PDHonline Course R118 (5 PDH)

The Right Choice: Applying Ethics and Leadership to Engineering

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COURSE CONTENT

The shortest and surest way to live with honor in the world, is to be in reality what we would appear to be; all human virtues increase and strengthen themselves by the practice and experience of them.
---Socrates (Philosopher)

Leadership is the art of getting someone else to do something you want done because he wants to do it.
---Dwight D. Eisenhower (General and U.S. President)

1.0 How Can You Be A Leader?

The Right Choice: Applying Ethics and Leadership to Engineering is designed to provide you with a set of traits and skills which you need to develop through study and experience to be a leader. These developed leadership traits and skills enable you to become the best leader possible at that point in your life when you are called upon to take charge and lead. Having the knowledge to be a leader is the first step in continuing the developmental process of becoming a leader.

This course guides you through a leadership development process by first introducing the bedrock of good leadership, ethics. The course then provides proven practical military leadership techniques easily transferable to any business or project. Finally, it provides the wisdom, examples, and

the latest research from numerous sources to enable you to better develop your own leadership philosophy, style and skills.

How can the Army and Marine Corps take an eighteen year old, overweight, self-absorbed, couch potato, and in a few short months, turn him (or her) into a lean, mean, fighting machine who will hunt his enemy down in the streets of Baghdad, in 120 degree heat, carrying fifty pounds of equipment and show the enemy no mercy? What causes that same person, in the next moment, to risk his own life by exposing himself to enemy fire to rescue a wounded child?

Actually, the answer is simple. It is leadership. It begins with building character and teaching values. Simply put, ethics!

On the first day of Boot Camp through the rest of their career, the Soldier, Marine, Sailor, and Airman is not only exposed to a high standard of leadership, but is expected to learn to become a leader themselves. All military training is a self-generating leadership laboratory. From Basic Training to the service War Colleges, leadership is the predominant goal.

Even the elite Army Ranger School is advertised as a leadership school. If you can lead soldiers who average 90 minutes of sleep and only one meal a day, in swamps and mountains, during patrols of up to 12 days, over a nine week course, you can probably motivate anybody.

Fortunately, we won't be doing any patrols or loosing sleep in this course, but we will learn vicariously through others' experiences.

Why should the military way of leadership be important to an engineer or businessman? It has to do with perception and tried and true methods developed under enormous stress by the military. Three surveys help answer the question. The Gallup annual survey on the honest and ethical standards of professions (December 2004) found 72 percent of Americans rated the ethical standards of military officers as very high or high. This statistic is especially surprising for the military because it is, at present, in a war that has an approximate 50 percent support rating. Used car salesman and lawyers ranked last in the survey.

The Harris Poll of confidence in leaders of major institutions (March 2004) found 65 percent trust American military leaders, followed by

university leaders at 37 percent and leaders in medicine at 32 percent. A third study listed military officers in the top five most admired professions. **Who would you hire to work for you, a company perceived as leaders with high ethical standards and integrity, or someone of lesser reputation?**

The National Leadership Index 2005: A National Study of Confidence in Leadership, prepared by U.S. News & World Report and Center for Public Leadership, John F. Kennedy School of Government, Harvard University, October 18, 2005, answered the question, "How much confidence do you have in the following leaders?" Military leaders rated highest with 40% as a "Great Deal," with Executive Branch leaders receiving 29%, Congressional leaders with 14% and the press with 10%.

The study of leadership is a high priority for the Army. It is a continuous process to study and improve the human dimension of questions such as: what motivates, what develops efficiency, how best to manage change, how do reduced resources affect the force, and many more. All these dimensions are vital in engineering and business as well.

The most recent military leadership manual takes a simple approach.[1] It is the Be-Know-Do leadership strategy. What must a leader's character "Be." What competencies must the leader "Know." What must the leader "Do" to motivate. Before and since the manual was published, much has been institutionalized by the Army that support the doctrine, such as a codified set of values, the establishment of the Army Center of Lessons Learned, the After Action Review process, and most recently, the standardization of the Warrior Ethos. As you will see, all these support the leadership process.

The principles of good leadership apply to all areas of life. Leadership in engineering and technology is not any different, except in the application of the "know" component. All leadership requires ethics.

2.0   Ethics in Leadership: A Must

Until the late 1970s, the United States of America had a competitive advantage in quality and performance of its products. In the late 1970s Japanese companies began an assault on the U.S. marketplace. What allowed the Japanese companies to penetrate the U.S. markets was a

substantial increase in the quality of their products coupled with low cost. In the mid-1980s, U.S. companies drastically changed the way they thought about quality and began to increase their quality. The improvement in the quality of products changed the marketplace and started the "quality revolution" now joined by Korea and China.[2] Today, international standards for quality are being adopted (ISO standards).

The "Ethics Revolution" will become to ethics what quality has become to the "quality revolution" in the '70s,'80s, '90s and continues into the twenty-first century. Ethics is more than a buzz word; it is a mark that every man, woman, child, and leader will be known by. In short, you, your job, and your company will become known by your/its ethics. Moreover, the "Ethics Revolution" is not society by society, it is becoming global.

We will become our ethics!

Background

The Right Choice: Applying Ethics to Engineering; and, *The Right Choice: Applying Ethics and Happiness to Engineering;* PDHonline.org Courses R115 and R117 provide introductions to Ethics, and, Ethics and Happiness, to Engineering. The basics and philosophy behind ethics are presented in those two courses.

However, a few basics are in order to establish a foundation for Ethics and Leadership. The premise of both courses and this course is that you must "think, act, and be ethical" personally and professionally, both at home and at work. Both courses go to great length to prove that you must first be personally ethical before becoming professionally ethical. By the same token, leaders must be personally and professionally ethical to lead workers. This is the "Be" component of the leadership strategy trilogy developed recently by the military.

It just makes common sense if leaders are not ethical, followers will not be ethical. Additionally, firms or employers must be ethical if employees are expected to be ethical. Ethics goes from top to bottom, and bottom to top. If the person in charge is perceived as *not* meeting high ethical, no compromise standards, others, accountants, and managers, will use these low exemplar standards as their own. The low ethical standards permeate throughout the

organization until the auditors discover violations of prudent practices or, worse, legal violations.

This top to bottom two way ethical street is not new. Aristotle over two thousand years ago realized that the individual and the *polis* (city, state, government) had to both be ethical. Today there is an intermediary called the corporation, firm, or company but the requirement is still the same. It is a two way ethical street.

Business and Engineering Ethics

Since most important leadership takes place in business, including engineering, it is instructive to view Rushworth M. Kidder's commentary *The Changing Face of Business Ethics,* Ethics Newsline™ from the Institute for Global Ethics.[3]
Kidder's commentary reached four conclusions:
1. Corruption destroys nations, in part by destroying the investment climate.
2. Businesses fail because of bad ethics (Enron, WorldCom).
3. The CEO's role is vital in promoting or degrading ethics.
4. Ethics training by itself does not solve the problem. (Most ethics training involves training centered around an "Ethics Code." Unfortunately, most ethics codes miss the fundamental requirement of personal ethics---you must think, act and be ethical personally and professionally, the "Be" of "Be-Know-Do leadership trilogy.)

Kidder's conclusions are backed up by sound independent studies. Kidder poses "the key question: If bad ethics destroys countries and corporations, and if CEOs need (but don't always have) a commitment to integrity, and if ethics training isn't the answer, then what's needed?" The answer according to Kidder lies in an "Ethical Culture."

Part of the solution will come from global ethics. The United Nations in December 2005 is implementing its *Convention Against Corruption* that creates a culture targeting corruption central to the integrity of both the private and public sectors. The U. S. Congress adopted the Sarbanes-Oxley (SOX) Act (2002), signed into law following the Enron, Arthur Anderson, Merrill Lynch, WorldCom, and other corporate scandals. The SOX Act was enacted to protect investors by improving the accuracy and accountability of corporate disclosures. Criminal penalties apply for ethical and criminal

violations. The Federal Criminal Sentencing Guidelines for prison terms consider ethics programs and participation. Unfortunately, considering ethics participation following a criminal conviction is after the fact and merely demonstrates the ethics programs and/or participation failed. Thus, the SOX Act has not really solved the ethical problem, it just forces more disclosure from corporations where the Act applies.

Kidder believes the global community is dictating global ethics. He also sees a shift from personal to organizational ethics that builds strong individuals and cultures of integrity across entire businesses led by some of the multinational corporations, the UN, and other world organizations. (This is the two way ethical street again dating back to Aristotle.) The UN's *Global Compact* in addition to the *Convention Against Corruption* calls for the world's private sector corporations to partner with social organizations to achieve a more sustainable and inclusive global economy. Hundreds of corporations around the world are joining the *Global Compact*.[4]

Currently, the ISO (International Organization on Standards) that developed ISO 9000 as an international standard is developing ISO 26000, *Guidance Standard on Social Responsibility* (SR). SR will become an international standard similar, in some respects, to the quality standards in the ISO 9000 series.[5]

Ethics and Leadership

How does ethics affect leadership? William D. Hitt in *Ethics and Leadership* shows the dependence:

"Ethics and leadership go hand-in-hand. An ethical environment is conducive to effective leadership, and effective leadership is conducive to ethics. Effective leadership is a consequence of ethical conduct, and ethical conduct is a consequence of effective leadership. Ethics and leadership function as both cause and effect….
    Beginning the chain of causal relations is the role of the leader, because leaders are the persons who influence others. Leaders do this in a number of ways: through their ability to acquire power and use the power to achieve worthwhile ends; through their vision and their ability to transform vision into action; and through their enthusiasm and their ability to empower others…leaders have influence…it is more meaningful to say an effective leader is one who casts a *light* (emphasis in original) on the organization."[6]

Trust

The *light* Hitt references can be thought of as Kidder's "Ethical Culture." Ethical culture really means the way things are done around here; here being the workplace. It provides the ground rules, written or unwritten, that drives the organization. If ethics is promoted in the "culture," it builds trust.[7]

Trust is the key ingredient in any relationship. If trust is missing in a relationship; the relationship dies. It does not matter if it is a husband/wife, employer/employee, politician/voter relationship, if trust is lacking the relationship is problematic.

Hitt makes a valid point. Ethics is not an either/or, or absolute, ethical/unethical situation. Ethics has a continuum, like a scale of one-to-ten, or A, B, C, D, F grading system.[8]

Why would we be ethical in some things and not in others? Hitt believes the point on the ethical scale is determined greatly by a person's background of family, church, and friends. This is true. However, people progress through another scale, called the Kohlberg scale consisting of six stages of moral development; and, accordingly a person's ethics can change. *The Right Choice: Applying Ethics to Engineering* covers the Kohlberg Stages in some detail. Suffice it to say, a person's ethics either progresses to a high ethical level, stage six, or stops along the way. It may be that having achieved stage six a person could backslide due to outside factors, such as unethical leaders in their organization or the five P's discussed in *The Right Choice: Applying Ethics to Engineering.* The five P's are Pressure, Pleasure, Power, Pride (exaggerated), and Priorities that are precursors to ethical dilemmas.

Keys to Becoming a TRUSTED Leader

Trusted leaders will be followed. Conversely, leaders will be ineffective without trust. As a leader, how do you build trust? The key principles that follow build trust and make you a better leader.

1. *Humility*: 'Favored are those not full of themselves'---leaders who are open and teachable…and invite the same qualities in others.

2. *Development*: 'Favored are the realists'---leaders who accept the truth and know how to train others to seize the benefits of adversity, loss, and change.
3. *Commitment*: 'Favored are the steadfast'---leaders who know that reaching a greater good requires a firm grip on the right values, causes, and goals.
4. *Focus*: 'Favored are those desperate for excellence'---leaders who do the right things at the right time in the right way.
5. *Compassion*: 'Favored are the caring'---leaders who serve the needs of everyone in their organizations.
6. *Integrity*: 'Favored are those with unshakable ethics'---leaders who hold high moral values regardless of personal cost.
7. *Peacemaking*: 'Favored are those who calm the waters'---leaders who remain steady in storms and build teams that stick together.
8. *Endurance*: 'Favored are those with fortitude'---leaders who overcome personal doubts and setbacks to courageously stay the course.[9]

These keys create trust. Trust is a must for leadership.

Authority and Obedience

William Hitt illustrates the substantial influence a leader has on others. This influence has been repeatedly proven with the famed Stanley Milgram electrical shock experiments. Subjects were given orders to follow that would require victims (followers) in the experiment to suffer pain by electrical shock. The object of the experiment was to prove, with ordinary people, that obedience took precedence over ethical or moral values. Moreover, although not as shocking, other research proves that leaders have influence over the ethical conduct of followers.[10]

Stanley Milgram's *Obedience to Authority* describes his experiments and provides valuable insight for leaders. Milgram shows obedience is basic to social life,

"Obedience is as basic an element in the structure of social life as one can point to. Some system of authority is a requirement of all communal living…" Milgram points to the inhumane policies of the Nazi regime that may have emanated from a single mind, but could have only been carried out on such a massive scale if people obeyed orders. One person could not

physically kill six million people; people had to obey orders. Milgram asserts, "Obedience is the psychological mechanism that links individual action to political purpose."[11]

Psychologically, an act out of command is different from an act that is spontaneous and voluntary. A person who detests stealing, killing, or assault may perform these acts with ease when commanded by authority. Unthinkable behavior is carried out under orders of authority. Milgram's experiments support the essence of obedience,

"The essence of obedience consists in the fact that a person comes to view himself as the instrument for carrying out another person's wishes, and he therefore no longer regards himself as responsible for his actions. Once this critical shift of viewpoint has occurred in the person, all of the essential features of obedience follow. The adjustment of thought, the freedom to engage in cruel behavior, and the types of justification experienced by the person are essentially similar whether they occur in a psychological laboratory or the control room of an ICBM site."[12]

History supports Milgram. The My Lai massacre in Vietnam and, recently, the Abu Graib prisoner mistreatment in Iraq, were performed by soldiers who had received classes on the Law of Land Warfare. In each instance, the actors knew better, but proceeded to commit acts they would not normally condone, much less participate. In both cases, the immediate leader, junior lieutenant and reserve staff sergeant, not only sanctioned, but participated in the deplorable acts. The followers followed their misguided leaders, despite their own ethical nature and learning.

