

Air Force Logistics Management Agency

Quotes

for the Air Force Logistician

Volume 2

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Quotes for the Air Force Logistician, Volume 2 is dedicated to every logistician in today's 21st century Air Force who turns a wrench, kicks a box, slings ink at paper, pounds a keyboard, negotiates a contract, gives a briefing, writes a report, or staffs a package.

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PREFACE

Much of the material in this book came from primary sources, secondary sources, and research via the Internet. Where allowed, either by the work itself or as prescribed under the provisions of 17 United States Code, limited material came from other sources.

The views expressed in the material contained herein are those of the authors and do not necessarily represent the views or established policy of the Department of Defense, Department of the Air Force, or the Air Force Logistics Management Agency.

INTRODUCTION

I believe that was the general idea that I was trying to convey.

Comdr Leonard (Bones) McCoy, MD (Star Trek)

The primary reason for producing this book was to provide a teaching resource that can be used in classroom, education, training, and mentoring programs for Air Force logisticians. It is a tool that can be used by instructors, teachers, managers, leaders, and students. It is also a tool that can be used in research settings and a resource that should stimulate comment and criticism within educational and mentoring settings. Copies of the book are provided free of charge to any Air Force logistician, educational institution, teacher, instructor, commander, or manager.

What is a quote or a quotation? Quotes or quotations often mean different things to those who hear or read them. For many, it's the repetition of something that conveys authority or illustration. For others, it's the process of citing or bringing forward evidence of a particular point. For still others, quotes are a source of wisdom or inspiration. All of these thoughts, however, share a common thread—communicating an idea. And perhaps of more import, communicating an idea that causes some form of action: think, act, direct, inform, question, or persuade. Further, quotes can, and often do, remove the barriers associated with the written or spoken word.

The wisdom of the wise, and the experience of ages, may be preserved by quotations.

Isaac D'Israeli

Much like *Quotes for the Air Force Logistician, Volume 1, Quotes for the Air Force Logistician, Volume 2* is a broad collection of

words of wisdom, witticisms, and reflections, both humorous and profound, on a wide variety of subjects. As you might expect, a great many of the quotations deal with military subjects in general and logistics in particular.

A book of quotations . . . can never be complete.

Robert M. Hamilton

By no means is *Quotes for the Air Force Logistician, Volume 2* all encompassing. It adds to the material presented in *Quotes for the Air Force Logistician, Volume 1*. As with Volume 1, the criteria used to make selections were purposely broad in form and scope.

The God of War hates those who hesitate.

Euripides

On to the quotes.

ACTION AND RISK

The way to get started is to quit talking and begin doing.

Walter E. (Walt) Disney

*The man who
can't make a
mistake can't
make anything.*

Abraham Lincoln

...nothing is impossible for the man who does not have to do it.

Ancient strategic aphorism

An ounce of proactive engagement protection is cheaper than a pound of warfighting cure.

Anonymous

The merit of an action lies in finishing it to the end.

Genghis Khan

The only thing necessary for the triumph of evil is for good men to do nothing.

Edmund Burke

We are outnumbered, there is only one thing to do. We must attack!

*Adm Andrew Cunningham,
Royal Navy*

Great acts are made up of small deeds.

Lao Tzu



C H A P T E R

In tactics, action is the governing rule of war.

Marshal of France Ferdinand Foch

Once you engage in battle it is inexcusable to display any sloth or hesitation; you must breakfast on your enemy before he dines on you!

Kai Ka'us Ibn Iskander, Prince of Gurgan (Persia, 1082)

Not everything that is faced can be changed. But nothing can be changed until it is faced.

James Baldwin

Take calculated risks. That is quite different from being rash.

Gen George S. Patton, Jr, USA

You miss 100 percent of the shots you never take.

Wayne D. Gretzky

Your current safe boundaries were once unknown frontiers.

Anonymous

I never came upon any of my discoveries through the process of rational thinking.

Albert Einstein

A man who wants to lead the orchestra must turn his back on the crowd.

James Crook

Anyone who has never made a mistake has never tried anything new.

Albert Einstein

He who will not apply new remedies must expect new evils; for time is the greatest innovator.

Viscount Francis Bacon

...no success is possible—or even conceivable—which is not grounded in an ability to tolerate uncertainty, cope with it, and make use of it.

Martin van Creveld

...my own view is that if Saint George's first priority with tackling dragons had been force protection, I don't think he would now be the patron saint of England.

Air Vice Marshal Tony Mason, RAF

Man does not live by words alone, despite the fact that sometimes he has to eat them.

William Broderick Crawford

Never doubt that you can change history. You already have.

Marge Piercy

Ability is of little account without opportunity.

Napoleon Bonaparte

Who bravely dares must sometimes risk a fall.

Tobias George Smollett

Danger gleams like sunshine to a brave man's eyes.

Euripides

Life is either a daring adventure or nothing. Security does not exist in nature, nor do the children of men as a whole experience it. Avoiding danger is no safer in the long run than exposure.

Helen Adams Keller

Destiny is not a matter of chance; it is a matter of choice. It is not a thing to be waited for; it is a thing to be achieved.

William Jennings Bryan

All truths are easy to understand once they are discovered; the point is to discover them.

Galileo Galilei

There is nothing impossible to him who will try.

Alexander the Great

Carry the battle to them. Don't let them bring it to you. Put them on the defensive. And don't ever apologize for anything.

Harry S. Truman

Don't hit at all if it is honorably possible to avoid hitting; but never hit soft.

Theodore Roosevelt

All difficult things have their origin in that which is easy,
and great things in that which is small.

Lao Tzu

Most of the things worth doing in the world had been
declared impossible before they were done.

Louis D. Brandeis

The young do not know enough to be prudent, and
therefore they attempt the impossible—and achieve it,
generation after generation.

Pearl S. Buck

A man of knowledge lives by acting, not by thinking about
acting.

Carlos Castaneda

If I had to sum up in a word what makes a good manager,
I'd say decisiveness. You can use the fanciest computers to
gather the numbers, but in the end you have to set a
timetable and act.

Lido Anthony (Lee) Iacocca

If opportunity doesn't knock, build a door.

Milton Berle

When one door closes another door opens; but we so often
look so long and so regretfully upon the closed door, that
we do not see the ones which open for us.

Alexander Graham Bell

A certain amount of opposition is a great help to a man.
Kites rise against, not with, the wind.

Lewis Mumford

I live for the present always. I accept this risk. I don't deny
the past, but it's a page to turn.

Juliette Binoche

The pursuit of perfection often impedes improvement.

George F. Will

You don't concentrate on risks. You concentrate on results.
No risk is too great to prevent the necessary job from
getting done.

Brig Gen Chuck Yeager, USAF

Only those who dare to fail greatly can ever achieve greatly.

Robert F. Kennedy

The secret of getting ahead is getting started.

Agatha Christie

When you engage in actual fighting, if victory is long in
coming, the men's weapons will grow dull and their ardour
dampened. Again, if the campaign is protracted the
resources of the State will not be equal to the strain. Thus,
though we have heard of stupid haste in war, cleverness
has never been associated with long delays. There is no
instance of a country having benefitted from prolonged
warfare.

Sun Tzu

If we are living in a world where either side can make a surprise attack upon the other which destroys the latter's capability to make a meaningful retaliation, then it makes sense to be trigger-happy with one's strategic air power. But if, on the other hand, the situation is such that neither side can hope to eliminate the retaliatory power of the other, that restraint which was suicidal in one situation now becomes prudence, and it is trigger-happiness that becomes suicidal.

Bernard Brodie

It is true that [in Germany in World War II] unheard-of inventions and progress were made in individual fields, far ahead of the rest of the world, but they all came too late and,... they came in such small numbers that they could no longer be decisive.

Karl Koller

There is a weakness in a council running a war. That is true of any council. I don't care if it is composed of the best men in the world.... In war, you must have decision. A bum decision is better than none. And the trouble is that when you get there, you finally get none.

Dwight D. Eisenhower

An educated guess is just as accurate and far faster than compiled errors.

Gen George S. Patton, Jr, USA

The offensive knows what it wants, whereas the defensive is in a state of uncertainty.

S. T. Das paraphrasing Moltke, the Elder

In order to have rest oneself it is necessary to keep the enemy occupied.

Frederick the Great (Frederick II of Prussia)

Air forces characteristically take the offensive. Even in defense, they defeat an invading enemy by attack.

Air University Manual 1, 1951

The offensive, however, is the more exhausting form of action. Nothing does more ruin to a force or a nation than offensives which show no profit commensurate with their cost. The sands of history are littered with the wrecks of States which set their compass on an offensive course only.

S. T. Das

No guts, no glory. If you are going to shoot him down, you have to get in there and mix it up with him.

Maj Gen Fred C. (Boots) Blesse, USAF

When we study the lives of the great captains, and not merely their victories and defeats, what do we discover? That the mainspring within them was originality, outwardly expressing itself in unexpected actions.