Importantly; and, the really scary part of *Obedience to Authority,* Milgram proves, the problem associated with authority remains today, "Some dismiss the Nazi example because we live in a democracy and not an authoritarian state. But, in reality, this does not eliminate the problem. For the problem is not 'authoritarianism' as a mode of political organization or a set of psychological attitudes but authority itself. Authoritarianism may give way to democratic practice, but authority itself cannot be eliminated…"[13]
Without ethics, we could be doomed even with a democracy form of government. As trite as it may sound, authority rules.

The lesson to be learned by the Milgram experiments proves leaders have a tremendous influence on followers. Moreover, a leader's influence can be ethical and good, or at the other extreme evil, with points in between.

Leadership of Harm

What is happening in today's world? Today, pressure to succeed causes unethical behavior. We have increasing expectations, tougher competition, instantaneous communications, global economies and competition, higher technology leveling the playing field, all of which magnify our successes and failures. Moreover, we are finding the unethical conduct of others causes considerable harm to everyone; it has a cascading affect on those far removed from the source. The scandals of Enron and WorldCom clearly evidence ethical and criminal violations, but many other smaller examples abound.

Our Cheating World

Many of us know there are corrupt counties in this world. Typically, the corrupt countries are governed by dictators where graft, corruption, and bribery are the business norm. The corrupt countries motivated the UN, and the rest of the world, to develop the *Convention Against Corruption* policy.

What about a supposedly ethical country that ranks within the top ten countries of the world in ethical behavior as a country? David Callahan has taken a direct shot at the United States of America in his book, *The Cheating Culture: Why More Americans Are Doing Wrong to Get Ahead.*[14] Callahan admits cheating is a difficult subject to research. There appears to be a lack of meaningful data that would allow comparisons of different forms of cheating. We know cheating is happening, but nobody is keeping track of it. Cheating is so diverse, how could anyone keep track of it? Out of necessity, Callahan relied on interviews, surveys, court information, and professional journal information to compile data for his book.

Cheating is not new! Callahan points to cheating in the ancient Olympic games. Even in ancient China, civil servants cheated for their jobs, despite the fact that the penalty for cheating was death. Unfortunately, cheating in America seems to be picking up speed.

"Everybody does it," says Callahan, who believes America's morals became defined differently in the '80s and '90s. Americans became too pre-occupied with moral problems of crime, drugs, premarital sex, and divorce, while overlooking moral problems of greed, envy, materialism, inequity, and inequality.[15]

Despite opinion polls that assert Americans are concerned with personal responsibility, cheating is up, and increasing. Callahan maintains, "Cheating is everywhere. By cheating I mean breaking the rules to get ahead academically, professionally, or financially." Some cheating involves violating the law while other cheating does not go that far.[16]

Callahan opines, Americans are using two moral compasses. One moral compass directs American behavior toward sex, family, drugs, abortion, and traditional crime. A second American moral compass points in the ethical or unethical guidance of career, money and success.[17]

A review of Callahan's *The Cheating Culture* reveals:
FACTS
- Tax evasion costs the U.S. government, and in turn innocent tax payers in the form of more costly government, some $250 billion per year.
- Nearly half of submitted resumes contain lies.
- Eighty percent of "A" students cheat.
- Theft by employees cost $600 billion, or six percent of Gross Domestic Product.
- Thirty-nine percent of workers contend senior managers lack integrity.
- A considerable number, maybe half, of Major League Baseball players are cheating with steroids.
- Law, medicine, accounting and other professionals became more unethical in the '90s.

WHY IS THERE MORE CHEATING?
- More people will do anything to succeed, and this is being taught to our children.
- Inequality provides greater paychecks for the winners and less money and less security for the remainder of Americans.

- The great bottom line focus on profits and productivity causes pressure (one of the 5Ps) on workers to cut corners.
- State and federal government regulators lack the resources to enforce laws aimed at cheating.
- American values have changed for the worse.
- Cheating becomes a new norm, every one does it; to be competitive you have to cheat.

What Does Cheating, Loss of Moral Virtues and Values Do Long Term?

Cheating, loss of moral virtues and values has a long term affect on all societies. What and how long is the affect? The answer has to come from history.

History tells us the Roman Empire was, arguably, the greatest and longest empire ever to exist. There were many reasons for the collapse of the Roman Empire. Perhaps, the most important reason was the decline in morals and values. Morals and values that kept the Roman legions together and the empire safe could not be maintained at the end of the empire. Violence in the streets made the cities unsafe. Public health and environmental problems abounded. Wealthy Romans brought water to their home through lead pipes, which caused high morality rates to the wealthy. The poor, who lived on the streets, in continuous contact with one another, spread disease. Alcohol abuse undoubtedly contributed to the demise. Political corruption was another cause of the fall. Before the fall, the Praetorian Guard gained complete control of determining the next emperor. The emperor, in turn, rewarded the guard. Eventually, the position of emperor went to the highest bidder. During the last years, unemployment, inflation, and urban decay contributed to the collapse. Basic research and new ideas in technology suffered. Lastly, military spending was a constant drain on the government and frustrated Romans no longer cared to defend the great Roman Empire.[18]

Does the Roman Empire collapse history lesson sound familiar? Possibly, the U.S. could be next! Are we off base to suggest the comparison of a possible collapse in the U.S.? Comptroller General of the U.S., David M. Walker, in a *Business Week* article, "Spending Is Out of Control" fired a warning shot. Walker used the same Roman Empire collapse comparison:

"The Roman Empire fell for many reasons, but three seem particularly relevant for our time: (1) declining moral and ethical values and political comity at home, (2) overconfidence and overextension abroad, and (3) fiscal irresponsibility by the central government. All these are certainly matters of significant concern today."[19] Comptroller General Walker then focuses on the third area that ails the U.S., which directly relates to his position as U.S. Comptroller General. But, his comparison is clear, and appropriate.

Promoting the Ethical Culture

Len Marrella authored "In Search of Ethics."[20] Marrella uses numerous leaders as examples in support of his thesis "ethics is essential to effective leadership." Moreover, "In order to get commitment from those you lead, you must be trustworthy. You must earn trust by being ethical. This means acting in accordance with good positive values (or virtues) your followers share and respect."

There are three things a leader must do to promote an ethical culture. A leader must:
- Understand ethics and its affect
- Serve as the role model for followers
- Develop and promote an ethical culture for followers.[21]

Interestingly, if the leader does nothing to influence the ethical culture for followers, the ethical culture defaults into a morass of multiple individual ethical stages without cohesion. Followers are working in different ethical directions, sometimes at odds with their peers.

The most important part as a leader is to establish ethics so others will follow on firm ethical ground. Ethics promotes trust. People will follow persons they trust; conversely, people will not follow persons they do not trust, unless forced to follow.

Reducing Stress: Byproduct of Personal Ethics

Don't you agree, we all want to reduce stress? You can reduce stress through personal ethics. New scientific evidence proves that personal ethics reduces stress. *Affirmation of Personal Values Buffers Neuroendocrine and Psychological Stress Responses* in the journal of *Psychological Science*

reports the first evidence that an experimental intervention involving the affirmation of personal values lessens neuroendocrine and psychological stress responses. Value affirmation participants had significantly lower cortisol responses to stress tasks.[22] Dr. Shelley E. Taylor, one of the researchers, confirmed in personal correspondence that their experimental evidence was another reason for developing personal ethics and values.[23]

Call For Action

The call for ethical action is urgent! We need to make a personal commitment to think, act, and be ethical, today. *The Right Choice: Applying Ethics to Engineering* discusses virtues for professionals: Integrity, Honesty, Fidelity, Charity, Responsibility, and Self-discipline, coupled with the Golden Rule, "do to others as you would have them do to you," as our "Moral Compass." These virtues and the Golden Rule point you in the right direction.

However, we need to do something today. What and How? Right now, before going on, take a piece of paper and write out your Personal Honor Code.

Start your Personal Honor Code with the words, "I WILL_____ ."
You can make your Personal Honor Code lengthy or a simple version might be:

"I will not lie, cheat, or steal, nor tolerate those who do."

Keep your Personal Honor Code with you to remind yourself of YOUR code. Share your Personal Honor Code with your followers, including your children. They will know your standards of Honor.

Encourage your followers to develop their own Honor Code. They can use yours if they want. Discuss with your followers whether your Honor Code should be revised. Re-visit your Honor Code with your followers whenever you have a new follower, or at least once a year with your followers.

Re-visit your Personal Honor Code on a daily basis. Your Personal Honor Code is a working document and can be amended if necessary. You have set *The Right Choice* attitude and the "Be" component for ethical leadership.

The paramount leadership skill is to "Be" ethical. We will keep this in mind as we progress through the other leadership skills.

3.0 Leadership from a Military Perspective

There are thousands of books on leadership theory. Though interesting, it is always nice to have something that actually tells you how to accomplish the theory.

The skills listed in this chapter have been tested by Army leaders for centuries. Much of the list was compiled by COL Mike Malone.[24] Mike started his career as a private and ended it as a colonel. Along the way, he earned a B.S. from Vanderbilt, an M.S. from Purdue and graduated from the Army's Command and General Staff College and War College. He commanded an infantry battalion (600 soldiers) in Vietnam. Though he was a great infantry combat leader, he is best known for his research, writings, and teaching on leadership.

Military officers over the years have adopted COL Malone's compiled list of practical leadership skills, now collected in his book, *Small Unit Leadership---A Commonsense Approach.* For more than thirty years COL Bruce Brant used these same leadership techniques at Army company, battalion, and brigade levels of command. It seems appropriate to share these leadership skills with you, converted for civilian use.

The skills are not intended to be at the strategic level of leadership. They are meant for day-to-day use by the leader who deals with the problem employee, the middle-of-the-road workers, and a few all-stars. Fitting the skills to the person is your responsibility as a leader.

Listed below are the key leadership skills we will discuss in more detail and try to master:
1. Listening

2. Processing Information
3. Sending Your Message
4. Becoming a Self-Starter
5. Planning
6. Setting Standards
7. Delegating
8. Maintaining Good Performance Levels
9. Providing Corrective Feedback to a Worker
10. Rewarding Workers
11. Conducting an Initial Counseling
12. Conducting Behavior Counseling
13. Punishing a Worker
14. Motivating
15. Supervising
16. Location
17. Creating a Vision

Master these leadership skills, keep your ethical honor code, and you will be on your way to becoming an outstanding leader.

1. Listening

A critical leadership skill in motivating your workers is listening. One aspect of that is giving them the opportunity to express their ideas, concerns or just talking to you. That gives the feeling you are interested in them personally, as well as professionally. But you must listen effectively, with total concentration. It is harder than you might think. When your workers believe they are listened to, they express themselves more clearly and fully; they let you know what exactly is on their mind. If you fail to listen to them, they will tune you out when you are trying to express yourself. Carefully listening to each other is a sign of respect and critical to getting them to complete their work to the standard you expect.

When Bill Brant trained as a mediator/negotiation, the first, most extensive, part of the training course was learning "how to listen." Moreover, the most fundamental rule when examining

witnesses during a trial, is to listen to what the witness is saying. The legal training coincides with leadership training.

When

- When someone is talking to you.

How

- Don't just listen to the words, listen for the content of the message and the emotions they give off like surprise, anger, happiness. When a comedian tells a joke, it is usually not just the words he says, it is how he says it and his expressions he demonstrates that makes the joke complete. Take in the verbal and non-verbal messages.
- A highly emotional person may not be getting their message through to you. You need to tell them about it simply by asking them to calm down or speak slower.
- Test your understanding of the message. For example, while you're listening, ask yourself every now and then, "Could I repeat or restate what he just said?" When lawyers examine witnesses, they call this looping. Looping is rolling the witness's answer into the next question and requires intense active listening.
- Check your own emotions. If you're getting angry or excited, you're probably not hearing the other person very accurately. Keep your emotions under control.
- Let the other person finish talking. Do not cut them off or interrupt. It is disrespectful, and you are not obtaining their information.

What "Right" looks like

- Your message to the worker is getting through because they are listening to you more carefully.

- In situations where you have to pass on information, you don't overlook what they have told you and you try to include their comments.
- More of your workers feel free to talk with you.

Several years ago, the Army adopted the After Action Review (AAR) as a standard way of doing business.   After each mission or task, leaders meet with their soldiers and critique each other on what they did right and what they did wrong according to a written standard but within the conditions they had to face. Officers, non-commissioned officers, and soldiers listen about their performance. This not only builds teamwork but supervisors learn their effectiveness.

2. Processing Information

Communication is critical to success in any business or relationship. Because it is vital, there have been great advances in communications technology. Unfortunately, although cell phones, email and the Web give us quantity, speed, and coverage, they do not meet all the needs for information. Accordingly, you must communicate clearly and precisely. Enormous amounts of information pass through leaders just because of their position. Here are some suggestions that can provide greater understanding of the meaning of any message.

When
- When you receive information from someone else.

How

- Assess your environment and setting; what is going on around you. Understand "the big picture," as well as "what's going on" in the office. The Army calls this "situational awareness". Knowing the big picture helps you better understand information you receive and puts it in perspective.
- Make notes on everything. A leader should never be without Palm Pilot, laptop computer or just a pen and

notebook. Memories fade, you never know when you'll need that nugget or data. Create a good filing system.

- Consider the conditions that created the information. Anxiety, uncertainty, fear, or stress increases false information or rumors about the situation.
- Assess the source of the information. Workers come from different backgrounds which pre-conditions or pre-disposes their work/ethic/value system and view of the world. Phrases and actions can mean different things to different people, particularly from different cultures. Beware of their personal "baggage."
- Check for signs that emotions (anger, fear, nervousness) are affecting the source providing the information.
- Repeatedly ask yourself, "What is the worker trying to tell me and what does he really want me to do with the information?" You might have to ask, "What would you like me to do?"
- Ask questions about what your workers tell you. Asking questions shows you are personally interested in that worker and provides a deeper understanding.

What "Right" looks like

- You can tell the other person, in your own words, what you think he said to you, and the two of you agree.

3. Sending Your Message

Successfully transmitting your thoughts is absolutely critical to mission accomplishment.   The bottom line: Leadership = Communication. About 80 percent of a leader's time is spent communicating. A leader's main tool to control workers is information. He sways, motivates, guides, and organizes them to do their own work. He does this through exchange of information. His primary tool in this exchange is oral or written communication. A word of caution, email is not a substitute for

leadership. Many introverted managers try to short circuit confrontation by sending an email when only a face-to-face conversation conveys the message. You cannot read the expression on the other person's face with an email; likewise, they cannot read your body language.

The suggestions that follow will help "senders" construct messages that will be received accurately by most workers with average interest, motivation, and ability.

When

- When sending a message.

How

- Develop as simple a message as possible. Begin with a clear, simple statement of purpose of the message or a, "Bottom Line Up Front (BLUF). Don't put in unnecessary information; it will only detract from the point you are trying to make and may lead to confusion.
- Keep the organization of the message in a simple, logical format that your workers will best understand.
- Put the message in their language. Stay away from unfamiliar acronyms, jargon and "Ivy League" words that make you sound like a college philosophy professor. If they don't know the meaning of the word, you aren't getting your message across. One of the keys to this is understanding the background of your workers.
- Use examples to help illustrate major points or new ideas.
- Draw pictures and sketches to go along with words whenever possible, but not necessarily a PowerPoint presentation.

- Repeat every important point of your message at least twice.
- Summarize the major points you want to get across.
- Question the receiver to ensure he understands.
- Ask the receiver to explain to you, in his own words, what you just told him.
- Paragraph often and separate paragraphs with space. This allows the email to be read and understood more easily.
- People remember written information much longer than spoken information and even longer if written and spoken.

What "Right" looks like

- Your worker tells you he understands your message and then demonstrates it through his action.

4. Becoming a Self-Starter

Every company needs leaders who know when and how to take the initiative. Good leaders don't wait for orders. Having a good understanding of the company's mission, as well as management's intent and policies, they recognize problems and take action to solve them. Initiative has made the difference in hundreds of past battles for the Army and successes in business. But to take initiative intelligently requires daily practice. Taking initiative must be encouraged, even at the expense of acceptable mistakes. The perceptive leader learns from mistakes before it comes down to a last minute, stressful, intense situation where the consequences of failure are unacceptable.

The American military teaches leaders what is called a "Duty Concept." Basically, it means doing what has to be done, to the best of our ability, without having to be asked to do it. A "Duty Concept," requires and teaches personal initiative.

When

- When there might be a way to perform your job better than the way you are doing it now or there is a task to complete and nobody else is doing it.
- When you see a problem that requires immediate attention.

How

- Continuously assess your job and look for better ways to perform it. Persuade your workers to do this also and encourage them to suggest better ways to do the job. If they bring you problems, ask them for their solution.
- Assess each "better way" in terms of your goals and objectives.
- Discuss the "better way" with your boss.
- Don't implement the "better way" if your boss says no.
- If you cannot contact your boss, ask yourself, does this "better way" fit in terms of the understanding I have of my company's vision, mission and goals? Is it moral, legal and ethical? If it isn't, continue performing in the manner previously directed.
- If the "better way" appears to fit in your boss's and company's mission, vision and goals, compare the consequences of the method you are now using with the "better way."
- Make sure your "better way" actually is more effective and less costly. Don't use it just for show or for the sake of being different. Keep your ego under control.
- If a problem requires an immediate solution, fix it, within company guidelines if at all possible.

What "Right" looks like

- You meet or exceed your objectives with less resources.
- Time, effort, personnel, materiel, supplies, are rarely "wasted."
- The problem is solved.

5. Planning

Leaders must plan constantly for the future. If you're not planning, you can't move forward. If you don't plan for contingencies, day-to-day problems will throw you off schedule. Make "ball park" estimates of your plan and update your data as it changes.

In law, we call this preparation. Lawyers are trained to prepare, prepare, prepare. Preparation covers the "what ifs" and known unknowns. The military calls this planning, "branches and sequels."

When

- When you have an objective, task, of even your daily schedule.

How

- Figure out how much help you're going to need. Can you do it yourself or should others be involved? Does time permit you to involve others? Do others have the necessary skills and knowledge to assist you? The more ideas you get from others, the more courses of action you'll have from which to choose.
- Develop a list of courses of action that you think might accomplish the task.
- Figure out the essential steps and resources in each course of action.
- Put the steps in proper sequence.

- Develop a timeline for when each step has to be finished.
- Look out for what could go wrong with each step by using your staff's and your experiences.
- Hope is not a method, assume things will go wrong. (Failure Modes and Effects Analysis).
- For each course of action, compute resources needed and develop a plan to cover things that could go wrong.

What "Right" looks like

- There are few problems while executing the plan, resources are wisely used, and workers know the direction they are going.
- You adjust quickly to problems and changes.

6. Setting Standards

If you want a job done right, the first time, a first step must be to develop and clearly communicate precise standards. <u>Workers achieve the best results when they know exactly what is expected of them to complete the task</u>. The standards need to be realistic, specific, measurable, challenging and include a timetable of task deadlines. Never assume the standards are known by the workers. They need to be communicated often for reinforcement.

When

- When you become a new leader <u>and</u> have a thorough understanding of your job, what your superior expects, as well as the operations, goals and objectives of your organization.
- When you have a new task to do and the standards are unclear or have not yet been established.

- When your workers are willing, have the resources and are trying, but are just not meeting your expectations.
- When workers ask a lot of questions about what to do or are confused about what you require of them.

How

- Check company policy letters, standard operating procedures and other appropriate publications to see if standards for tasks, techniques, or procedures are already clearly established.
- When there are no clearly defined standards, your job is to figure out what they should be.
- Standards must be clear, specific and measurable.
- Continuously communicate standards to workers. Demonstrate them if you can.
- Determine that the worker understands the standard.
- Always hold workers accountable for the standards. If you don't, what they did becomes the new standard.
- Gauge performance against the acknowledged standards, never against other workers.
- When workers are not able to meet your standards, ensure they understand what needs to be done and they have the resources. Don't lower standards, establish intermediate standards that are steps to the full standard.
- Provide continuous feedback to workers on how you perceive their progress on meeting the standards. Make corrections when necessary.
- After a period of time, reevaluate standards when they appear to be either too easy or unachievable.
- Your boss might not establish standards when he gives you a task. Sometimes it may seem like he doesn't really know what he wants or has not thought it through. Ask him if you don't have a complete understanding of what is expected. If you don't, you'll

waste time, resources, and frustration will set in at all levels.

What "Right" looks like

- Time and other resources are not wasted on workers trying to figure out what you want.
- There are very few questions and little confusion during the course of accomplishing the task you've assigned.
- Workers are not frustrated after completing part of the job and being told it isn't correct.
- Workers take pride in meeting the standard and are disappointed when they fail to meet it.

In Appendix A, COL Bruce Brant exemplifies the measurable standards he required as commanding officer of the 214th Field Artillery Brigade. These standards were put in place the first day he took command of the brigade, comprised of some 3500 soldiers.

7. Delegating

Leaders must learn to delegate responsibility. You will never have enough time to do everything yourself. If you try, you may miss an important part of the project. Simply delegating responsibility for tasks, however, does not ensure that they will be accomplished to your satisfaction. Tasks must be delegated to trusted, competent subordinates. Here are some simple rules on how to delegate.

When
- When you are unable to maintain an expected standard; this allows you to focus your attention to an area needing your personal attention.
- When you just can't get around to supervise everyone and everything.
- When you are not meeting the expected timeline.

- When you see good workers standing around idle.

How

- Split the task into smaller sub-tasks.
- Ask yourself, "At what level of leadership should this task be handled, e.g. director, deputy director, office manager, etc.
- At each level, find out who is available.
- Of those available, decide who has the skills and desire to complete the sub-task.
- If you have to make a choice between skill and desire, pick the worker with the skill but observe his performance often.
- If you don't have a worker with the skill, train a motivated one on how to do the sub-task.
- Give the person the responsibility for accomplishing the sub-task.
- Establish a specific deadline, and assist with resource management and planning.
- Give your worker your standards.
- Have him come back to you with his plan and any questions.
- Tell him you have confidence in his ability.
- At intervals, check his performance.
- Give positive feedback and any corrections that need to be made.

What "Right" looks like

- All the workers are busy.
- You have more time to supervise the critical parts of the task and plan for the next day's objectives.
- Your team completes more tasks on time while meeting the established standards.

8. Maintaining Good Performance Levels

Leaders usually give most of their attention to the all-stars and, by necessity, the sub-par performers. The average worker who simply does his job is often overlooked. But all workers need the boss's positive recognition to maintain performance levels. What is "positive recognition"? Sometimes all the leader needs to do is give the average worker a pat on the back or say, "I really appreciate the job your doing. It's important to us." However, at times this leaves the worker wondering why the boss said it. Since the comment is *not* explicit, the worker is not able to relate it to any specific action he did. Here are some hints on motivating the average worker.

When

- When workers first start meeting your standards. At this stage, they need a lot of positive recognition.
- When workers have been performing at acceptable levels for some time. (When they reach this stage, they need periodic acknowledgment and thanks to let them know they're meeting your standards.

How

- Identify a specific part of a worker's performance that is above average and let him know <u>why</u> it deserves special recognition.
- Continuously let you workers know that you appreciate their efforts.
- Ask your workers if there is anything you can do to help them do their job better.
- When your average worker starts to perform well in some areas, tell him you have confidence in his ability to perform <u>all</u> tasks in the same way.

What "Right" looks like

- The worker continues to meet or exceed standards.

9. Providing Corrective Feedback to a Worker

There are three reasons for unsatisfactory performance. One, the worker doesn't know how to do the task; two, can't do the task (lack of resources or skills) or; three, won't do the task. It's the last reason that requires the leader to give corrective feedback.

Leaders must give workers feedback so they can learn to overcome substandard performances. Use caution when discussing job-related problems with a subordinate, trying not to put the worker on the defensive. Some reasons workers might give for their performance are: lack of time, lack of resources, belief that they are doing it correctly, or blaming someone else. They may react emotionally or aggressively. They might not agree that they have a substandard performance. The best way for a leader to avoid this behavior is by focusing his feedback on the <u>task</u> - on what the worker <u>did</u>, not on the worker himself.

When

- When the worker fails to meet standards.

How

- Concentrate on performance, not on personality.
- Bad Example: "Brant you are a lousy worker and have a bad attitude."
- Example focused on performance: "Bob you did not submit the weekly cost analysis report this week. Why not?"
- Never, ever evaluate a worker's performance against a co-worker, always against a defined standard.

What "Right" looks like

- The worker can tell you what standard he is not meeting, why he didn't meet it, what he is going to do to meet it and when he is going to meet it.

10. Rewarding Workers

Rewarding workers is the one of the best methods of motivating them. Rewards show workers they did something right and you noticed it. Punishment only shows workers they did something wrong. Punishment doesn't demonstrate what is right; it only illustrates what is wrong. Positive motivation is always preferable to negative. Rewarding is more effective and takes less time than punishment. Rewards increase trust and confidence between the leader and workers. Trust and confidence are basic elements in any successful enterprise.

When

- When a worker meets or exceeds the expected standards.
- Most leaders only reward their very best workers. But remember, you are trying to develop a team where each worker is meeting the standards. Be sure to recognize workers when they meet standards. Everyone can be good, but not everyone can be the best. Show your good workers that you appreciate the quality of their efforts as well.

How

- Make sure the worker met or exceeded the performance standard for a reward.
- Guidelines in selecting a reward: If there is a specific reward or you promised him something, make sure the worker gets it. Don't make promises of rewards and then not give them when the criteria are met. Only give a reward that is valued by the worker.   There are a great variety of rewards such as just saying "Thank

you," or "Great job!", a bonus, a good annual appraisal, a day off, recognition in front of co-workers or spouse. Be imaginative.
- Fit the reward to the performance. Don't go overboard because it cheapens your rewards system.
- Make sure that your workers get the rewards they deserve and on time. If you wait too long, people forget what they did to deserve it and that it wasn't important to you.
- Whenever possible, do the rewarding in front of other workers.
- Give your newest workers extra attention as far as rewarding goes. The new guy trys extra hard to meet your approval. For him, simple praise will have extra value.

What "Right" looks like

- The worker's performance and attitude meets or exceed defined standards.

11. Conducting the Initial Counseling

You have just hired a new employee or one transferred in and it is their first day on the job. Most leaders assume the new employee understands the job and knows what is expected. Both those assumptions are wrong. The leader should sit down with the new worker the first day to set him on the right path to success with the company. The objective of the initial counseling is to provide information to the worker to prevent time being wasted by the worker trying to figure out the job and expectations.

When

- The first day of work, if possible.
- Bring your worker back a few days later to set goals and answer questions.

- Continue with periodic sessions to review goals and keep the worker on the proper path.

How

- Develop a prepared agenda or counseling form which covers, as a minimum, the following items:
  - A sincere welcome to the organization and group or team.
  - Company mission statement and vision.
  - Chain of command.
  - Company culture, values, and ethics.
  - Set times and places for mandatory training such as sexual harassment, computer security, etc.
  - Provide the scope of the new position and how it fits into the organization.
  - Provide the employee time to establish short term and long term goals.
  - Coordinate with Human Resources as appropriate.
  - Introduce the worker around the organization and to fellow workers.
  - Make your worker feel welcome.

What "Right" looks like

- At the next counseling session, the worker has thought through the goals to work toward.
- The worker associates with fellow workers.
- The worker is motivated to succeed.
- Standards are met or exceeded.
- The worker stays out of trouble and fulfills his role with the organization.