Maj Gen J. F. C. Fuller, Royal Army

AIRPOWER AND AIRMEN

*Offense is the
essence of
airpower.*

*Gen Henry H.
Arnold, USAAF*

Decisive means and results are always to be preferred, even if they are not always possible. We should always be skeptical when so-called experts suggest that all a particular crisis calls for is a little surgical bombing or a limited attack.... History has not been kind to this approach to warmaking.

Gen Colin L. Powell, USA

As soon as they tell me it is limited, it means they do not care whether you achieve a result or not. As soon as they tell me it's surgical, I head for the bunker.

Gen Colin L. Powell, USA

...there are some things air power can do and does very well and some things it can't do, and we should never expect it to do very well, and that is to move in on the terrain and dictate terms to the enemy. Our ground forces did that.

Gen Merrill A. McPeak, USAF

The bottom line is not dollars per aircraft but overall capability per dollar.

Gen Charles A. Horner, USAF

2

C H A P T E R

The deficiency we have right now in the cruise missile system is the cost per shot. If you want to get somebody's attention at \$1.5 million a pop, you can shoot those things and get their attention, but if you want to conduct an air campaign, you're going to bankrupt the country quickly by doing that.

Gen Ronald R. Fogleman, USAF

I finally came to the conclusion that at the core, Strategic Air Command [SAC] was a nuclear outfit, had always been, was, and would always be. I knew that unless that perception changed, the air assets that traditionally had been assigned to SAC would wither and be lost.

Gen George Lee Butler, USAF

For the Navy, more than any other service, Desert Storm was the midwife of change.

Adm William A. Owens, USN

The issue facing the nation's naval forces is not whether strategic bombardment theory is absolutely correct; it is how best to contribute to successful strategic bombardment campaigns.

Adm William A. Owens, USN

This was the only air campaign in history in which lovers strolled down riverbanks in the gathering twilight and ate at outdoor cafes and watched the fireworks.

Gen Wesley K. Clark, USA, when referring to the Air War in Kosovo

Bureaucratic, political, and diplomatic concerns were elevated above military efficacy. The fact that foolish gambles sometimes pay off does not make them any less foolish.

Pax Clintonia, National Review, June 28, 1999

...we set the bar fairly high when we fly more than 30,000 combat sorties and we don't lose one pilot. It makes it look as if air power is indeed risk free and too easy a choice to make.

Gen John P. Jumper, USAF

When the political and tactical constraints imposed on air use are extensive and pervasive—and that trend seems more rather than less likely—then gradualism may be perceived as the only option.

Gen Joseph W. Ralston, USAF

It is the politics of the moment that will dictate what we can do.... If the limits of that consensus mean gradualism, then we're going to have to find a way to deal with a phased air campaign. Efficiency may be second.

Gen John P. Jumper, USAF

The preeminence of air power will stand or fall not by promises and abstract theories, but, like any other kind of military power, by its relevance to, and ability to secure, political objectives at a cost acceptable to the government of the day.

Air Vice Marshal Tony Mason, RAF

Air power is the most difficult of all forms of military force to measure or even to express in precise terms.

Winston S. Churchill

You can do everything with air superiority, but nothing without it.

Senior Air Force General

The airplane is the only weapon which can engage with equal facility, land, sea, and other forces....

Maj Gen Frank M. Andrews, USA, 1938

One has the embarrassing feeling of having been caught napping just when one was feeling confident and in charge of things. Even though there wasn't much damage, it's a disgrace that the skies over the imperial capital should have been defiled without a single airplane being shot down.

*Adm Isoroku Yamamoto, Commander, Combined Fleet,
Imperial Japanese Navy*

I have traveled around the world and talked to people in different countries. I can tell you that when that *big T tail* aircraft lands, with the American flag on the tail, they not only represent America—they are America.

Gen Ronald R. Fogleman, USAF

Direct support of ground troops is naturally the method preferred by the immediate commander concerned, but his vision did not extend beyond the local battle. It did not consider the competing demands of individual commanders on a far flung battlefield, each of whom would naturally like to have at his disposal some segment of the Air Force for his own exclusive use.

Dwight D. Eisenhower

The lesson from the last war that stands out clearly above all the others is that if you want to go anywhere in modern war, in the air, on the sea, on the land, you must have command of the air.

Adm William F. Halsey, USN

Air power is indivisible. If you split it up into compartments, you merely pull it to pieces and destroy its greatest asset—its flexibility.

*Field Marshal Viscount Bernard L. Montgomery,
Royal Army*

It is improbable that any terrorization of the civil population which could be achieved by air attack would compel the government of a great nation to surrender. In our own case, we have seen the combative spirit of the people roused, and not quelled, by the German air raids. Therefore, our air offensive should consistently be directed at striking the bases and communications upon whose structure the fighting power of his armies and fleets of the sea and air depends.

Winston S. Churchill

Airpower has become predominant, both as a deterrent to war, and—in the eventuality of war—as the devastating force to destroy an enemy’s potential and fatally undermine his will to wage war.

Gen Omar N. Bradley, USA

Nobody has yet found a way of bombing that can prevent foot soldiers from walking.

Walter Lippmann

I hate to see good, serviceable aircraft sitting on the ground with no one to fly them. An airplane doesn’t need to sleep.

Col Edward H. Alexander, USAAF

Absolutely not. I want them low. I want them loud. I want them everywhere! I don’t completely understand it, but this population responds to airpower, both fixed- and rotary-wing ... so get the air out there.

Lt Gen Thomas F. Metz, USA

Tell the guys in [the joint operations center] that from the 3 BCT grunts’ perspective, air presence works. Our Iraqi Army counterparts really like the fighters overhead.

*3^d Brigade, 1st Infantry Division’s Tactical Operations
Center Report*

...air operations reduced substantially the costs and risks of ground operations.

*RAND memo to Secretary of Defense
Donald H. Rumsfeld*

Regardless of Air Force specialty code, we must understand the overall purposes of military air power and then see how our individual duties support those purposes.

Col Keith W. Geiger, USAF

A modern, autonomous, and thoroughly trained Air Force in being at all times will not alone be sufficient, but without it there can be no national security.

Gen Henry H. Arnold, USAAF

Air power is like poker. A second-best hand is like none at all—it will cost you dough and win you nothing.

Gen George C. Kenney, USAAF

Air power alone does not guarantee America's security, but I believe it best exploits the nation's greatest asset—our technical skill.

Gen Hoyt S. Vandenberg, USAF

Once the command of the air is obtained by one of the contending armies, the war must become a conflict between a seeing host and one that is blind.

Herbert George (H. G.) Wells

In the air all directions lead everywhere.

Herbert George (H. G.) Wells

The first important difference between air forces and armies is that, within his tactical range, the airman is independent of lines of communication and has no flanks. The only other important difference between armies and air forces is that an air force is not committed to any one course of action.

Air Marshal Sir John C. Slessor, RAF

The measure of airpower is the ability of a nation to exploit airspace for its own purposes—and in wartime to deny it to an enemy.

Adm Arthur W. Radford, USN

Air power can either paralyze the enemy's military action or compel him to devote to the defense of his bases and communications a share of his strained resources far greater than what we need in the attack.

Winston S. Churchill

Aerial forces menace all the territory comprised in their radius of action. They can set off from different points and arrive en masse on a chosen point. They lend themselves to the offensive because they leave the adversary, until the last moment, in uncertainty as to their objective.

A. Vauthier, paraphrase of Giulio Douhet

[World War II] showed beyond all ... that airpower, especially when applied as widely and in as many directions as the United States could [apply it], dominated surface warfare.

David MacIsaac

Once real mastery of the air was obtained, all sorts of enterprises would become easy. All kinds of aeroplanes could come into play.

Winston S. Churchill

The single clear lesson of World War II was that the visionaries were correct that all future warfare would be dominated from the air. They agreed on that. What they argued about was just how airpower would dominate surface warfare.

David MacIsaac

A nation may have every other element of air power but still lag behind if its government has no real urge to insure its future development. The attitude and actions of government will fully determine the size of our military air establishment, and greatly affect the efficiency of our civil air establishment, [and] our aeronautical industry and facilities—hence our air power in being.

John C. Cooper

[In World War I] air raids on both sides caused interruptions to production and transportation out of all proportion to the weight of bombs dropped.

Edward Meade Earle

The flexibility which the range of aircraft gives to air forces permits concentrated effort against a particular target system or complex without need for concentration against a particular target of the system; hence the enemy is unable to keep his defenses in one geographical area.

Air University Manual 1, 1951

Strategic air assault is wasted if it is dissipated piecemeal in sporadic attacks between which the enemy has an opportunity to readjust defenses or recuperate.

Gen Henry H. Arnold, USAAF

Air power is, above all, a psychological weapon—and only short-sighted soldiers, too battle-minded, underrate the importance of psychological factors in war.

B. H. Liddell Hart

Without a reasonable degree of air superiority, no air force can effectively assist land or sea forces or strike at the enemy's war potential.

Air Marshal Lord Arthur Tedder, RAF

After all, the great defence against aerial menace is to attack the enemy's aircraft as near as possible to their point of departure.

*Winston S. Churchill, memo of 5 September 1914,
proposing a combined offensive and defensive
counterair campaign*

After Big Week, Spaatz, who commanded the United States strategic air forces, sensed that air superiority had been wrenched from the enemy. In the space of 6 days, massive and deep penetrations had been made to 15 large industrial areas by some 6,000 bombers. Allied losses were far less than had been expected, amounting to about 6 percent for the 6-day battle. As a consequence, Allied morale soared while enemy morale plummeted.

Dale O. Smith

To use a fighter as a fighter-bomber when the strength of the fighter arm is inadequate to achieve air superiority is putting the cart before the horse.

Gen Adolf D. Galland, Luftwaffe

Air interdiction and ground maneuver must be synchronized so that each complements and reinforces the other. Synchronization is important because it can create a dilemma for the enemy that has no satisfactory answer. His dilemma is this: if he attempts to counter ground maneuver by moving rapidly, he exposes himself to unacceptable losses from air interdiction; yet if he employs measures that are effective at reducing losses caused by air interdiction, he then cannot maneuver fast enough to counter the ground component of the campaign.

Lt Col Price T. Bingham, USAF

If the enemy has air supremacy and makes full use of it, then one's own command is forced to suffer the following limitations and disadvantages. By using his strategic air force, the enemy can strangle one's supplies, especially if they have to be carried across the sea. The enemy can wage the battle of attrition from the air. Intensive exploitation by the enemy of his air superiority gives rise to far-reaching tactical limitations for one's own command.

Field Marshal Erwin Rommel, Wehrmacht

To have command of the air means to be able to cut an enemy's army and navy off from their bases of operation and nullify their chances of winning the war.

Gen Giulio Douhet

Space in which to maneuver in the air, unlike fighting on land or sea, is practically unlimited.

Air Vice Marshal James Edgar (Johnnie) Johnson, RAF

I hope none of you gentlemen is so foolish as to think that aeroplanes will be usefully employed for reconnaissance from the air. There is only one way for a commander to get information by reconnaissance, and that is by the use of cavalry.

General Sir Douglas Haig, Royal Army, summer 1914

The air force has become the hammer of modern warfare on land.... Aviation gives modern battle a third dimension.... Modern battle is the fight for cubic space.

Lt Col Ferdinand Miksche

[On D-Day, June 6, 1944]the whole of the area through which the [Nazi] divisions must march was being most intensively patrolled by the Allied air forces. No road movement by day was possible in view of this air umbrella, which reached from Normandy to the Paris area.

Lt Gen Bodo Zimmerman, Wehrmacht

During the Iran War [the 1984-88 Iran-Iraq conflict], my tank was my friend because I could sleep in it and know I was safe.... During this war [the 1991 Gulf War], my tank became my enemy...None of my troops would get near a tank at night, because they just kept blowing up.

Remarks by an Iraqi General

Air power is a complex of at least 15 different elements, each of which must be considered indispensable. The relative importance of each must be variable, yet the absence of any one must endanger control of the air or prevent its exploitation. The 15 elements are:

- Raw materials and fuel
- Industrial potential, tool reserves, and high rate of technological progress
- Bases and protective forces
- Communications and electronics
- Logistics and supplies
- Auxiliary services
- Airborne forces
- Guided missiles and atomic weapons
- Aircraft
- Manpower
- Training
- Morale
- Intelligence
- Research and inventiveness
- Tactics—strategy and planning

Stefan T. Possory

The very flexibility of air forces makes true cooperation essential. Air forces, at short notice, can be switched from one sort of target to another and, within limits, from one type of operation to a quite different type. There is, therefore, a constant temptation to use them piecemeal to meet an immediate requirement, rather than to use them on a long-term joint plan, and to utilize their flexibility in the method of achieving a consistent aim which is an integral part of our government's policy and of our strategy to implement that policy.

Air Marshal Sir John C. Slessor, RAF

In my first few months in country, I rarely put air into my plan—this was because we did not understand how it could assist us in a counter insurgency fight—then I saw the incredible results in Fallujah and in our follow-on operations. After that, in our North Babil operations and election prep, I never left without my JTAC and always requested air to support our operations.

*Col Michael Formica, USA, Commander,
Black Jack Brigade*

...the total strength of our aircraft did not exceed the strength of the Americans' [Sabre] Wings.

*Lt Gen Georgy Lobov,
Commander of the 64th Fighter Corps in 1952*

But there is one element in relation to the flying machine that we are not producing, that we cannot produce in an emergency, and that is the men. We can produce machines but not the aviators. That takes time.

Alexander Graham Bell

The future battle on the ground will be preceded by battle in the air. This will determine which of the contestants has to suffer operational and tactical disadvantages and be forced throughout the battle into adopting compromise solutions.

Field Marshal Erwin Rommel, Wehrmacht

COMMAND

The price of greatness is responsibility.

Winston S. Churchill

What you cannot enforce, do not command.

Sophocles

A good commander is someone who can step on your boots and still leave a shine.

A group of American soldiers

When you come to a fork in the road, take it.

*Lawrence Peter (Yogi) Berra,
Baseball Player*

Don't be afraid to take a big step when one is indicated. You can't cross a chasm in two small jumps.

David Loyd George

Action springs not from thought, but from a readiness for responsibility.

George Macaulay Trevelyan

Some people change when they see the light, others when they feel the heat.

Caroline Schoeder

3

The more directives you issue to solve a problem, the worse it gets.

Jack Robertson

C H A P T E R

If you see a snake—just kill it. Don't appoint a committee on snakes.

H. Ross Perot

They (your troops) want to know how much you care, long before they care how much you know.

Lt Gen Robert D. Springer, USAF

Congress can make a general, but only communication can make him a commander.

Gen Omar N. Bradley, USA

Every level of leadership of command has its own intellectual standard.

Carl Philipp Gottfried von Clausewitz

We build a world of justice, or we will live in a world of coercion. The magnitude of our shared responsibilities makes our disagreements look so small.

George W. Bush

There's only going to be one guy in charge of the air—Horner. If you want to fight the interservice battles, do it after the war.

Gen H. Norman Schwarzkopf, USA

A higher commander, must think *big*.

Field Marshall Viscount William J. Slim, Royal Army

A prince or a general can best demonstrate his genius by managing a campaign exactly to suit his objectives and his resources, doing neither too much nor too little.

Carl Philipp Gottfried von Clausewitz

Social scientists make bad generals

Eliot A. Cohen

It appears that, when Germany determined to go into Norway, the staff of the supreme command determined what proportion of air, ground, and naval elements would comprise this expeditionary force. It then designated a commander and thereafter there was complete unity of command, and no interference from the three arms of the service thus combined. Here is a lesson which we must study well.

Gen Henry H. Arnold, USAAF

Last year [1984], Congress changed the number of smoke grenade launchers and muzzle boresights the Army requested. We directed the Navy to pare back its request for parachute flares, practice bombs, and passenger vehicles. Congress specified that the Air Force should cut its request for garbage trucks, street cleaners, and scoop loaders. This is a bit ridiculous.

Senator Samuel A. Nunn, Jr

Next stop Kuwait! We're going to go fast and go violently!

Lt Gen Walter E. Boomer, USMC, 15 February 1991

The formulation of a clear and precise mission statement which defines measurable and attainable objectives is paramount.

Gen Joseph P. Hoar, USMC

There is nothing impossible! Give your orders, support them with firmness, and you will see every obstacle vanish!

Lt Gen Johann von Ewald, Treatise on the duties of light troops, 1790

To command is to serve, nothing more and nothing less.

André Malraux

There is no limit to the good you can do if you don't care who gets the credit.

Gen George C. Marshall, USA

Speak when you are angry and you will make the best speech you will ever regret.

Ambrose Gwinnett Bierce

In order to keep a true perspective of one's importance, everyone should have a dog that will worship him and a cat that will ignore him.

Dereke Bruce

Any order that can be misunderstood has been misunderstood.

Army Axiom

When you are content to be simply yourself and don't compare or compete, everybody will respect you.

Lao Tzu

I do not propose to lay down for you a plan of campaign, but simply to lay down the work it is desirable to have done and leave you free to execute it in your own way.

Ulysses S. Grant

The responsibilities of an officer are quite analogous to those of a policeman or a fireman. The better he performs his daily task, the less frequently does he have to take direct action.

Gen George S. Patton, Jr, USA

It is above all necessary that a general should adopt a role proportionate to his capacity, a plan that he feels himself able to follow out methodically amidst dangers, surprise, friction, and accidents of all sorts.