12. Conducting Behavior Counseling

A worker with personal problems will, at some point, not be useful on the job. Part of a leader's job is to counsel workers who have problems. Successful counseling aids the worker in

self-discovery of what their real problems is and how they will work to a solution. The leader's goal in counseling is to make the worker more effective on the job.   Counseling skills are a major part of the leader's tool box.

When

- When you observe a change in a worker's job performance or attitude.
- When a worker requests your advice or help.
- When a subordinate supervisor brings a worker to you for counseling.

How

- If a worker's performance is not meeting standards, determine the cause of the problem and/or give the employee a written warning, as per company policy, if necessary.
- Make yourself available and accessible. Don't just tell your workers, "Stop by to see me if you've ever got a problem." Get out of your office and go down to their job site whenever possible.
- Build a reputation of dealing with your workers' problems honestly, fairly, and effectively.
- Never ignore their problem or make fun of it. It is important to them.
- Let the worker do the talking. Listen carefully and don't interrupt.
- Be patient, don't look distracted.
- You've got to understand the problem and often they will be emotional when telling it to you. Make them be specific about what is bothering them. Often they haven't thought the problem all the way through.
- Ask for additional information if you don't understand or an example.
- Stay on topic, don't let them drift to a different unrelated subject.

- Keep the conversation focused on what the worker wants to talk about, not your experiences.
- Stay calm, don't be emotional or argumentative.
- Factor in all that you have been listening to and determine whether the worker needs additional help. You should send them for additional help only if:
  - You can't solve the problem.
  - There is a language or cultural barrier between you and the worker.
  - You aren't making progress.
  - You become too personally involved in the problem.
  - The worker needs professional expertise that you don't have such as a marriage counselor, attorney, psychologist, etc.
- If you send them to someone else, then you should make the appointment for them.
- You must do a follow up counseling session:
  - Make sure the worker really took the actions they told you they would do to solve their problem.
  - Get them to establish intermediate goals if they feel they can't take on the entire problem at one time.
  - Ask them how they are doing periodically. Show an interest, it creates loyalty.

What "Right" looks like

- The worker tells you the problem is solved.
- The performance or attitude you first noticed that led you to suspect that there was a problem changes back to meeting standards.

13. Punishing

Punishment is a form of counseling. Use it as a last resort to improve job performance of a worker. Punishment does not teach what should be done but does teach the worker to not get caught. Few leaders enjoy the confrontation of punishing a

worker. Unfortunately, an infraction not corrected sets a lower "new standard." Others might think they too can meet the lower "new standard" with no consequences. Soon, efficiency suffers. Punishment often leads to negative feelings toward the leader. These feelings make it almost impossible to build loyalty, trust, respect, and a sense of teamwork between the worker and his boss. Repeated punishment can make the worker feel like a "loser" in his own eyes and that of his fellow workers or he may continue to blame his problems on the leader. Though punishment has its place and can be effective, use it only when necessary to improve job performance of workers.

When

- Punish a worker for poor performance when all of the following conditions have been met:
    - He failed to meet a performance standard which he knew, had the resources for, and understood.
    - The worker is unwilling and does not appear to be trying to perform the task.
    - He has been previously counseled and warned of punishment if the performance standard was not met.
- His performance has been evaluated against the established standard, not against the performance of others.

How

- Make sure the worker should be punished and the conditions above have been met.
- Base the punishment on the following:
    - It must be legal. This may involve a union representative, attorneys, or other individuals to consult.
    - During a previous counseling, if you promised the worker a specific kind of punishment, that's the one you need to give.

- Select punishments that your workers want to avoid – like a Personal Improvement Program, longer hours, or lack of freedom on the job.
- Make the punishment fit the crime; the worse the wrong doing, the tougher the consequences.
- Do it as quickly as possible. The worker has got to link his specific performance with the punishment.
- Complete the action. When you tell someone they will be punished, do it. Fellow workers are watching to see if you set a new, but lower standard or play favorites.
- When the punishment is over, it is over, drop it and move on. Don't bring it up again to the worker unless his performance fails to improve. Then he needs to know the next punishment will be tougher.

What "Right" looks like

- The worker's performance and attitude become acceptable.

14. Motivating

Motivation is about the wants and needs of the worker. These basic desires cause an individual to perform in a certain way. Motivation provides the fundamental basis for what individuals think and do. Workers normally act in their own best interest. The greatest performance is met when workers not only realize their own needs but are also working toward company objectives. Workers can be motivated internally, as well as externally, by a leader. To use motivation effectively, leaders must recognize workers can be complex and variable. Workers carry their own historical and emotional baggage which often changes on small events. They look for variety in their work; want to do something meaningful; and react differently to diverse leadership methods. Knowing your workers takes a significant amount of listening, observing, and reflecting to find the right

combination of leadership techniques to get the most out of each individual.

When

- Continuously

How

- Pay close attention to the basic needs like food, shelter, clothing and taking care of their family.
- Listen to your workers but let them know what is on your mind as well.
- Identify their needs and things that are important to them.
- Evaluate how well accomplishing their work will satisfy these needs. Explain this linkage to your workers.
- Always, always, always, set the example; deeds, not words, is one of the strongest motivation techniques you can use. Workers should believe you are the hardest worker on the team.
- Reward only those who really deserve it.
- Quickly punish those who deserve it.
- Promote good men and women and send them to advanced schooling and training even if it means you might lose them. Advanced schooling or training provides self-worth, dignity, and confidence which creates a lasting bond between the worker and leader. It demonstrates to all the workers that you actually do have a vested interest in them.
- Continuously explain how important their performance is to the company and to you.
- Thank them often.

What "Right" looks like

- Workers perform to or exceed standards, are happy, inspired, work as a team and like to come to work each day.

15. Supervising

Leaders do not do the work! Leaders get the work done! Leaders get the work done through the efforts of others – and supervising is the main tool for doing work. Supervising is a complex skill. It requires leadership proficiency in a range of specific sub-skills.

   The list below summarizes the nine most critical skills in the one task where leaders should be putting about 90% of their leadership effort – supervising.

When

- All the time.

How

- Develop loyalty.
   -To the company, the leader and to fellow workers.
   -Strong loyalty means less supervision because the worker will always do his best not to let anyone down.
   -It's a two way street, stand by your workers during adversity when they are right.

- Let them know the, "Good, the bad, and the ugly," of a project upfront. Often they criticize among themselves because they don't understand the constraints you are under. However, don't let it sound as if you are making excuses.

- Foster open communications.
  - -Listen, listen, listen to workers at all levels!
  - -Stop rumors, keep workers informed.
  - -Get new information out quickly.
  - -Communicate with candor and encourage workers to do the same.
  - -Do not shoot the messenger of bad news; if you do, they will stop bringing the message to you.

- Be a coach.
  - -Provide performance feedback.
  - -Keep subordinates informed about day-to-day work progress.
  - -Coach individual subordinates to improve performance.
  - -Evaluate individual and team performance based upon specified standards.
  - -Provide an optimistic "can do attitude" for workers to follow. Look for the good in people.
  - -Provide opportunities for the group to work as a team.
  - -Conduct sensing sessions with workers as a group to get their ideas and feedback on your policies.
  - -Keep workers interested in what's going on.
  - -Coordinate efforts of the team and show them how they depend upon each other.

- Get the worker involved.
  - -Seek opinions, suggestion, and ideas of workers.
  - -Take their criticism, and then ask how they would handle the situation.
  - -Be willing to make changes based on their recommendations.
  - -When a worker brings you a problem, make sure he has all his facts correct; then ask for a solution or recommendation.

-Provide all workers an opportunity to fully use their skills on their job.

- Develop initiative.
   -Delegate whenever possible.
   -Give willing and able workers some freedom in how to do a job.
   -Use subordinates' ideas from time to time.
   -Use mistakes as a learning experience, that is, "How could you/we have done that better?" or "Lessons learned approach."
   -Expect performance to be up to standards and on time without close checking.

- Provide positive supervision.
   -Take genuine interest in what your people are doing.
   -Take care of workers' welfare.
   -Stand by subordinates for their actions.
   -Reward good performance.
   -Solve worker's problems quickly and effectively.

- Set good standards.
   -RULE #1 – set the example. You are the standard they see.
   -Involve workers, when possible, in setting standards and timetables.
   -You set the example for "outstanding" performance.
   -Make standards challenging but not impossible.
   -Use standards to evaluate the project accomplishment.

- Use control measures.
   -Know what resources you have to work with, and keep track of them as the work progresses.
   -Establish measurable and realistic work targets and deadlines.

-Adjust resources when performance measures don't meet the standard but workers are willing and know their tasks.

-Require workers to follow established written laws, codes, operating procedures, and policies.

What "Right" looks like

- Tasks are completed correctly and on time. The attitude of your workers is such that it contributes to overall performance and teamwork.

16. Location

So you are in charge. Where do you spend your day? Naturally there are the continuous meetings, visitors, emails, phone calls, working lunches, etc. that sap your time and energy. But real leaders break away from their office. The MBA school answer for years has been, "Management by walking around." Though that is good public relations, just patting the workers on the back and looking interested in their tasks serves limited purpose. A better method is to be at the critical spot at the critical time.

When

- When you have a key portion of a project being worked on, deadline coming up, a scenario where someone may be at physical risk.

How

- Conduct your own risk analysis. Determine what can go wrong with the project and when and where it could occur. What are the important or fragile nodes?

41

- Study your workers involved at that point in the project where you have decided is a critical point. What is their experience for handling that part of the project? Can you trust them to do what is right and make the proper decision? Who is doing the quality control? Is the decision maker too close to that point in the project that he cannot see trouble on the horizon?
- Double check to ensure that the needed resources are available for the critical task and time.
- Double check blueprints, OSHA standards, protective equipment, the contract, whatever the expected parameters are.
- Block out your calendar for the day and, depending on your trust in the individual who will make the decisions at the decisive juncture, position yourself at the critical spot at the critical time that your risk assessment tells you something major could go wrong and throw the project off schedule or get a worker hurt.
- Do not make a habit of looking over your workers' shoulders during every task. Those who have gained your complete trust by demonstrating their knowledge, experience and, most importantly, good judgment, do not need close supervision. However, a second set of eyes, at the critical point of the job, can see a lot that others may not. Moreover, it shows your concern for the project and your personnel.

What "right" looks like

The critical part of the job is completed satisfactorily, nobody is injured, the workers know you don't just sit in an office all day, and they know you care about what they are doing.

17. Create a vision

No one will follow you simply because you are put into a leadership position. You have to have a clear idea of where you want to take the organization and convince your workers that your goal and method of getting there is in the best interest of the company and, hopefully, them. If your organization does not continuously grow, it dies. To grow it must change. But there must be a plan of direction. It is a leader's responsibility to see the future and communicate it through his vision statement. <u>This may be the most important task a leader accomplishes when he first takes charge of an organization or project.</u>   "*Where there is no vision, the people perish. – Proverbs XXIX, 18.*"

A vision empowers leaders by transcending day-to-day issues, creating a future context within which they can operate. A leader uses vision and values to mobilize people, to facilitate change and growth, to create a future for his or her organization. A vision is the first step in transforming the organization.

When

- When you first take over a project, job or other position of leadership

How

- Do your homework. Where does your leadership want the company to go? Often, in larger organizations, they already have their own version of a vision statement. How will yours fit in?
- Define what you are aiming to achieve in the future, and compare it with where you are now.
- Map out what you will need to bridge the gap, from extra staff or training to purchasing new technology.
- What is your mission? Learn all aspects of what needs to be done.

- What are your resources? Don't create a vision that is absolutely impossible to attain.   One of the hardest parts of creating a vision, especially on a project in a small organization, is developing a vision that stretches resources and abilities to their fullest extent but is still within reality.
- Keep your vision statement brief, clear, and prescriptive. Check out large company web sites and read their vision statements, are they logical or generalized confusing prose.
- How farsighted your vision is may depend upon the level and size of your project or organization. A department head's vision should be further than a small staff section.
- Visions need to be expressed as statements to communicate a clear understanding of the long-term aim and the principles underlying it.
- When writing a statement, ask yourself if anybody reading it would be able to extract a practical understanding of the business you are in, where your leadership is headed, and how it will get there.
- Focus your statement on the customers, on the people who service the customers, and on the constantly improved performance that will make your service better.
- Keep your vision statement simple, clear, and communicate it to your workforce again, and again and again. James E. Buerger, publisher of Travelhost National magazine, says, "A secret goal cannot benefit from the participation and force of others. A well-defined goal, shared with others and sparked with enthusiasm, will draw energy and forces that cannot be measured or suppressed."[25]

EXAMPLES OF VISION STATEMENTS:

<u>WEAK STATEMENT</u>   <u>BETTER STATEMENT</u>

We sustain a robust results orientation.

Plans, polices, and performance are designed for and by our associates, who partner with valued suppliers to achieve extraordinary customer satisfaction.

Our aim is to be the largest and best in our market.

We invest and change to double revenues every four years, while raising profits, cash flow, giving added value, and sharing the rewards.

What "right" looks like

- You have a consensus from top to bottom on where the organization is headed.
- Goals within the organization are developed in the context of the vision.
- Talking to workers, confirms they know the direction you want to move the company.
- Workers are not afraid of change; they have a sense of what the future will look like.

Ethics and mastering the leadership skills just described, will put you well on the road to becoming an outstanding leader. The goal is to apply your ethics and leadership skills to engineering.

4.0 Leadership in Engineering

Max DePree in *LEADERSHIP is an ART*, describes leadership:

"The first responsibility of a leader is to define reality. The last is to say thank you. In between the two, the leader must be a servant and a debtor…A leader is one who rules like the one who serves. Leadership is a concept of owing certain things to the institution…Leaders owe a clear statement of the **values of the organization**. These values should be broadly understood and agreed to and should shape the organization and individual behavior…Leaders owe a certain maturity. Maturity is expressed in a sense of self-worth, a sense of belonging, a sense of expectancy, a sense of responsibility, a sense of accountability, and a sense of equality…"[26]

John C. Maxwell defines leadership as: "Influence!" "Inspiring others to do better work is the accomplishment of a leader." Moreover, Maxwell insists, "The key to success in any endeavor is the ability to lead others successfully."[27] Leadership, i.e., influence, is applicable from the lowest soldier to the highest CEO, from the smallest firm to the largest global corporation, from the smallest town to the largest city, and from the smallest to the largest country.