Jean Colin

There were two extremely important points about him [Yamamoto] as a commander. First, he made the objectives of the operation extremely clear, and he expressed them with indomitable will. Second, although he did not permit any criticism of the objectives of the operation, he entrusted the details of its execution to the discretion of his subordinates.

Commander Minoru Genda, Imperial Japanese Navy

My observation is [that] where one person is found adequate to the discharge of a duty by close application, it is worse executed by two and scarcely done at all by three.

General Baron Friedrich von Steuben

The ability to distinguish essentials from non-essentials, to grasp quickly the elements of the changing situation, and the intestinal fortitude to keep cool and to continue fighting when the going gets tough are required in the successful war commander.

Adm Raymond A. Spruance, USN

We want commanders—not committees—to send our troops into battle.

W. G. Wyman

The commander should practice kindness and severity, should appear friendly to the soldiers, speak to them on the march, visit them while they are cooking, ask them if they are well cared for, and alleviate their needs if they have any. Officers without experience in war should be treated kindly. Their good actions should be praised. Small requests should be granted and they should not be treated in an overbearing manner, but severity is maintained about everything regarding duty.

Frederick the Great (Frederick II of Prussia)

A general is just as good or just as bad as the troops under his command make him.

Gen Douglas MacArthur, USA

When things go wrong in your command, start searching for the reason in increasingly larger concentric circles around your own desk.

Gen Bruce C. Clarke, USA

It [a joint committee] leads to weak and faltering decisions—or rather indecisions ... you may take the most gallant sailor, the most intrepid airman, or the most audacious soldier, put them at a table together—what do you get? The sum of their fears.

Attributed to Winston S. Churchill

Principles don't change—but battlefield execution in accordance with these principles has changed drastically. Soldiers don't change—but the tools of their trade, the modern weapons systems that are flooding into the inventory, are changing in a revolutionary way.... As we look at the mistakes in generalship over the past 100 years, the common theme is that the general did not understand the technology of his time or, as they say, he elected to fight the last war rather than the one he happened to be in. A general must be versatile enough to take into battle the existing technology of whatever moment in time he is called upon to fight. The job of a general is to be a battlefield leader, a tactician, a logistician, a commander who readies his force for battle with enlightened training and leads it into the fight with inspirational tactical judgment and a deep understanding of soldiers.

Gen John R. Galvin, USA

Our Army [Confederate Army] would be invincible if it could be properly organized and officered. There were never such men in an army before. They will go anywhere and do anything. But there is the difficulty—proper commanders.

*Gen Robert E. Lee, CSA to
Gen Thomas J. (Stonewall) Jackson, CSA*

The military commander is the fate of the nation.

*General Field Marshal Helmut Karl Bernhard Von
Moltke (the Elder)*

Command and leadership are two quite different functions, yet they are inextricably interrelated—each supplementing, strengthening the other. I think of them as Siamese twins, each essential to the life of the other, joined at the head and heart—with the head symbolizing command and the heart denoting leadership.

Maj Gen Aubrey S. (Red) Newman, USA

...the success of a military commander depends largely upon his practical turn of mind, whether it be in planning and directing military operations in the field or managing the business of transportation and supply. Military science is based on principles that have been deduced from the application of common sense in the conduct of military affairs ... military genius is really only the capacity to understand and apply simple principles founded on experience and sound reasoning.

Gen John J. Pershing, USA

No military commander is immune to mistakes, and many commanders at one time or another have perhaps made errors that cost our nation dearly—any wasted lives being too dear a price. But it is still the part of a soldier to accept responsibility for blunders and to examine honestly into their origin.

Gen Matthew B. Ridgway, USA

The general must know how to get his men their rations and every other kind of stores needed for war. He must have imagination to originate plans, practical sense and energy to carry them through. He must be observant, untiring, shrewd, kindly and cruel, simple and crafty, a watchman and a robber, lavish and miserly, generous and stingy, rash and conservative. All these and many other qualities, natural and acquired, he must have. He should also, as a matter of course, know his tactics, for a disorderly mob is no more an army than a heap of building materials is a house.

Socrates

Self-confidence and self-assertion are more important than modesty. The nation selects its President, at least in part, for his philosophy and his judgement and his conscientious conviction of what is right—and he need not hesitate to apply them. He must believe in his own objectives. He must assert his own priorities. And he must always strive to preserve the power and prestige of his office, the availability of his options, and the long-range interests of the nation.

*Theodore Sorenson,
Special Counsel to President John F. Kennedy*

The art of war requires the intuitive ability to grasp the essence of a unique battlefield situation, the creative ability to devise a practical solution, and the strength of purpose to execute the act.

*Marine Corps Doctrinal Pamphlet
(MCDP) 1-1, Warfighting*

Being powerful is like being a lady. If you have to tell people you are, you aren't.

Margaret Hilda Thatcher

Every general-in-chief who undertakes to execute a plan that he knows to be bad is culpable. He should communicate his reasons, insist on a change of plan, and finally resign his commission rather than become the instrument of his army's ruin.

Napoleon Bonaparte

A Task Force Commander who creates a close knit interagency working relationship can focus on getting the mission accomplished without the distractions created by outside agencies or attempts to fulfill special agendas that might be disruptive to the operation.

Rear Adm Michael D. Haskins, USN

CORE VALUES

Integrity is the fundamental premise for military service in a free society. Without integrity, the moral pillars of our military strength, public trust, and self-respect are lost.

Gen Charles A. Gabriel, USAF

The most important persuasion tool you have in your entire arsenal is integrity.

*Herman Hinton
(Zig) Ziglar*

Core values make the military what it is; without them, we cannot succeed. They are values that instill confidence, earn lasting respect, and create willing followers. They are the values that anchor resolve in the most difficult situations. They are the values that buttress mental and physical courage when we enter combat. In essence, they are the three pillars of professionalism that provide the foundation for military leadership at every level.

*Secretary of the Air Force
Sheila E. Widnall*

The society which scorns excellence in plumbing because plumbing is a humble activity, and tolerates shoddiness in philosophy because it is an exalted activity, will have neither good plumbing nor good philosophy. Neither its pipes nor its theories will hold water.

John W. Gardner

4

C H A P T E R

As we transform the Army ... some things will change, others will not. Our values will not change and they are not negotiable.

Gen Peter J. Schoomaker, USA

Some worry that it is somehow undiplomatic or impolite to speak the language of right and wrong. I disagree. Different circumstances require different methods, but not different moralities.

George W. Bush

The way we fight necessarily will reflect the way we live.

Samuel P. Huntington

Always do right—this will gratify some and astonish the rest.

Mark Twain (Samuel Langhorne Clemens)

Nearly all men can stand adversity, but if you want to test a man's character, give him power.

Abraham Lincoln

A reputation once broken may possibly be repaired, but the world will always keep their eyes on the spot where the crack was.

Joseph Hall

I cannot trust a man to control others who cannot control himself.

Gen Robert E. Lee, CSA

It must be accepted that discipline does not break down under the strain of placing a testing demand upon the individual. It is sloth, not activity that destroys discipline.

Brig Gen L. A. Marshall, USA

The untruthful soldier trifles with the lives of his countrymen and the honor and safety of his country.

Gen Douglas MacArthur, USA

Yours is the profession of arms, the will to win, the sure knowledge that in war there is no substitute for victory, that if you lose, the nation will be destroyed, that the very obsession of your public service must be duty, honor, country....

Gen Douglas MacArthur, USA

If I do my full duty, the rest will take care of itself.

Gen George S. Patton, Jr, USA

...You are always on parade.... There is no such thing as a good field soldier. You are either a good soldier or a bad soldier.

Gen George S. Patton, Jr, USA

The test of character is not *hanging in* when you expect light at the end of the tunnel, but performance of duty and persistence of example when you know no light is coming.

Vice Adm James B. Stockdale, USN

Professional competence is more than a display of book knowledge or of the results of military schooling. It requires the display of qualities of character which reflect inner strength and justified confidence in one's self.

Gen Maxwell D. Taylor, USA

Inseparable from the concept of service is the concept of integrity. The citizens of this great nation place great trust in their military Services. They will continue to judge us by stricter rules than they apply to themselves and they should do that because, ultimately, their security rests with us and the way we perform our duties.

Gen John W. Vessey, Jr, USA

Careerism is the one great sin, and it has no place among you. If you achieve success over the bodies or the careers of your comrades, you have served your nation poorly and you have violated the code of the warrior class.

Gen John W. Vessey, Jr, USA

A general may succeed for some time in persuading his superiors that he is a good commander; he will never persuade his army that he is a good commander unless he has the real qualities of one.

Field Marshal Earl A. P. Wavell, Royal Army

In times of danger, it is the ethical element of leadership which will bond our units together and enable them to withstand the stresses of combat.

Gen John A. Wickham, Jr, USA

...the legacy of souls that we touch through example-setting and through teaching is the long gray line of the Army of the future.