The most important part of leadership is for the leader to be grounded in ethics and reality, the "Be" and "Know" components of the leadership trilogy. You must know what the true situation actually is, both ethically and in reality. Most engineers are trained to think for the worst case scenario. We try to design for the worst failure and think in those terms, what could go wrong? Unfortunately, the nature of this worst case type of thinking can cause a pessimistic attitude. Conversely, there are other people who are overly optimistic and approach everything with the attitude that there are no problems and that everything will work out, despite the fact that the walls are falling down around them. Pessimism and optimism are at the extreme ends of the spectrum and neither is grounded in reality.

The movie *Downfall* or *Untergang* in German depicts the last ten days of Nazi Germany during World War II. The movie is based on the testimony of Adolph Hitler's secretary, Traudl Junge, and takes place in Hitler's bunker. As the Russian Army surrounds Berlin and the American Army pushes forward through Germany, Hitler is in his bunker still plotting moves. The war is lost, but Hitler does not see reality. He is a leader not grounded in reality, ethically or otherwise.

The best leader is the one grounded in reality, including ethical reality. The best leader knows what the worst case is and how to compensate for it, but is

optimistic enough that the job will be accomplished by her/his followers. In other words, the leader is realistic.

How do you get to reality and be realistic---the "know" component of "Be-Know-Do"? Experience, in one word! Experience is your guide to reality and allows you to use inductive reasoning. However, suppose you do not have the experience. What do you do? Learn vicariously, experience through others. Research and read everything you can get your hands on about the subject. Interview people in similar circumstances. Chances are that someone, somewhere has encountered the same problem. Learn how they handled the problem. Become involved in professional organizations. Professional organizations have people who are a largely untapped information source.

Training adds to your experience, but it is vitally important to your followers. Training instills knowledge and confidence to you and your followers. The Army spends vast amounts of time and money training. Training together builds teamwork and allows trainees to know one another, who they are and their character. You would not play a real football game without practicing, and you can not effectively lead without training. Even on-the-job training is still training, but in an informal way and susceptible to mistakes.

Perhaps the greatest benefit of training as a team is the building of trust. Trust is that fundamental ingredient of all relationships. Trust starts with ethics, "Be," and follows with "Know." Trust influences people and influence is leadership.

What Does Leadership For Engineers Portend for the Future?

The age old question is what is going to happen in the future? What are we going to see in the future? How do we prepare to lead into the future? A look at history helps us predict our future. Specifically, engineers must look at the history of technology to help predict the future; and, as leaders, how we will lead in the future.

Flattened Information

The World Is Flat, by Thomas Friedman describes a scene from the U.S. military command center in Iraq. The scene is a large flat-screened TV

showing some people (bad guys) moving behind a house. The TV picture was in real time from an overhead camera. On the right side of the TV was an instant-messaging chat room. The overhead camera was mounted on a pilot-less U.S. Predator drone being flown by a person located at Nellis Air Force Base in Las Vegas, Nevada. At the same time, the video was being watched by the U.S. Marine 24th MEU in Iraq, the U.S. Central Command headquarters in Tampa, Florida, U.S. CentCom regional headquarters in Qatar, the Pentagon in Washington, D. C., and elsewhere. The military traditional chain-of-command had been "flattened" by everyone viewing the same events at the same time, real time. There was no passing on of information, everyone was on the same page at the same time. Privates and generals alike, all viewed the events unfolding.[28] Information was not passed down, it was horizontal and spread out to everyone.

What does the flat-screened TV have to do with leadership and business? The military with its rigid chain-of-command structure has been "flattened" by instant and simultaneous information sharing, from the lowest rank to the highest rank. Decision making is more democratic. This "flattening" Friedman describes, is happening in leadership, business and economics. Everybody knows what everyone is doing instantaneously, and this is true in leadership, business and economics, globally.

What does this mean to us? Simply, leadership and business that we see today will change in the future. How?

Knowledge Leadership

Peter Drucker, called by some "the father of management," provides us with some clues. Aside from being brilliant, Peter Drucker studied the leadership and management of the past and integrated his experiences into his studies to provide clues for the future. Drucker's experience was extensive until he died at age 95 in 2005. He was still writing on management a year before his death and observed considerable changes during his lifetime.

Peter Drucker predicts that the information technology era will demand knowledgeable users that will transform the organizational structure of business and leadership that we know today, particularly for large corporations. The day of the Knowledge Worker and Knowledge Management is here. Large corporations of the future will employ half the levels of management and one-third the managers as today.[29]

Work or labor will be done by specialists, knowledge workers. Moreover, leadership, coordination and control, will depend on influencing worker's willingness to produce and be disciplined in their approach, professionalism if you will. Together, this will be knowledge leadership and management. The knowledge leadership and management will dictate a new form of organization in the future.[30]

Importantly, businesses will have no choice except to become information based. There will be no more "burying your head in the sand." Information makes business much more dynamic. The internet connects everyone globally. There are even professional outsourcing associations whose members are involved in outsourcing as customers, providers, and advisors, spreading globally.[31]

"Information," states Drucker, "is data endowed with relevance and purpose. Converting data into information thus requires knowledge. And knowledge, by definition, is specialized."[32] Accordingly, these specialists become knowledge workers in the new knowledge leadership.

A Look at the Past to See the FUTURE

Peter Drucker in *Managing In The Next Society,* attributes the new economy and new society to fundamental changes in both developed and developing countries. Attributing factors are: (1) the information revolution, discussed above; (2) demographics, falling birth rates and shrinkage of younger workers; (3) manufacturing decline, in terms of wealth and jobs; and, (4) transformation of the work force and its splintering.[33]

What are the bases for Drucker's opinions? Going back in history to the Industrial Revolution, he says that the Information Revolution is at the same stage as the Industrial Revolution in the early 1820s, forty years after James Watt improved the steam engine. The improved steam engine improved production, and by the end of the Napoleonic Wars, cannons were made ten to twenty times faster and the cost dropped by two-thirds. This gave rise to the working class in the factories, which changed society.[34]

Prior to the Industrial Revolution, families were the unit of production, mostly on the farm in an agrarian society. Both on the farm and in the artisan's workshop, the family all worked together. The Industrial

Revolution took the worker away from the family and into the factory. The factories for the most part started in the cities where the labor supply was located. The jobs attracted those from outside the cities and a shift away from the farms into the cities started to take place.[35]

In 1829, railroads changed the economy, society, and politics forever. The railroad created not only a new economy, but a new mentality regarding distance. Humans had true mobility. Railroads were followed shortly by the telegraph, photography, and the fertilizer industry. New social institutions came from the new technologies such as a modern postal service, daily newspapers, and investment and commercial banking. Psychologically, society was different. Somewhat similar to the 1455 Gutenberg printing press revolution that completely changed Europe's economy and psychology, when books and information were mass produced from then on.[36]

In America, the new social mind-set welcomed "inventors." Inventors were American folk heroes and were rewarded socially and financially. These were the new "technologists." By the 1850s, America and Germany were overtaking England as the predominant industrial economy. The reason was social. England never accepted the "technologist" socially. Moreover, England failed to develop the venture capitalist that financed the unexpected and unproven inventions. England stayed behind with a more formal and rigid system for scientific advances.[37]

Today, the Information Revolution

The Information Revolution is here! Processes are routine, saving time and money. Psychologically, learning has taken a tremendous leap. Children are developing computer skills with their toys. E-commerce is changing the economy, society, and politics. Distances have shrunk to insignificance. Businesses are competing in a global market. Websites provide information on almost everything. Information is a mouse click away. E-commerce has changed how customers buy and what they buy. E-commerce has changed consumer behavior, banking, savings, industry, and the entire economy.[38]

Where are we going with leadership, ethics, and society? Drucker is convinced a drastic change in the social mind-set is required in the future. Just as the leadership in the industrial economy drastically changed from the agrarian social norm to the industrial revolution's shift in social processes,

so too must the Information Revolution create social changes. He says the Information Revolution is really the Knowledge Revolution.[39]

"The *key* to maintaining leadership in the economy and the technology that are about to emerge," says Drucker, "is likely to be the social position of knowledge professionals and social acceptance of their values." If they are to remain traditional employees, the U.S. will likely slip back into pre-1850 England's non-acceptance of technologists, probably with the same result.[40] The U.S. would fall behind other countries because of its failure to change socially.

New Society and New Organizations

The creation of knowledge workers requires a new society and organizations. Satisfying the knowledge workers' values, social recognition, and social power will have to be added to knowledge worker compensation. Knowledge workers will demand satisfying values, social recognition and power, that transforms them from subordinates into fellow executives, and from employees into partners.[41] In the past, executives were usually more knowledgeable than the employees in the business, in part because they controlled information. With knowledge workers, executives are no longer more knowledgeable because the business has "flattened" and everyone is on the same page, except that knowledge workers are one step ahead of the executives in their specialized field.

Organizational Change

Organizations can no longer rely on their competitive advantage of knowledge or know-how because technology spreads knowledge, globally and instantly. The advantage America enjoys presently, and possibly the next thirty to forty years, is a substantial supply of knowledge workers. Knowledge workers are not created overnight. It takes time and resources to produce knowledge workers and keep them knowledgeable. For example, China has 1.5 million college students out of a population of 1.2 billion people. That same student to population ratio in the United States would be roughly 250,000 college students. Today, just the State of Texas has well over 250,000 college students.[42]

What does the rise of the knowledge workers portend for the CEO of a corporation? The CEO will be more accountable for his or her results and

leading by charisma will no longer suffice. Long term policy will have to become flexible and adaptable to changes overnight as the business environment changes. The corporation will have to adapt by "flattening" its structure and utilizing knowledge workers.

Today, tremendous competition and performance demands are changing the very structure of organizations. The classical organization of today is vertically integrated and self-sufficient. It has a command and control, hierarchical, structure that owns, manages, and controls many of its production factors, making it somewhat self-sufficient. This structure is changing whether it wants to or not.

There are two key reasons forcing the change in organizational structure. First, technology forces shorter and shorter investment cycles, in turn, forcing new investment by the organization just to maintain status quo. For example, computers and software are advancing at such a rapid pace that a two year old computer and software is outdated. It is not just computers and software that outdate; it is almost everything in the organization, causing the investment times to shorten. Second, operational activities throughout the organizations are becoming more specialized and knowledge driven causing the self-sufficient, vertically integrated, organizational structure to collapse and "flatten."   Specialization and knowledge are expanding at such a great rate, globally, that it is practically impossible for the organization to maintain state-of-the-art expertise in every facet of its business, let alone develop new state-of-the-art expertise to gain a competitive advantage.[43]

As the organization slides below its standard of quality, the result is diminished capacity, higher costs, reduced performance, and loss of competitive advantage. In response to this global, intense competition and required performance, organizations must be better focused and better specialized. They must evaluate every activity. Those areas that provide competitive advantage will receive increased internal investment. Those areas that do not provide competitive advantage will either be eliminated or outsourced to external providers. Outsourcing will be the other option to an area that does not meet the competitive advantage criteria.[44]

Moreover, corporate ownership and governance is changing. Pension funds and institutional investors are changing ownership interests in corporations globally. The "financial people" mentality wants increased profits above all else, often not caring about the long term outlook.[45]

There is precedent for what Drucker points to as a new corporate structure. Corporations will have structures similar to orchestras, hospitals, universities, professional sports teams, and trial lawyers, which have all used the new corporate structure for quite some time.[46]

The New Corporate Structure

Winston Churchill once said, "The further backward we look, the further forward we see." This is true in a sense.

We know orchestras, hospitals, universities, professional sports, and trial lawyers have been around for quite some time. So, the new organizational structure has been seen before.

Work, however, will be done differently. Traditional departments will serve to protect their standards, such as quality and ethics. The difference is that departments will not do the work, they will do training and assigning specialists or knowledge workers. The departments will assign task focused teams to do work. This change is underway. Research in pharmaceuticals, telecommunications, papermaking, and marketing is being replaced by specialists working together as a team. The team works together from inception of research to a product's establishment in the market. Task force teams, their assignments, their composition, and their leadership will be decided on a case by case basis.[47]

One thing is clear, organizations and teams will require greater self-discipline, greater individual responsibility and communication, and greater trust throughout. Trust can be built by ethics and ethical leadership.[48]

What will these transformed organizations look like? There will be a shift to the orchestra, hospital, university, professional sport, and trial lawyer form of organization. The amount and timing of the shift in organization will depend upon the type of business the organization conducts from a knowledge point of view. Research is highly knowledge influenced and that shift has started. Lesser knowledge influenced organizations will shift more slowly.

Eventually, most organizations will have to shift to this new organization. The new organizational form should morph into something similar to the

orchestra/sport, hospital/university, trial lawyer organizational form. The orchestra/sport organization has highly skilled players organized into sections that are coordinated together to achieve an objective. The conductor or head coach has section or skilled position leaders. The conductor has a lead trumpet with the trumpet section who works with the trumpet section to mesh with the conductor and rest of the orchestra. The football head coach has an offensive coordinator and defensive coordinator with several specialist coaches under them, such as the defensive and offensive line coaches, backfield, tight end, quarterback, receiver coaches, and special teams coaches. They all have to mesh to become a team. A common characteristic is that the orchestra plays off the same sheet of music and the sports team has the same game plan for the team. In other words, they have the same goals and objectives despite being different in their contribution.

Looking at the hospital/university organizational form we can take an example of a hospital of some 400 beds. The hospital will have several hundred physicians in different disciplines. Then there are 1,200 to 1,500 paramedics divided into some 60 medical and paramedical specialties. Each specialty has its own training, its own language, and its own knowledge. Some paramedical specialties, such as a clinical lab or physical therapy, have a head person who is a working specialist instead of a full-time manager. The head of each specialty reports directly to the top or the organization, with very little middle management. Universities have a similar organizational structure.[49]

Trial lawyers have a case by case or project organization. In a typical products liability case, the trial lawyer has to prepare a comprehensive, cohesive, coordinated presentation to a jury with numerous highly educated expert witnesses and ordinary everyday witnesses. The expert witnesses are broken down into two categories: liability and damage. In an aircraft products liability case there could be a pilot expert, aerospace engineering expert, quality assurance expert, metallurgist, meteorologist, flight controller, and on the damage side, an economist, accountant, vocationologist, rehabilitation doctor and therapist (for survivors), psychologists, and pathologist as typical expert witnesses. All are working as a task related team with the goal of winning the trial.

The new organization will shift to something similar to the orchestra/sports, hospital/university, and trial lawyer organizations. These are knowledge

based organizations. A great university is great because it can attract and develop outstanding teachers, scholars, and researchers and makes it possible for them to do outstanding teaching and research. The same is true for an opera house.

Drucker maintains the knowledge-based business most closely resembles a knowledge-based symphony orchestra. Some thirty different instruments are played. A great orchestra is not composed of all great players but adequate players who produce at their peak. A new orchestra conductor or head coach generally can not fire players he or she inherited and usually can not just go out and hire new players. He or she has to make the inherited players productive. This is done by working closely with individual players and individual sections. People relations makes the difference.[50]

Accordingly, executives will have to learn what the effective university department head or successful orchestra conductor already knows, "The key to greatness is to look for the potential of people and to spend time developing it." To build a world-class orchestra requires rehearsing a piece over and over again until all the players sound the way the conductor wants to hear it.[51]

One way to achieve leadership in the knowledge-based business is to spend time with the promising knowledge professionals, getting to know them and be known by them, mentoring them and listening to them, challenging them and encouraging them. These people will be the organization's greatest resource, whether or not they are employees of the organization. Leadership and people relations are vital in the new organization. More so, than ever before! Executives must make sure the knowledge workers have professional development, motivation, satisfaction, and productivity. After all, the executive's performance is dependent upon the productivity and satisfaction of the knowledge workers on his team.[52]

One thing is certain, leadership will be crucial in the new organization!

Model of the New Organizational Structure

Is there a model of the new corporate structure? Yes, look at Caterpillar, Inc. of Peoria, Illinois. Caterpillar "obliterated its centralized hierarchy and shifted decision making on design, manufacturing, and pricing to 22 autonomous businesses, each run by an executive with profit-and-loss

responsibility." The results: profits per employee increased ten times and bulldozers that took three days to build are finished in one day.[53]

Moreover, other organizations have changed:

"At General Electric's leadership development institute in Crotonville, New York, fifty pupils are busily working on a problem. It's not a case study. It's a real problem, a sourcing issue that is hampering GE's drive to six sigma quality. If these teams solve it, that answer will be worth tens of millions of dollars to the company, and these managers will have some valuable tools they'll use for the rest of their careers. The facilitators are all GE veterans---part of the company's elite six sigma black belt team. But most of the pupils don't even work for GE. They work for the company's suppliers.

    In Bosnia, a young U.S. Special Forces captain in his thirties conducts a briefing in a cold, bare room. Tensions are high in this corner of the war-torn Balkans as various ethnic groups move back to their homes after years of fighting. The captain lives in a rented house, drives a private vehicle, and lives with a team of half a dozen Special Forces noncommissioned officers and their interpreter. They all wear small side arms but have never drawn them. Instead, they meet daily with local politicians, religious leaders, businesspeople, and military leaders of the local armies and the international peacekeeping force. They don't order or command, rather they persuade by brokering deals, defusing arguments, providing assurances, and issuing warnings. When they need to, these men can be fearsome warriors. On this mission they are diplomats."[54]

In order to succeed, the new organization must be committed to its mission and its leaders must lead suppliers, customers, partners, and volunteers. Leaders who succeed, guide people to assess the reality of a situation and develop a beneficial course of action, then influence them to carry out their mission. Where leaders do not have direct control, they must influence others by teaching them to be leaders. Oftentimes, people on the front lines know more than the people at the top about the specifics of any part of an operation. It is the front line people who are most likely to see challenges and opportunities first. This team approach is essential in the new organizations of tomorrow.[55] When Bruce Brant wanted to know how his brigade was functioning, he visited the troops in the mess hall chow line and talked to the privates. They talked freely with the man in command about how things were run and what needed to be done from their viewpoint.

The new team organization has another benefit, if some member jumps ship and leaves, the team can carry on the mission. Remember when Cleveland Browns NFL superstar Jimmy Brown retired? Jimmy Brown was arguably the greatest football runner of all time and many believed his retirement was pre-mature. The next season, Leroy Kelly jumped into Jimmy Brown's position and led the NFL in rushing. The team was able replace Jimmy Brown and carry on its mission.

5.0   Society, Technology, Ethics, and Leadership

The 20th Century may become known as the technology century because society incorporated a huge number of technological advances during the century. We became a technological civilization. In the 20th Century mankind developed an ability to transport people around the world in a matter of hours and voice communication became instantaneous to any part of the world. As never before, we can feed, transport, entertain, clothe, heal, and **kill** *each other* by technological means.[56]

Our advanced technology is not only a source of benefit to society; it can be detrimental to society as well. In other words, technology is a two edged sword. Technology compelled huge changes to our social fabric. Our shift in population to the cities, buildup of giant corporations, organization of labor, mass production, higher standards of living, world wars, growing dependence of national strength on technology, and the competition between government control and free enterprise, all, really gained strength in the 20th Century and are continuing into the 21st Century.[57]

Technology, at first was welcomed as good for society and brought advancements for society. Unfortunately, the other side of the sword seems to be surfacing; technology is creating societal problems. For example, TV. TV produces millions of dollars and provides jobs all over the world and communicates more than its inventors ever envisioned. However, TV now dominates presidential elections. Today, presidential contenders must have a good TV presence and appearance in order to be credible and considered as presidential material. TV shows, like the *West Wing,* may shape our thoughts of what a president should look like, act, and be. TV also educates our youth for good and for bad. TV and videogames have usurped the attention of our young and influences, thus, leads our youth. TV, as a youth

leader, determines our political leadership and education for the next generations. The desirability of the social affect of TV was not considered by society, it just happened. TV technology did not have a controlled response by society; it had an uncontrolled response by society. TV controls many of our lives.[58]

TV will be with us, but it can be controlled by our market response and/or legislative control. Similarly, computers and the internet are shaping societies globally. Pornography dominates society as never before. Legislative control may be required for pornography and other societal problems associated with computers and the internet.

Mankind is dependent upon more and more scientific research and technological development, relying on it to improve our lives.[59]

Technology Creates Ethical Issues

Technology can produce horrible detriments to our societies. Pesticides and fertilizers expand our food supply, but carelessness creates frightening risks. Many of these technological advances produce cancer risks and no universal cure for cancer has been discovered. Moreover, advances in medicine have increased costs in medical services and hospitalization. Associated costs are such that a health care financial crisis looms on the horizon. Technology has not produced jobs for everyone and has not produced cheap sources of environmentally clean energy. Nuclear power as a cheap source of electrical energy has fizzled amongst societal pressures fueled by the unknown.[60]

Huge regulatory bureaucracies have been established by governments, not just in the United States but globally, to deal with the unacceptable harm emanating from technological advances. Now, high technology may be seen as a doubtful way to a better life.[61] Moreover, ethics in high technology is being brought into question. For example, the ethics dilemma associated with "designer babies."

Triangle of Society—Technology—Liberty/Individual

Simon Ramo, Ph.D. in Electrical Engineering from Cal Tech by age 23 and the "R" in TRW a large defense firm, discusses the Triangle of Society—Technology—Liberty/Individual.[62]

If the results of technology are not suited for society, then we must humanize the technological society. We must organize to lead technological advances, rather than follow them as we have done before. We must be *masters of our technology, NOT slaves to it.*

How we select our objectives and priorities for our decision making will determine our success with technology, the benefits rather than the detriments. Objectives and priorities are the critical requirement for social innovation, organizational innovation, and innovation in a way to maximize our benefits from science and technology. Of course, these objectives and priorities must be ethical to benefit society.

Ramo has proposed guidelines, or an appropriate philosophy, for society to follow when making technological innovations and decisions. The goal is to humanize the technological society. Our civilization has created two guiding foci. One focus is on *Liberty/Individual. Liberty/Individual* is the innate desire of human beings to be free and to decide their best interests independently of others.   It is to act as people choose, free choice. The other focus is on *Society. Society* develops a rule of law, accepted ethics, and patterns of organized approaches to societal problems. *Liberty/Individual* and *Society* are "joined at the hip," so to speak, and allow humans beings to co-exist on our planet. *Liberty/Individual* and *Society* are very different, but are inextricable intertwined.

Life works best when *Liberty/Individual* and *Society* are in balance. Thus, when the *Liberty/Individual* freedoms we give up, and the regulation or law we impose on ourselves are acceptable; and, *Society* releases control of the individual, our civilization becomes optimal or good for everyone. There is a constant "give and take" between *Society* and *Liberty/Individual.*

To improve life and the long-term future for mankind, we must become an organized global society through coordination and cooperation. This coordination and cooperation will involve a continual contest between individual freedom and government and/or multinational control.

Technology, however, requires more than just the balance between *Society and Liberty/Individual.* Technology requires us to add a third focus; that is *Technology* itself. The *Society—Technology—Liberty/Individual* can be

thought of as a triangle with each vertex dependent on the other two vertices as shown below.

Technology Triangle
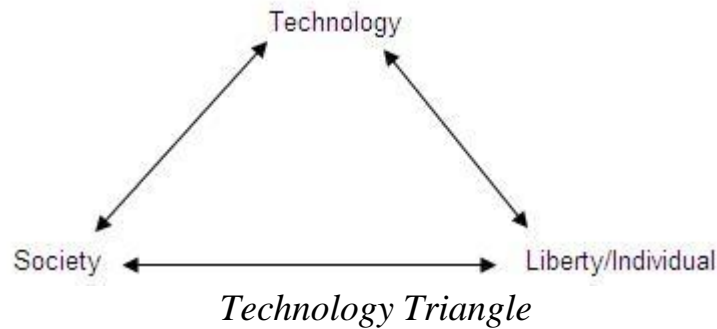
Technology depends on *Society* which depends on *Liberty/Individual* which, in turn, depends on *Technology.* Anyone who does not believe *Society* and *Liberty/Individual* depend on *Technology* only has to observe what happens to a city when the lights go out.

Scientific discovery drives *Technology* and is dependent on *Society* for its resources and to *Liberty/Individual* for thought and pursuit. *Technology,* to some extent, is independent because it develops from the laws of the universe or natural law, which *Society* and *Liberty/Individual* can not change. (Neutrons are still neutrons in spite of what congress says.) Accordingly, once *Technology* is discovered, it by its nature becomes accepted. Like it or not, the "genie is out of the lamp."

The *Technology Triangle* involves big and small issues. Technology involves everyone, from small communities to the whole world. For example, picture the orderly flow of traffic through an intersection. Some measure of liberty is given up to stop at a red light in the interest of safety. Some societies allow individuals to own guns, but prohibit ownership of atom bombs. Societies have organized procedures for controlling pharmaceutical drugs. *Technology* produced information that identified smoking as a cause of cancer and other associated diseases. However, *Society* deems it necessary to only issue warnings because *Liberty/Individual* insists on freedom to choose. *Society* on the other hand governs nuclear power plants, cable TV practices, and limits automobile companies in safety and environmental aspects of cars they produce.[63]

Globally, the *Technology Triangle* applies to individual nations not to act unilaterally, restricting their freedom. The nations of the world give up some of their freedoms to act and are required to cooperate with other

nations for mutual benefit. Thus, nations have accepted procedures for allocating bandwidth or radio spectrum for the good of all. The cooperation of nations is easily identified by global, multinational, corporations and governmental organizations of the United Nations, World Trade Organization, World Bank, International Monetary Fund, and others that balance societies—technology—liberties/individual, and nation states.

Interestingly, the *Technology* triangle is useful for the national security of nations. It shows the balancing of the potential for peace and war. Nations of the world give up a measure of their power of self-governance to world organizations, such as the United Nations and World Trade Organization. Accordingly, the nation's freedom becomes subservient and the world organization has the power to enforce sanctions and compliance. Thus, there is "give and take" between world organizations and nations.

"Production Bastards"

Years ago, Bill Blackwell told the story of what he termed "production bastards." Bill worked in the metallurgy lab for Monsanto and a new production manager arrived. The new production manager's first goal was to increase production. Monsanto had a piece of production equipment that had a twelve inch diameter steel shaft. The new manager's methodology was simple, he would run the piece of production equipment at 110% overspeed to boost production. To his surprise, the twelve inch steel shaft snapped with a very loud noise. Thus, emanated the terminology of "production bastard," someone who would do anything to increase production, despite the danger, and try to make himself look good.

It is the "production bastard" that requires society to regulate overzealous idiots to protect society from their harmful ways.

Ramo explains that even in technology heaven, three criteria are required for technology:
1. The technology must be readily and feasibly extendable.
2. The cost to implement must not exceed its value.
3. The technology must have social acceptance.[64]

As part of the feasibility, technology must deal with the dangers, excluding and minimizing possible hazards. The science and technology of safety,

health, and environmental protection **(SHEP)** are applied to individual technical projects which require a major effort and organization.

The second area of cost is made more severe by addressing the hazards problem. The costs must still be lower than the promised benefits, but preventing hazards, risk analysis, could cause the cost to exceed benefits and prevent the technology from being feasible.

The third criterion, social acceptance could be a technology killer. Decades ago, technology might pass all three criteria, but today fails the last test of social acceptance. The social acceptance criterion really becomes an ethical value judgment. Moreover, the ethical value judgment may be difficult to foresee, since it can vary and relies on perception by citizens who are not directly involved in the technology and generally not educated in the technology. The prime example is nuclear power technology. Citizens of several countries have perceived a risk greater than the benefit to society.[65] Even if the public was convinced of the technology's safety, it may doubt the "production bastard's" misuse.