Gen John A. Wickham, Jr, USA

Personal and professional excellence ... you can't do one without the other ... they are all wrapped up in the word *character*.

Gen John A. Wickham, Jr, USA

There is a transcendent power in example. We reform others unconsciously when we walk uprightly.

Anne Sophie Swetchine

Leadership means being good at what you do, and much more. It means building teams, nurturing and setting the example for others to follow. It means committing yourself to the Core Values of the Air Force—Integrity, Service Before Self, and Excellence.

Secretary of the Air Force Sheila E. Widnall

I hope that the United States of America has not yet passed the peak of honor and beauty, and that our people can still sustain certain simple philosophies at which some miserable souls feel it incumbent to sneer. I refer to some of the Psalms, and to the Gettysburg Address, and the Scout Oath. I refer to the Lord's prayer, and to that other oath which a man must take when he stands with hand uplifted, and swears that he will defend his Country.

Gen Curtis E. LeMay, USAF

The American people rightly look to their military leaders not only to be skilled in the technical aspects of the profession of arms, but to be men of integrity who have a deep understanding of the human strengths and weaknesses that motivate soldiers under the ultimate test of war.

Gen J. Lawton Collins, USA

The people of this Nation have entrusted their Armed Forces with the most awesome weapons the world has ever seen, but they have also placed the lives of their sons and daughters who serve and the safety of their own families for now and in the future in the hands of the Armed Forces. Don't confuse integrity with infallibility. There's a great tendency to do that. As Gary Cooper said in *High Noon*, "you should aim to be high-regarded;" but you should remember that you are also human and fallible. Those who will lead you are also human and fallible. The code of the warrior class has room for fallibility. Certainly, the higher up the flagpole you go, the more of your fallible backside will show. There is room for that; but, there is no room for a lack of integrity or for those who place self before duty or self before comrades or self before country.

Gen John W. Vessey, Jr, USA

Do your duty in all things. You should never wish to do less.

Gen Robert E. Lee, CSA

COURAGE AND FEAR

Retreat Hell! We just got here.

Captain Lloyd S. Williams

We're surrounded! That simplifies the problem.

*Lt Gen Lewis B. (Chesty) Puller,
USMC*

There are no extraordinary men ... just extraordinary circumstances that ordinary men are forced to deal with.

Adm William F. Halsey, USN

Courage is resistance to fear, mastery of fear—not absence of fear.

*Mark Twain
(Samuel Langhorne Clemens)*

It is curious—curious that physical courage should be so common in the world and moral courage so rare.

*Mark Twain
(Samuel Langhorne Clemens)*

Courage is contagious. When a brave man takes a stand, the spines of others are stiffened.

William Franklin (Billy) Graham, Jr

5

C H A P T E R

The bravest are surely those who have the clearest vision of what is before them, glory and danger alike, and yet notwithstanding go out to meet it.

Thucydides

As for courage and will—we cannot measure how much of each lies within us, we can only trust there will be sufficient to carry through trials which may lie ahead.

Andre Norton

We fear things in proportion to our ignorance of them.

Livy (Titus Livius)

Perfect courage means doing unwitnessed what we would be capable of with the world looking on.

François de La Rochefoucauld

I have only 2 men out of my company and 20 out of some other company. We need support, but it is almost suicide to try to get it here as we are swept by machine gun fire and a constant barrage is on us. I have no one on my left and only a few on my right. I will hold.

*1Lt Clifton B. Cates, USMC,
Belleau Wood, 19 July 1918*

Death does not concern us, because as long as we exist, death is not here. And when it does come, we no longer exist.

Epicurus

Strength does not come from physical capacity. It comes from an indomitable will.

Mohandas Karamchand Gandhi

Even the bravest cannot fight beyond his strength.

Homer

All military history records the triumphs of discipline and courage far more frequently than numbers and resources.

Gen Robert E. Lee, CSA

I don't mind being called tough, since I find in this racket it's the tough guys who lead the survivors.

Gen Curtis E. LeMay, USAF

Among the men who fought on Iwo Jima, uncommon valor was a common virtue.

Adm Chester W. Nimitz, USN

Sometimes I do what I want to do. The rest of the time, I do what I have to.

Cicero

Courage, above all things, is the first quality of a warrior.

Carl Philipp Gottfried von Clausewitz

True heroism is remarkably sober, very undramatic. It is not the urge to surpass all others at whatever cost, but the urge to serve others at whatever cost.

Arthur Robert Ashe, Jr

Every reliable report from those capitals tells of the mounting fear that seized upon the population—the fear of being bombed from the air. The fear of the unknown is ever more potent than the fear of a known thing which may be weighed and measured and resolutely faced.

George Fielding Eliot

I started shooting when I was much too far away. That was merely a trick of mine. I did not mean so much to hit him as to frighten him, and I succeeded in catching him. He began flying in curves and this enabled me to draw near.

Baron Manfred von Richthofen, Luftwaffe

Soldiers will not follow any battle leader with confidence unless they know that he will require full performance of duty from every member of the team.

Dwight D. Eisenhower

Our troops are capable of the best discipline. If they lack it, leadership is faulty.

Dwight D. Eisenhower

The bold are helpless without cleverness.

Euripides

FUEL

It was a war begun as a fight for oil and ended by the lack of it.

*Asahi Shimbun,
regarding World War II*

He who owns the oil will own the world, for he will rule the sea by means of the heavy oils, the air by means of the ultra-refined oils, and the land by means of gasoline and the illuminating oils.

Henri Berenger

To fight, we must have oil for our machine.

Adolph Hitler

The war was decided by engines and octane.

*Joseph Stalin, referring to the
outcome of World War II*

The primary cause of our failure was a shortage of fuel.

Gen Paul von Kleist, Wehrmacht

Our ships sailed on water, but they moved on oil, and the demand never ceased.

Rear Adm W.R. Carter, USN

No matter how well fed, equipped, or officered, without oil and gasoline the modern army is a hopeless monster, mired and marked for destruction.

T. H. Vail Motter

6

C H A P T E R

The raids of the Allied air fleets on the German fuel supply installations were the most important of the combined factors which brought about the collapse of Germany.

Gen Adolf D. Galland, Luftwaffe

A plentiful and reliable supply of petroleum products was probably the single most vital factor in establishing Allied logistical superiority over the German Army.

The Quartermaster Corps

God was on the side of the nation that had the oil.

Professor Wakimura, Tokyo Imperial University

Above all, petrol governed every movement.

Winston S. Churchill

on Allied operations during World War II

Navy missions over Afghanistan were never planned without the employment of strat [strategic] gas.

James Paulsen

The shortage of oil was the key to Japan's military situation. It was the main problem for those preparing for war, at the same time, the reason why the nation was moving toward war.... Without oil, Japan's pretensions to empire were empty shadows.

Louis Morton

The thing that tied the fleet to the base [Pearl Harbor] more than any one factor was the question of fuel.

Rear Adm Husband E. Kimmel, USN

LEADERSHIP

Time is neutral and does not change things. With courage and initiative, leaders change things.

Jesse Louis Jackson

I start with the premise that the function of leadership is to produce more leaders, not more followers.

Ralph Nader

If your actions inspire others to dream more, learn more, do more and become more, you are a leader.

John Quincy Adams

Leaders shouldn't attach moral significance to their idea—do that, and you can't compromise.

Peter F. Drucker

Being busy does not always mean real work. The object of all work is production or accomplishment and to either of these ends there must be forethought, system, planning, intelligence, and honest purpose, as well as perspiration. Seeming to do is not doing.

Thomas A. Edison

No man is a leader until his appointment is ratified in the minds and hearts of his men.

Anonymous

7

CHAPTER

If you have knowledge, let others light their candles at it.

Sarah Margaret Fuller

Inventories can be managed, but people must be led.

H. Ross Perot

I don't know the key to success, but the key to failure is trying to please everybody.

William Henry (Bill) Cosby

Management is doing things right; leadership is doing the right things.

Peter F. Drucker

Leadership is the art of getting someone else to do something you want done because he wants to do it.

Dwight D. Eisenhower

Leaders grow; they are not made.

Peter F. Drucker

The only test of leadership is that somebody follows.

Robert K. Greenleaf

A leader is a dealer in hope.

Napoleon Bonaparte

Leadership is not magnetic personality—that can just as well be a glib tongue. It is not making friends and influencing people—that is flattery. Leadership is lifting a person's vision to higher sights, the raising of a person's performance to a higher standard, the building of a personality beyond its normal limitations.

Peter F. Drucker

Leadership is action, not position.

Donald H. McGannon

Leaders are the ones who keep faith with the past, keep step with the present, and keep the promise to posterity.

Harold J. Seymour

A good leader inspires others with confidence in him; a great leader inspires them with confidence in themselves.

Unknown

I am more afraid of an army of 100 sheep led by a lion than an army of 100 lions led by a sheep.