*How Must Leaders and Engineers Handle the **SHEP** Problem?*

Safety, health, and environmental protection (SHEP) problems are ethical value judgments and must be recognized as such. Trust must be established, not fancy public relations, but actual trust. In the 1970s, the callused attitude permeating the nuclear industry was "if they don't know what is good for them, let them freeze in the dark." This attitude did not foster trust.

A careful SHEP risk analysis must be done at the conceptual design stage, continue through implementation stage, and follow through continually in the production stage. Public trust must be established from toys to airplanes to nuclear plants.

Public trust demands ethical leaders and organizations. Ultimately, technology decisions will be determined by the free market. Unfortunately, the free market by itself is not fully capable of assessing the SHEP problem, especially for the long-term future. Moreover, society can not assume organizations will police themselves. Enron, Arthur Anderson, Tyco, WorldCom, and others have provided ample evidence that organizations will not police themselves and can not be trusted. As a result, society demanded

action and the Sarbanes-Oxley Act (SOX) was quickly passed by the U.S. Congress and signed into law.

Further, the study of science and technology, investigations, data gathering, statistics over large time frames and large geographical areas requires organizations of substantial size and means. The scope and interface presents a difficult organizational problem between the private, Liberty/Individual, and government regulators, Society. As the complexity grows, more and more governmental regulatory duties have grown to handle the SHEP problems.

As we know, the results of governmental regulation have so far not been very good. Regulation of SHEP has been costly, delayed benefits, and all too often failed to provide needed protection. For example, Viox and other drugs have come to market, killed, and then been re-assessed. Leadership in our technological society must realize, more than ever, the SHEP risk/benefit analysis, requiring the need for governmental regulation, must be contrasted with the handicap to progress that regulation can create.

The SHEP regulation is difficult because defining acceptable risks is a difficult and inexact task. We can measure SHEP for use of fertilizers and pesticides, operation of automobiles and airplanes, operation of nuclear power plants and coal plants. Unfortunately, we still have not determined a level of acceptable risk. Moreover, "acceptable risk" changes. For example, in August of 2005, a Category 3 hurricane levee system for New Orleans was an acceptable risk. Today, the "acceptable risk" will be higher.

What we define as "acceptable risk" depends upon how much we are willing to risk losing. Most often, the "acceptable risk" does not directly affect the persons determining the "acceptable risk." **"Acceptable risk" becomes an ethical value judgment.** It is very difficult to put an economic worth on health improvement and prevention of accidents. Moreover, the free market does not set a price for an extra year of life or one month's supply of fresh air.

Comparing Alternatives---Risk and Regulation

Without question, technology requires regulation. New technology creates new regulation. Most regulation involves some sort of societal risk. Unfortunately, there is no such thing as zero risk. The closer society tries to

achieve zero risk, the more expensive the regulatory bureaucracy becomes. Technology decision making must examine alternatives. The solution is to compare alternatives, sometimes imperfect options, and balance risks versus benefits, when developing rules and regulations for application to the technology. We must realize that an overly severe regulation is not necessarily an error on the side of safety. An overly severe regulation may have a negative impact on productivity, employment, and investment as well as reduce competitiveness in the world market.[66] Examples are plentiful, aviation, nuclear, pharmaceutical, environmental, regulations all have affected productivity, employment, and investment. Unfortunately, society has been forced to protect itself from technology, ethics, or lack thereof, and the "production bastard." In so doing, society has many times overcompensated.

Often, governments regulate in self-contradictory ways and against common sense. For example, consider automobile regulations. Governments introduced strong air pollution restrictions on automobiles without considering the long term impending oil shortage. Mandated unleaded gasoline lowered automobile performance, increasing the demand for more oil. Refineries produced less gasoline from a barrel of crude oil and more refinery capacity was required due to regulation, which at the same time, increased additional air pollution from the refineries. The regulations were legislated as a societal reaction for cleaner air quality, particularly in large cities.[67] Perhaps, mandated ethanol blended gasoline would have been a better regulatory alternative.

Interestingly, Simon Ramo recognizes the craziness of governmental regulations in the nuclear industry, "Few records of government regulatory activities can match---for confusion, illogic, inadequacy, and sheer randomness of decision making---that of the U.S. government in handling the licensing and control of nuclear reactors to generate electric power…A prime example of regulatory malfeasance by the government is its failure to handle the problem of nuclear waste disposal.[68] Unfortunately, it is not just the United States that has craziness in its regulations. Germany, Great Britain, and other countries have followed the U.S. illogical lead.

Over regulated and poorly managed technology by a government presents a severe handicap to beneficial technological advancement. **Regulation involves a complex mix of science, technology, economics, politics, and personal value judgments or ethics.** Ideally, business leadership would

contribute substantially to sound regulation of technology. Any firm engaged in technology that might impair health, safety, or the environment would base its price structure on fully covering the expense of adequately addressing the associated risks with its technology. Moreover, its equally ethical competitors would experience the same costs. Therefore, ideally, there would be no cost disadvantage.[69]

Unfortunately, even coming close to the "ideal" firm engaged in technology is unrealistic. It just is not going to happen! When all is said and done, regulation becomes a question of how safe is safe? How safe is safe will always be a value judgment or ethical consideration. The inescapable dilemma is risks versus costs, and lower risks invariably mean greater costs. "The best industry can do in working out risk-safety-price relationships is to anticipate and meet market requirements where they are applicable and government-imposed regulations where they exist."[70]

Balance SOCIETY---TECHNOLOGY---LIBERTY/INDIVIDUAL

What have we learned so far? It is inescapable that ethics must play an important role in our lives, personally, professionally, and on a global scale, particularly with technology. Moreover, strong leadership will be required in our knowledge worker future.

Ethical engineering leaders must realize that the Society-Technology-Liberty/Individual triangle requires balance. Ethical engineering leaders must realize technology promises benefits to society, but also threatens harm. Ethical engineering leaders must realize liberty/individual provides freedom to innovate, but is held in check by society that insists on rules. The Society-Technology-Liberty/Individual triangle must be understood as constantly interconnected with each aspect influencing each other. Balance is the key, fortified by ethics and leadership.[71]

6.0 Differences between Leadership and Management

The Army has a regulation that defines the differences between leadership and management. Leadership is the process of influencing others to accomplish the mission by providing purpose, direction, and motivation. Effective leadership transforms human potential into effective performance. Management is the process of acquiring, assigning priorities

to, using resources (people, money, materiel, facilities, information, time, etc.) in an effective and efficient manner.

The Army specifies the responsibilities of the leader to be:

1. Accomplish the unit's mission.
2. Ensure subordinates' welfare to include physical, moral, personal, and professional well-being.
3. Effectively communicate vision, purpose and direction.
4. Set and exemplify the highest professional and ethical standards.
5. Build cohesive teams.
6. Empower subordinates.
7. Develop subordinate leaders' skills, knowledge, and attitudes.
8. Build discipline, while stimulating confidence, enthusiasm and trust.
9. Anticipate, manage, and exploit change.
10. Anticipate and solve problems.
11. Act decisively under pressure.
12. Evaluate and accept risk to exploit opportunity.
13. Treat subordinates with dignity, respect, fairness and consistency.

The regulations also state that all Army leaders have a responsibility for personal acceptance of the Army ethic and for instilling in subordinates those values (loyalty, duty, respect for others, selfless service, honor, integrity, personal courage) that comprise the Army ethic.

The chief leader in an Army unit, normally is the commander. Command is the legal authority vested in an individual appointed to a position in the chain of command. Command carries with it special powers of responsibility and accountability which are associated with the position. Commanders are sometimes relieved of their command (fired and career ended) for not meeting the leader responsibilities in the Army leadership regulation. Normally you won't see as drastic of measures taken with a manager/staff officer.

Harvard professor Dr. John P. Kotter has performed substantial research and writing differentiating leadership and management. He says both are necessary for success in an increasing competitive, complex, volatile business world. With only strong leaders, the business would be

chaos. Without the leader, the business would stagnate. The manager takes the leader's vision or grand strategy and applies organization process creating productivity.

Dr. Kotter simplified the management process that evolved over the last century into three basic areas.

1. Planning and budgeting. This takes the leader's vision, breaks it down to realistic objectives, each with a target or goal and a timetable, and then finds and distributes resources to support the process.

2. Organizing and Staffing. The manager sets up an organization, figures out what skills are required to meet the objectives, finds qualified workers, communicates the plan, and monitors their progress toward meeting their target.

3. Controlling and problem solving. The manager constantly compares how the plan is being implemented with where it is suppose to be at that point and time. S/He does this through reports, meetings, observation and other methods, always trying to find deviations from the plan. S/He then tries to put the plan back on the right path when deviations occur.

In contrast to the manager, Kotter, believes the leader's main function is constructive or adaptive change. He lists three sub-processes that are normally the functions of the company leadership.

1. Establishing direction. The leader creates the vision of the distant future and the strategy for constructing the changes to meet that vision.

2. Aligning people. Communicating the path for meeting the vision is needed to gain a commitment from the workers which produces greater results than employees just putting in their time on the job.

3. Motivating and inspiring. The road to the end state of the vision is continuously blocked by problems such as depleting resources, changes to leadership, personnel problems, market changes, etc. The leader must not let his workers lose focus.   Appealing to their basic needs, values, emotions, loyalty, etc., keeps them focused.

In the *Harvard Business Review*,[72] Dr. John P Kotter gives an excellent business focused definition on the subject. Leadership and management are two distinctive and complementary systems of action. Both are necessary for success in an increasingly complex and volatile business environment. Companies with strong leaders but weak management are no better, and sometimes worse, than the reverse. The real challenge is to combine strong leadership and strong management and use each to balance the other.

Management is about coping with complexity. Its practices and procedures are largely a response to the growth of large, multifaceted organizations. Without good management, complex enterprises tend to become chaotic in ways that threaten their very existence. Good management brings a degree of order and consistency to key dimensions like the quality and profitability of products.

Leadership, by contrast, is about establishing direction and coping with change. Part of the reason leadership has become so important in recent years is that the business world has become more competitive and more volatile. Faster technological change, greater international competition, the deregulation of markets, an unstable energy market, corporate corruption, and the changing demographics of the work force are among the many factors that have contributed to this shift. The net result is that doing what was done yesterday, or doing it 5% better, is no longer a formula for success. Major changes are more and more necessary to survive and compete effectively in this new environment. More change always demands a vision and a leader to make it happen.

Consider a simple military analogy: a peacetime army can usually survive with good administration and management up and down the chain of command, coupled with good leadership at critical levels. However, in wartime, the army needs strong, competent leadership at all levels. No one yet has figured out how to manage people effectively into combat; they must be led.

These different functions, coping with complexity and coping with change, shape the characteristic activities of management and leadership. Each course of action involves deciding what needs to be done, creating networks of people and relationships that can accomplish an agenda, and

then trying to ensure that those people actually do the job. But each accomplishes these three tasks in different ways.

Companies manage complexity first by planning and budgeting-setting targets or goals for the future (typically for the next month or year), establishing detailed steps for achieving those targets, and then allocating resources to accomplish those plans. By contrast, leading an organization to constructive change begins by setting a direction, i.e., developing a vision of the future along with strategies for producing the changes needed to achieve that vision.

Management develops the capacity to achieve its plan by organizing and staffing, i.e., creating an organizational structure and set of jobs for accomplishing plan requirements, staffing the jobs with qualified individuals, communicating the plan to those people, delegating responsibility for carrying out the plan, and devising systems to monitor implementation. The equivalent leadership activity, however, is aligning people. This means communicating the new direction to those who can create teams that understand the vision and are committed to its achievement.

Finally, management ensures plan accomplishment by controlling and problem solving---monitoring results versus the detailed plan, both formally and informally, by means of reports, meetings, and other tools; identifying deviations; and then planning and organizing to solve the problems. However, for leadership, achieving a vision requires motivating and inspiring, i.e., influencing people in the right direction, despite major obstacles to change, by appealing to basic but often untapped human needs, values, and emotions.

Managers and leaders are two very different types of people. Managers' goals arise out of necessities rather than desires; they excel at diffusing conflicts between individuals or departments, placating all sides while ensuring that an organization's day-to-day business gets done. Leaders adopt personal, active attitudes towards goals. They look for the potential opportunities and future rewards. They inspire employees and ignite the creative process with their own energy. Their relationships with coworkers can be intense and their working environment chaotic.

Businesses need both managers and leaders to survive and succeed. Words associated with a leader and a manager are:

Leader	Manager
Vision	Short term focus
Administrator	Implement
Develop	Maintain
Originate	Copy
Inspire followers	Control
Challenge status quo	Accept status quo
Do the right thing	Do things right
Ask what and why	Ask how and when

7.0 Excellence in Leadership

Leaders act. Action is the third component of the leadership trilogy, Be-Know-Do. Leaders achieve results by focusing on who they are, what they believe, and everything they know with purpose, direction, and motivation. First, leaders develop all aspects of themselves. Leaders develop clear values and live those values, i.e., character. Leaders solve problems, overcome obstacles, strengthen their team, and achieve their objectives.[73]

There are three key actions successful leaders employ: (1) create teams and organizations with a unified purpose, (2) create results, and (3) create change that makes the organization stronger. The three key action areas are achieved through (1) influencing, (2) operating, and (3) improving.[74]

The difference between philosophers and leaders is the "Do" component of the leadership trilogy. When it comes to leadership, knowledge without application is, for the most part, useless. Leadership is influencing others to do the right thing.[75]

Leaders operate to accomplish their mission and objectives. What is operating? Operating is developing detailed plans and executing those plans, taking care of people, and effectively managing their resources. Leaders are people---people; assessing their own efficiency and

effectiveness, as well as their teams and organizations, making improvements to people and organizations.[76]

Improving means leaving the organization better today than yesterday, taking steps to increase capability to accomplish current and future missions. Leaders are loyal to their people and the organization. Leaders consider the long term consequences of their actions. Leaders develop subordinates into leaders, improve their groups, and create an ethical climate for their group and the organization. Leaders learn, self-improve, and grow with the organization.[77]

Excellent leaders also know the barriers to leadership and avoid them.