Charles Maurice de Talleyrand-Périgord, Prince de Benevente

A leader is a man who can adapt principles to circumstances.

Gen George S. Patton, Jr, USA

Good leaders are people who have a passion to succeed.... To become successful leaders, we must first learn that no matter how good the technology or how shiny the equipment, people-to-people relations get things done in our organizations. People are the assets that determine our success or failure. If you are to be a good leader, you have to cultivate your skills in the arena of personal relations.

Gen Ronald R. Fogleman, USAF

Anyone can become angry—that is easy. But to be angry with the right person, to the right degree, at the right time, for the right purpose, and in the right way—that is not easy.

Aristotle

Leadership remains the most baffling of arts ... as long as we do not know exactly what makes men get up out of a hole in the ground and go forward in the face of death at a word from another man, then leadership will remain one of the highest and most elusive of qualities. It will remain an art.

James L. Stokesbury

A good leader has to create the right kind of climate to ensure that everyone has an opportunity to achieve.

Gen Howell M. Estes III, USAF

I've discovered that the difference between a good unit and a poor unit is fundamentally leadership.

Gen Ronald R. Fogleman, USAF

Leaders should visibly love their people more than their positions—and prove their love with their actions.

Theodore Roosevelt

A leader must be able to look a man in the eye when he fires him and weep for him at the same time.

Vice Adm James B. Stockdale, USN

It is one of the most beautiful compensations of this life that no man can sincerely try to help another without helping himself.

Ralph Waldo Emerson

The power of example is very important to people under stress.

Gen Sir John W. Hackett, Royal Army

Out of every 100 men, 10 shouldn't even be there,
Eighty are just targets,
Nine are the real fighters, and we are lucky to have them,
for they make the battle.

Ah, but the one,
One is a warrior,
And he will bring the others back.

Heraclitus

The person who knows how will always have a job. The person who knows why will always be his boss.

Diane Ravitch

The most important quality in a leader is that of being acknowledged as such.

André Maurois (Emile Salomon Wilhelm Herzog)

Leadership is understanding people and involving them to help you do a job. That takes all of the good characteristics, like integrity, dedication of purpose, selflessness, knowledge, skill, implacability, as well as determination not to accept failure.

Adm Arleigh A. Burke, USN

You cannot be a leader, and ask other people to follow you, unless you know how to follow, too.

Senator Samuel T. Rayburn

I would rather excel others in the knowledge of what is excellent than in the extent of my powers and dominion.

Alexander the Great

Memories of our lives, of our works and our deeds will continue in others.

Rosa Louise McCauley Parks

In sum, the leader has to achieve a balance between the essential need for professional competence in his own technical field and that broader understanding of human problems which can only be achieved from a wide and largely self-acquired education.

S. W. Roskill

...the truly great leader overcomes all difficulties, and campaigns and battles are nothing but a long series of difficulties to be overcome. The lack of equipment, the lack of food, the lack of this or that are only excuses; the real leader displays his quality in his triumphs over adversity, however great it may be.

Gen George C. Marshall, USA

No normal young man is likely to recognize in himself the qualities that will persuade others to follow him. On the other hand, any man who can carry out orders in a cheerful spirit, complete his work step by step, use imagination in improving it, and then when the job is done, can face toward his next duty with anticipation, need have no reason to doubt his own capacity for leadership.

Samuel Lyman Atwood (Slam) Marshall

Good leadership promotes professionalism—a renaissance of standards, involving quality of life, service, discipline and total commitment to our Army and the United States of America.

Maj Gen Albert Akers, USA

Don't begrudge the time you spend developing, coaching and helping your people to grow so they can carry on when you're gone. It's one of the best signs of good leadership.

Bernard M. Baruch

Delegating work works, provided the one delegating works, too.

Robert Half

Use your people by allowing everyone to do his job. When a subordinate is free to do his job, he perceives this trust and confidence from his superiors and takes more pride in his job, himself, and the organization's goals and objectives. Delegation of sufficient authority and proper use of subordinates helps develop future leaders. This is a moral responsibility of every commander.

Lt Col Stanley Bonta, USA

Leadership is intangible, and therefore no weapon ever designed can replace it.

Gen Omar N. Bradley, USA

I would caution you always to remember that an essential qualification of a good leader is the ability to recognize, select, and train junior leaders.

Gen Omar N. Bradley, USA

To create great armies is one thing; to lead them ... is another.

Winston S. Churchill

All my life, both as a soldier and as an educator, I have been engaged in a search for a mysterious intangible. All nations seek it constantly because it is the key to greatness, sometimes to survival. That intangible is the electric and elusive quality known as leadership.

Gen Mark W. Clark, USA

You must be able to underwrite the honest mistakes of your subordinates if you wish to develop their initiative and experience.

Gen Bruce C. Clarke, USA

Do not expect to get squad, platoon, company, battalion, brigade, division, or corps commanders as replacements who are fully trained. If such people are available in the replacement system, they will probably be promoted before they arrive. Plan to coach them as needed in your standards and way of doing things.

Gen Bruce C. Clarke, USA

Good leadership in a platoon can only be practiced in the climate of good commandship in the units above.

Gen Bruce C. Clarke, USA

Over 2,400 years ago, the Greek Historian Herodotus wrote a *History of the Persian Wars* so that “men’s actions may not be effaced by time nor the great and wondrous deeds” of “the Greeks be deprived of renown.” Since that time countless writers have attempted to capture the essence of the great captains. In virtually every case great leaders have been those who gave extra effort and sought out challenge in all forms. There are no short cuts and sadly no easy ways to selfless leadership. Leadership is to be learned from experience and from study, toil, trial and error. The good things in life are worth striving for and nothing is more rewarding than leading soldiers.

Gen Robert A. Kingston, USA

All of us who are fortunate enough to be in leadership positions now, and those who aspire to lead soldiers in the future must hone our skills so that we can be the best leaders possible. Our soldiers want leaders who are willing to share their hardships, who are totally concerned with their welfare, and who are willing to place personal ambitions secondary to the needs of their troops or units. We must provide the direction, the counsel, and the good example to insure the concepts of excellence are firmly established in those under our supervision.

Gen Roscoe Robinson, Jr, USA

The strength of the group is the strength of the leader—I am the first believer. Leaders must have the quiet confidence, the certainty, of professional preparation and personal conviction that the task can and will be done. If so, it will.

Vincent Thomas (Vince) Lombardi

Leadership in the field depends to an important extent on one's legs, and stomach, and nervous system, and on one's ability to withstand hardships, and lack of sleep, and still be disposed energetically and aggressively to command men, to dominate men on the battlefield.

Gen George C. Marshall, USA

Each of us is led, some of us are leaders. The competence we demand in our leaders must be our model when we lead. Where are you?

Gen Glenn K. Otis, USA

...every military leader, from the lowest to the highest, owes it to the men whose lives are at his disposal to speak out clearly when he feels that a serious mistake is about to be made.

Gen Matthew B. Ridgway, USA

A good leader can't get too far ahead of his followers.

Franklin D. Roosevelt

A brave captain is as a root, out of which, as branches, the courage of his soldiers doth spring.

Sir Phillip Sidney

If I were asked to define leadership, I should say it is the projection of personality. It is the most intensely personal thing in the world because it is just plain you.

Field Marshall Viscount William J. Slim, Royal Army

Men think as their leaders think.

Charles P. Summerall

It is easy enough to provide soldiers with their basic needs—food and shelter, for example—but it takes skillful, imaginative, and dedicated leaders to create an atmosphere where soldiers and their family members share a sense of purpose and belonging.

Gen Maxwell R. Thurman, USA

The message is that better soldiers demand more from their leaders. In this sense authority flows from competence, not rank.

Gen Maxwell R. Thurman, USA

You will find in the days ahead that your ability to lead will be challenged by young soldiers anxious to succeed. They will not challenge you from the bottom of the ladder but from the top.

Gen Maxwell R. Thurman, USA

The kind of leadership available to an organization is a principal factor in its operation. So far as armies are concerned, the quality of leadership determines their success. Indeed, it often determines their survival.

Anonymous

These commissions [as officers] will not make you leaders, they will merely make you officers.

Anonymous, circa 1919

Every soldier is a leader regardless of his rank or position. His attitude, opinions, desires, and deportment mold the approach to mission taken by those above him and his subordinates. It is the summation of this leadership by every soldier that makes our Army a winner.

Anonymous

A great leader never sets himself above his followers except in carrying responsibilities.

Jules Ormont

My advice to tomorrow's senior NCOs [Noncommissioned Officer] is to listen, to learn, and then to serve with unequalled commitment. Their example will motivate and inspire, and when they, in turn, pass the baton, America will certainly be in good hands.

*CMSAF Thomas N. Barnes,
Fourth Chief Master Sergeant of the Air Force*

Leaders lead by example and set the tone. Above all, they do not countenance selective enforcement of standards. I know of no more ruinous path ... than selective enforcement of rules and standards.... Excellent leaders have very high standards and they enforce them without fear or favors.