Barriers to Leadership

Frances Hesselbein, editor-in-chief of Leader to Leader, and former chief executive of the Girl Scouts USA, had an insightful article several years ago on *Barriers to Leadership.*[78] Ms. Hesselbein articulates two types of barriers to leadership: (1) personal and self-imposed, and (2) institutional, structural, or cultural.

Self-Imposed Barriers
 1. No formalized articulated personal goals or a way to achieve them.
 2. No clear understanding of our own strengths and weakness.
 3. Living by two different standards: (1) one for our personal lives, and (2) one for our professional lives (not walking the talk).
 4. Lack of respect and generosity by not sharing ideas, time, encouragement, respect, and encouragement with others (self-centered, egotistical).
 5. Not taking responsibility.
 6. Failing to consider what people can do, not what they can *not* do.
 7. Failing to take a positive, can do, attitude.
 8. Failing to improve your own personal learning and development.

Institutional Barriers
 1. Hierarchical structure that boxes people in and restricts what they can achieve.
 2. Corporate cultures encouraging mediocrity.
 3. Any organization that plays "kill the messenger."
 4. Any organization that permits racism and sexism.

5. Lack of clear accountability.
6. Lack of clearly defined duties and responsibilities within and without the organization.
7. Lack of training and/or mentoring in the organization.
8. Failing to appreciate that people are the firm's greatest asset and not just the bottom line.
9. Cloning rather than diversifying the organization throughout.
10. Lack of integrity, a organization whose behavior does not match its verbiage (eg. Enron).
11. Lack of cross-training, job rotation, and/or job expansion (single-minded people in single-minded jobs).
12. No articulated plan for succession.

These barriers to leadership show you what impedes good leadership. If these barriers are lurking in your environment, you are not as effective as you should be.

The barriers to leadership must be overcome to "be all you can be," an excellent leader.

Pursuit of Excellence

In Pursuit of Excellence---How to Win in Sport and Life Through Mental Training, by Terry Orlick, Ph.D., provides keys to excellent performance that we can all use in our pursuit of leadership excellence. Dr. Orlick, who equips Olympic athletes with excellence training, argues, "The desire to do your personal best, to excel, to attain the highest standards of performance, to be supreme in your chosen field is a worthy human ambition, which can lead to increasingly high standards, personal growth, and personal meaning…Becoming a highly skilled person in any field---sport, art, medicine, science, writing, teaching, or parenting [or engineering]---demands commitment and sacrifice…The greatest barriers in our pursuit of excellence are psychological barriers that we impose upon ourselves, sometimes unknowingly."[79]

All great human accomplishment comes from a dream or vision that is created before the achievement. Dreams precede reality, whether it is flying to the moon, creating a better society, healing oneself, pursuing a relationship, building a bridge, climbing a mountain, or winning a gold

medal in the Olympics. Put another way, you will *not* get there without dreams and forethought.[80]

To put your dreams into action you must overcome distractions, focus totally on your task, visualize excellence in action, and be well rested when you are required to act. Focusing is the uninterrupted connection between two things, such as you and your vision or you and your goal. Focus your energy on specific aspects of performance that are within your control. Specific aspects in your control include your skills, your preparation, your execution, your routines, your time, the best effort you can give that day. Avoid focusing on aspects outside your personal control. Such aspects include competitors, mistakes, rumors, weather, anything beyond your control.[81]

Dr. Orlick maintains, "Excellence in any field depends largely on three basic factors: (a) how well you know where you want to go, (b) how much you really want to get there, and (c) how strongly you believe in your ability to arrive at your desired destination." Moreover, "your performance is largely a function of your expectations for yourself."[82] Be positive in your thinking about yourself. The key to attaining your potential is your ability to keep matters in perspective and view your situation in a positive constructive vision.

Winners Never Cheat

As we bring this course to a close, wouldn't it be nice to have one person to illustrate excellence in leadership; one example of an excellent leader to observe. America has been blessed with many excellent leaders, but if we had to select one, we select Jon M. Huntsman.

Jon M. Huntsman is chairman and founder of Huntsman Corporation, started in 1970 with his brother. In 2000, Huntsman Corporation was the largest privately held chemical company in the world and was America's biggest family owned and operated business. It had more than $12 billion in annual revenues and is a global manufacturer. Its operating companies manufacture basic products for a variety of global industries including chemicals, plastics, automotive, aviation, footwear, paints and coatings, construction, technology, agriculture, health care, textiles, detergent, personal care, furniture, appliances and packaging. Huntsman Corporation has some 11,300 employees and 57 operations in 22 countries around the globe. Jon Huntsman is a philanthropist, who believes you should give back to society;

and, has donated *hundreds* of millions of dollars to make our world a better world.

From the preface to *Winners Never Cheat,* "Jon is a true rarity in the corporate world: a highly successful entrepreneur whose conscience is as sharp as his business sense, whose word is known as an unbreakable bond. From his very first job, picking potatoes in rural Idaho at age eight, to…running the world's largest private chemical company, he has always put ethical concerns on equal, if not greater, footing than his business concerns."[83]

Larry King, who has probably interviewed more great people than any person in the world, claims, "Jon is the embodiment of the American Dream….He won that incredible race [dream] fair and square, fulfilling his dream with moral principles intact, his word being kept, dealing above board and fairly with colleagues and competitors alike, and displaying a demeanor of decency and generosity…Jon Huntsman is a different breed…He believes business is a creative endeavor, similar to a theater production, wherein integrity must be the central character."[84]

Jon Huntsman's *Winners Never Cheat* provides many examples of excellence in leadership, but we will use some of his insight here.

Jon Huntsman's Prescription for Excellence

We all remember the unwritten rules for the playgrounds of our youth. The playground rules were simply being fair and decent, and having integrity. However, the playground rules have not changed just because we moved from the playground to a desk. We must still be honorable and fair, with integrity. Jon Huntsman suggests four ways to bring us back to the fair and honorable playground rules:
1. Answer, if you would like to be treated as you treat others (golden rule)? Answer, am I doing the right thing?
2. Maintain your integrity; that is, being the same good valued person at home, work, and all the time.
3. Set a good ethical example as you would for your brother and sister.
4. Prioritize family, faith, fortitude, fairness, fidelity, friendship, and philanthropy.[85]

Jon Huntsman drives home the concept we have been describing throughout this course:

"We are not always required by law to do what is right and proper. Decency and generosity, for instance, carry no legal mandate. Pure ethics are optional.

Laws define courses to which we *must* legally adhere or avoid. Ethics are standards of conduct that we *ought* to follow. There is some overlap of the two, but virtuous behavior usually is left to individual discretion. All the professional training in the world does not guarantee moral leadership. Unlike laws, virtue cannot be politically mandated, let alone enforced by bureaucrats, but that does not stop them from trying. Congress considered the corporate world today so challenged when it comes to ethics that it enacted the Sarbanes-Oxley Act in an attempt to regain credibility in the marketplace. Ultimately, though, respect, civility, and integrity will return only upon the individual-by-individual return of values.

Ethical behavior is to business competition what sportsmanship is to athletic contests. We were taught to play by the rules, to be fair, and to show sportsmanship. The rulebook didn't always state specifically that shortcuts were prohibited. It went without saying that every competitor ran around the oval track and didn't cut across the infield."[86]

Ethics makes winners and *Winners Never Cheat!*

Summary

By applying ethical and leadership principles applicable from military leadership to technology, you will:
1. Create and sustain core ethical values and an honor code.
2. Provide trust, thus eliminating fear.
3. Consider the needs, particularly of your followers, but also your customers, suppliers, financiers, local communities and society.
4. Set obtainable standards and sustain them with a clear vision and purpose.
5. Empower workers through training and the freedom to act with responsibility and accountability.
6. Inspire, encourage, and recognize followers' contributions.

Congratulations! You have just been through over 65 years of diverse leadership experience. That is the good news. Now the bad news, today is the first day of the rest of your life and you are not through learning. Learning is a lifetime experience and leadership learning is no exception.

If there were only three things you could take away from this course, call them "gold nuggets of information" what would they be? Number one has to be ethics and your Personal Honor Code. You have already defaulted into an honor code whether you realize it or not. People know how you are. Wouldn't it be better to have a written Personal Honor Code that is adopted and practiced?

Number two is the value of listening. Listening is an art that requires undivided attention. It is more than spoken words. It is eyes connected and the unspoken body messages and tones received. It is that momentary focus on that person. It is respect, appreciation, anticipation, influence, and leadership. Listening is a connection. You listen, you respond; they listen, they respond; and, in that magical give and take, messages are communicated. Listening is the most essential element of effective leadership.[87]

The third "golden nugget" is to build trust to make you a leader from this point on. You do this by: *humility, development, commitment, focus, compassion, integrity, peacemaking, and endurance.*

Take these three "golden nuggets" with you, your Personal/Ethics Honor Code, the Art of Listening, the Keys to Building Trust; and, we will have made you a better, maybe excellent, engineering leader.

214th FIELD ARTILLERY BRIGADE MEASURABLE STANDARDS

1. <u>Deploy Tonight, Fight Tomorrow</u>.
--Red Cycle: by individual soldiers (we will provide for other unit's shortages).
--Amber Cycle: by section.
--Green Cycle: by battery/company to battalion.
--Go Cycle: by battalion and brigade. (Changes to Green Cycle 1 Oct 1998)

<u>Civilian translation</u>: A cycle is normally a month long and is used to rotate soldiers through support, training, and readiness deployment periods.

2. <u>Training Management</u>. **FM 25-100/101 is THE standard**, not just lip service and *Power Point* slide drivel for QTBs. All training will be conducted IAW the unit's **published** training schedule and include: a task, condition and standard; risk assessment; and an After Action Review. This includes PT.

<u>Civilian translation</u>: Field Manuals 25-100/101 were Army manuals on training management. QTB is Quarterly Training Brief. PT is physical training.

3. Pass 100% of <u>External Evaluation tasks/missions</u>; 90% first time "GO's".

<u>Civilian translation</u>: The units are tested by evaluators external to that unit. If a unit fails a task the first time, they are retested later in the evaluation.

4. <u>OR</u> rate no lower than 91%. Equipment green by -10/20 standards.

<u>Civilian translation</u>: Operational Readiness rate refers to the standards for maintenance of vehicles and other equipment. Green means the equipment is operational with 10/20 being the highest standard.

5. 100% <u>services</u> completed within window.

<u>Civilian translation</u>: This refers to periodic maintenance services to equipment. Similar to your 25K, 50K, 100K mile checkup on your car.

6. 100% of <u>deadlined vehicles</u> up within 24 hours of receiving the deadlining part.

Civilian translation: A deadlined vehicle is one that does not meet minimum operating standards. The unit must have the vehicle back up to standard within a day of receiving any needed parts.

7. Stay within <u>budget</u> but no bullets and no bucks by 30 September.

Civilian translation: The budget and ammunition allocation must be used up by the end of the Fiscal Year.

8. 100% of all <u>soldiers off</u> no later than the published end of the duty day.

Civilian translation: Leaders don't keep Soldiers past quitting time when they are not in the field. It shows Soldiers that their leaders respect their time.

9. <u>No fat soldiers</u>.

Civilian translation: The Army has weight standards. If a Soldier goes over the standard, he may be discharged from of the Army.

10. 260 point battery/company <u>APFT average</u>. No failures.

Civilian translation: The Army Physical Fitness Test is given twice a year. If a Soldier fails it, he may be discharged from the Army. There are 300 points possible on the test.

11. 80% <u>M-16 experts</u> – goal of 100%.

Civilian translation: M-16 rifle is the standard individual weapon. The Soldier must qualify at least once, but normally twice a year. Expert is the highest possible score.

12. 50% commendables on unit <u>CIPs</u> with no UNSATs.

Civilian translation: The Command Inspection Program is an assessment of all areas of a unit given by the higher headquarters. It covers everything from the Dining Facility to Chaplain activities to the unit supply room. Grades are given as Commendable, Satisfactory or Unsatisfactory.

13. No late <u>OER/NCOERs or awards</u>.

Civilian translation: Officer and Non-commissioned Officer Evaluations are completed at least once a year. The officer and NCO's future is determined using the evaluation. A late OER/NCOER or any awards due the Soldier is an administrative taboo because it shows the boss is not taking care of his people.

14. Unit runs of four miles in 36 minutes.

Civilian translation: Units take PT every morning at 6 or 6:30 AM all over the Army. The running standard for this unit is as stated.

15. Meet all standards in all areas required by III Corps and III Corps Artillery.

Civilian translation: Meet the requirements of the boss and the boss's boss.

16. All commanders and first sergeant visit their billets at least once a weekend.

Civilian translation: The company commanders and their senior NCO are required to inspect the Solder's living areas during the weekend to ensure good order, discipline, cleanliness, etc. They are Soldiers, they don't live in college dorms.

17. All missions fired digital with a returned Mission Fired Report before they are given credit on an Ex Eval. (Added Jan 1998)

Civilian translation: This was an artillery rocket unit which computed firing data to shoot a rocket over 15 miles and missiles over 40 miles using on-board computers. If the mission was fired correctly, the computer sent back a message using a digital radio connection. If the MFR was not received on time during the units external field test, they did not receive credit.

These are all standards, not goals. They are all attainable. The standards you have now in most areas are probably higher, if so, assume the higher of the two.

THE RIGHT CHOICE: References, Endnotes, Acknowledgments & Websites

The Right Choice: Applying Ethics to Engineering and subsequent Right Choice titles started development in 2001. Since then, countless websites were visited, many with links to other sources, some of which are on longer on the web. Every attempt has been made to credit those sources used in this course and your indulgence is asked of anyone who has been slighted.

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