Gen William L. Creech, USAF

People want to know what is expected of them. No one goes to work and says, I am going to do a lousy job today. People work to succeed, and they need to know how you measure that success. Allow for a few mistakes because people must be given the latitude to learn.

Gen H. Norman Schwartzkopf, USA

...every single soldier must know, before he goes into battle, how the little battle he is to fight fits into the larger picture, and how the success of his fighting will influence the battle as a whole.

*Field Marshal Viscount Bernard L. Montgomery,
Royal Army*

We must foster an atmosphere in which people understand the purpose of their work and are empowered to improve the way we do business.

Gen Ronald R. Fogleman, USAF

The existence of a following, whether it be a ship, an air station, or a fabrication shop, compels leaders to act responsibly. A leader only occupies that position by consent—he is responsible first, last, and always to those who follow him—it is a way of life!

Rear Adm Donald R. Eaton, USN

Leadership is inseparable from the followers' needs and goals. If that concept is ignored, the organization becomes factionalized, progress is halted, and productivity is impossible. Leaders in any organization are essentially politicians who must deal with the realities of pressures from above and below. In the hierarchy of leadership, no one is exempt. Admirals, commodores, captains, department heads and ship supervisors operate in an environment of conflicting political pressures. It might be said that leadership is the art of the possible.

Rear Adm Donald R. Eaton, USN

Because people are better informed, the leader of today is more likely to deal with subordinates who resent being treated as subordinates, who may be critical of any organizational system, who expect to be consulted and to influence their own destinies, and who often stand on the brink of alienation from the very institution that depends on their loyalty and commitment.

Rear Adm Donald R. Eaton, USN

It follows then that authority is entitled only to the respect it earns and no more. With the stage thus set, leadership is a matter of eliciting cooperation, rather than commanding obedience. It is a matter of being mindful of the needs of people in the context of a common mission.

Rear Adm Donald R. Eaton, USN

About a month after my promotion was announced, I asked the commander of all US Air Forces in Europe how I could possibly have been selected for promotion. The answer I got was fascinating; he replied, “Because you handled failure well.” When I told him that I didn’t understand what he meant, he told me that each wing commander was failing in one way or another. One had a major drug problem on his base, another had flunked a major NATO [North Atlantic Treaty Organization] inspection, a third commander had a significant racial problem on his base, and yet another had a terrible ground-safety record. He then explained that he learns more of the character of leaders while they are dealing with failure than when they are succeeding.

Maj Gen Perry M. Smith, USAF

...a peacetime army can usually survive with good administration and management up and down the hierarchy, coupled with good leadership concentrated at the very top. A wartime army, however, needs competent leadership at all levels. No one yet has figured out how to manage people effectively into battle; they must be led.

John P. Kotter

Military leadership is always greater than its interpreters, yet one truth is certain. Victory in battle can only be assured by leaders who are skilled in the art and science of war—tactically and technically competent. To this end, we must set, achieve, and sustain high standards of training in all areas central to soldiering. American military history and biography testify as nothing else can to the demand for the mastery of professional skills and knowledge, solidly grounded and tirelessly accumulated. Since the days of Valley Forge and Trenton when the leadership of George Washington captured the imagination of a dispirited American Army and propelled it to victory, American military training and education have proved to be the sure path to competence, to high standards, and to victory. In our time, the surest way to strengthen the bond between certain preparation in peace and ultimate success in war is through the rigorous development and continuous professional growth of the Army's leaders.

Gen William R. Richardson, USA

The most important thing I learned is that soldiers watch what their leaders do. You can give them classes and lecture them forever, but it is your personal example they will follow.

Gen Colin L. Powell, USA

LOGISTICS

There is nothing so useless as doing efficiently that which should not be done at all.

Peter F. Drucker

Clearly, logistics is the hard part of fighting a war.

Lt Gen E. T. Cook, USMC

Bitter experience in war has taught the maxim that the art of war is the art of the logistically feasible.

Adm Hyman G. Rickover, USN

I have no reason to believe that logistics will ever have much military sex appeal, except to serious soldiers....

*Maj Gen Julian Thompson,
Royal Marines*

Because of my wartime experience, I am insistent on the point that logistics know-how must be maintained, that logistics is second to nothing in importance in warfare, that logistics training must be widespread and thorough....

Vice Adm Robert B. Carney, USN

*Sir, the Air
Force can
deliver
anything.*

*Maj Gen Curtis E.
LeMay, USAF*



C H A P T E R

Only a commander who understands logistics can push the military machine to the limits without risking total breakdown.

Maj Gen Julian Thompson, Royal Marines

The line between disorder and order lies in logistics....

Sun Tzu

Logistics is the ball and chain of armored warfare.

Gen Heinz W. Guderian, Wehrmacht

...the basic design and the control of the area logistic system must be in the hands of the commander who will design, shift, and control the task forces in accordance with the strategic and tactical needs of the situation.

Rear Adm Henry C. Eccles, USN

Sound logistics forms the foundation for the development of strategic flexibility and mobility. If such flexibility is to be exercised and exploited, military command must have adequate control of its logistic support.

Rear Adm Henry C. Eccles, USN

...in its relationship to strategy, logistics assumes the character of a dynamic force, without which the strategic conception is simply a paper plan.

Commander C. Theo Vogelsang, USN

During the last war, 80 percent of our problems were of a logistical nature.

*Field Marshal Viscount Bernard L. Montgomery,
Royal Army*

Strategy and tactics provide the scheme for the conduct of military operations, logistics the means therefor.

Lt Col George C. Thorpe, USMC

Strategy is to war what the plot is to the play; Tactics is represented by the role of the players; Logistics furnishes the stage management, accessories, and maintenance. The audience, thrilled by the action of the play and the art of the performers, overlooks all of the cleverly hidden details of stage management.

Lt Col George C. Thorpe, USMC

Forget logistics, you lose.

Lt Gen Fredrick Franks, USA

Factors in the art of warfare are: first, calculations; second, quantities; third, logistics; fourth, the balance of power; and fifth, the possibility of victory is based on the balance of power.

Sun Tzu

And regulation entails organizational effectiveness, a chain of command, and a structure for logistical support.

Sun Tzu

There are five kinds of incendiary attack: the first is called setting fire to personnel; the second, to stores; the third, to transport vehicles and equipment; the fourth, to munitions; the fifth, to supply installations.... In all cases an army must understand the changes induced by the five kinds of incendiary attack, and make use of logistical calculations to address them.

Sun Tzu

I am tempted to make a slightly exaggerated statement—that logistics is all of war-making, except shooting the guns, releasing the bombs, and firing the torpedoes.

Adm Lynde D. McCormick, USN

Logistics is all or almost all of the field of military activities except combat. It is the province of not merely staffs, but also of generals-in-chief.

General Baron Antoine-Henri Jomini

In the long drawn out campaigns in Western Asia, with long marches and operations in barren desert or mountain, the generals had to relearn the logistical lessons that Alexander had learned from his father 14 centuries before the Crusades—plan properly, or die.

Maj Gen Julian Thompson, Royal Marines.

Army officers are intelligent. Give them the bare tree, let them supply the leaves.

Gen George Marshall

A sound logistics plan is the foundation upon which a war operation should be based. If the necessary minimum of logistics support cannot be given to the combatant forces involved, the operation may fail, or at best be only partially successful.

Adm Raymond A. Spruance, USN

Vision, sure. Strategy, yes. But when you go to war, you need to have both toilet paper and bullets at the right place at the right time. In other words, you must win through superior logistics. Go back to the Gulf War. After that war ended, the media stories focused on the strategy that was devised by Colin Powell and executed by Norman Schwarzkopf. For my money, the guy who won the Gulf War was Gus Pagonis, the genius who managed all of the logistics. It doesn't matter how brilliant your vision and strategy are if you can't get the soldiers, the weapons, the vehicles, the gasoline, the chow—the boots, for God's sake! —to the right people, at the right place, at the right time.

Thomas J. (Tom) Peters

To wage war, you need first of all money; second, you need money; and third, you also need money.

Prince Raimondo Montecucoli

The ideal for all military forces is to reduce their logistical requirements to necessities only.

*Air Force Manual 1-1,
Basic Aerospace Doctrine of the United States*

As a business professional with a vested career interest in the field of logistics, you are a part of a highly dynamic profession—current global developments and technological innovations are impacting logistics today as never before. While the logistics function's contributions to a firm's competitive strength have often been invisible in the past, many factors have coalesced to heighten its importance and visibility in the 1990s and beyond.

*Council of Logistics Management
Logistical competency will be valued as a strategic
resource in the future.*

History has little to say of the great logisticians, for the prancing charger is longer remembered than the pack mule.

Lt Gen Brehon B. Somervell, USA

...victory over all enemies will be achieved in the last analysis not only by the bravery, skill, and determination of our men, but by our overwhelming mastery in the munitions of war. We must not only provide munitions for our own fighting forces but vast quantities to be used against the enemy in every appropriate theater of war, wherever that may be.

Franklin D. Roosevelt

Logistics controls all campaigns and limits many.

Dwight D. Eisenhower

Logistics is the bridge between the national economy and the combat forces, and logistics thus operates as military economics in the fullest sense of the word. Therefore, logistics must be seen from two viewpoints. Logistics has its roots in the national economy. In this area it is dominated by civilian influences and civilian authority. In this area the major criterion of logistics is production efficiency. On the other hand, the end product of logistics lies in the operations of combat forces. There logistics is dominated by military influence and by military authority. In this area the major criterion of logistics is its effectiveness in creating and sustaining combat forces in action against an enemy.

Rear Adm Henry E. Eccles, USN

The science of logistics concerns integration of strategic, operational, and tactical sustainment efforts while scheduling the mobilization and deployment of units, personnel, equipment, and supplies in support of the employment concept of the geographic combatant commander. The relative combat power that military forces can bring to bear against an enemy is enabled by a nation's capability to plan for, gain access to, and deliver forces and material to the required points of application across the range of military operations.

*Joint Publication 4.0,
Doctrine of Logistics Support of Joint Operations,
6 April 2000*

Logistics governs the tempo and power of operations. For us, and for our enemy. We have to think about the partnership of operations and logistics because it is a target. A target for us, and for our enemy. Like any target, we need to fully understand its importance, vulnerabilities and critical elements to make sure we know what to defend and what to attack. All military commanders, at all levels of command, rely on the success of this partnership. How well they understand it will make a big difference concerning how well it works for them and how well they work for it.

Wing Commander David J. Foster, RAF

The current logistics apparatus was suited ideally to the battlefields of the Cold War, with more clearly defined front lines. It is not enough to ship supplies just to the nearest seaport or airfield. Nor can we solely depend on just-in time concepts for fast-moving tactical forces. The current scenarios require a logistics infrastructure that can deliver supplies to the last tactical mile....

Lt Gen Lawrence P. Farrell, Jr, USAF

US logistics systems can track all shipments and deliveries from the United States to overseas port of debarkation. But it lacks full, factory-to-foxhole visibility of the supplies once they enter a theater of war. That visibility is essential in today's battlefields. The point of failure is at the seam between the strategic and operational level.

Lt Gen Gary H. Hughey, USMC

All comments and lessons from the logistics of campaigns should be leavened with the fact that this must be one of the few campaigns fought by a regular force since the internal combustion engine became generally available, where the widespread use of wheeled transport was not possible. This, combined with the speed with which it was necessary to put the whole act together, and the enemy's efforts to disrupt the act, makes it arguable that we were fortunate to have any logistics at all!

*I. Gardiner, rifle company commander,
Royal Army, Falklands Campaign*

The sounder theory, which accords more closely with the facts of modern warfare, is that logistics is not something distinct from strategy and tactics, but rather an integral part of both; that an understanding of the problems inherent in creating and, even more important, in maintaining naval forces in fighting condition in the theater of operations is essential to high naval command.

Duncan S. Ballantine

Logistical competency will be valued as a strategic resource in the future.

Don Bowersox

International logistics coordination must always involve some invasion of the economic rights, independence, and sovereignty of each nation of the alliance.

Rear Adm Henry E. Eccles, USN

It will not suffice merely to make a specialist of the logistician, for logistics is part of the exercise of command...the record of the Second World War suggests that the naval commander must be indoctrinated in the problems of providing as well as making use of the means of warfare.

Duncan S. Ballantine

Logistics [is] ... in the broadest sense, the three big M's of warfare—material, movement, and maintenance. If international politics is the art of the possible, and war is its instrument, logistics is the art of defining and extending the possible. It provides the substance that physically permits an army to live and move and have its being.

James A. Huston

Logistics is the foundation of combat power.

Joint Doctrine Capstone/Keystone Primer

If politics is the art of the possible, logistics is the corresponding science.

Thomas M. Kane

The situation facing the Army, Navy and Air Force logisticians in Vietnam during the early days of the buildup was such that no one Service was particularly anxious to support another.

Lt Gen Joseph M. Heiser, Jr

MOBILITY

If your sword is too short, take one step forward.

Adm Togo Heihachiro, Imperial Japanese Navy, Commander of the Japanese Fleet at the Battle of Tsushima, 27-28 May 1905

I need to bed my forces down, and I need to know all this stuff about it...I don't want to arrive to find my tent city where my bombs have to go.

Gen John P. Jumper, USAF

The politician should fall silent the moment that mobilization begins.

Field Marshal Helmuth Johan Ludwig von Moltke (the Younger)

The problem with armored forces is that they are hard to deploy and hard to supply.

Max Boot

If you lose your readiness, you lose the people. If you lose the people, you lose it all, for a generation.

Gen Michael E. Ryan, USAF

The whole idea behind the expeditionary air force is to be able to plan and execute air and space power anywhere on the globe ... to do it in the way we train.

Gen John P. Jumper, USAF



C H A P T E R

Without mobility an army is but a corpse—awaiting burial in a trench.

B. H. Liddell Hart

Even though no other country can match our capabilities to move and sustain military forces, our capabilities don't fully meet all the challenges we face today or will face in the future. Of necessity, our operations planning is becoming more time-sensitive, and our ... planning ... must become both more streamlined and more precise.

Focused Logistics Campaign Plan

Both Afghanistan and Iraq were air mobility wars. Every single flight into these areas of operation needed some kind of air refueling—fighters, bombers, lifters and even other tankers needed air refueling. Navy carrier-based fighters needed dramatic air refueling to get them the legs they needed.

Gen John W. Handy, USAF

Airlift made possible the allied victory. The defenders of this post were exclusively resupplied by air and withstood the attacks of four Vietnamese regiments.

Anything, Anywhere, Anytime: An Illustrated History of the Military Airlift Command, 1941-1991

[The force rotation is] a logistics feat that will rival any in history.

Gen Richard B. Myers, USAF

We are defining the distribution battlespace.

Maj Gen Carlos D. Pair, USAR

In a successful airlift (operation), you don't see planes parked all over the place; they're either in the air, on loading or unloading ramps, or being worked on. You don't see personnel milling around; flying crews are either flying or resting up so they can fly again tomorrow.

Maj Gen William H. Tunner, USAF

The Americans, with minimum losses, attacked and seized a relatively weak area, constructed airfields, and then proceeded to cut the supply lines to troops in that area. The Japanese Army preferred direct assault, after German fashion, but the Americans flowed into our weaker points and submerged us, just as water seeks the weakest entry to sink a ship. We respected this type of strategy for its brilliance because it gained the most while losing the least.

Lt Col Matsuichi Iino, Imperial Japanese Army

The concentration of troops can be done fast and easy, on paper.

Field Marshal Radomir Putnik, Serbia, 1912-17

With the Axis on the run, airfields were built even faster. One request was received to build several airfields in the Sbeitla sector; 72 hours later, all were in use.

Gen Henry H. Arnold, USAAF

He who can move twice as fast as his opponent doubles his operative time and thereby halves that of his opponent.

Maj Gen J. F. C. Fuller, Royal Army

History shows again and again that a combination of resistance and mobility—of shield and sword—is the true answer to mass.

Maj Gen J. F. C. Fuller, Royal Army

The principles of mobility and concentration of force were considered to be contradictory elements of principles of war till the arrival of airpower. Today the exponents of airpower maintain that the principles of offensive and economy of force can be achieved effectively only by the exploitation of airspace, whereas prior to the emergence of airpower the principle of offensive could only be applied by maintaining a 4-to-1 ratio over the enemy forces.

S. T. Das

The ultimate object of mobility is to obtain superior power in battle.

Marshal General of France Hermann Maurice de Saxe

I believe that, more or less, all of the Allied operations [in the Southwest Pacific] depended on deception by landing in places where we thought a landing and the building of airfields impossible.

Lt Col Masaru Shinohara, Imperial Japanese Navy

We put into place a sequence that first off, before hostilities began, got the footprint established by assisting in everything from construction of runways to building housing for troops in a number of countries, and this went on for months ahead of final positioning of forces.

Gen Tommy R. Franks, USA

MORALE AND MOTIVATION

Keep away from people who try to belittle your ambitions. Small people always do that, but the really great make you feel that you, too, can become great.

*Mark Twain
(Samuel Langhorne Clemens)*

*If the enemy
stays spirited it
is difficult to
crush him.*

*Musashi
Miyamoto*

All they need do, really, is quietly let people know the truth. There is no need to bang the big drum. Official reports should stick to the absolute truth—once you start lying, the war's as good as lost. Information Division's outlook is all wrong. All this talk of guiding public opinion and maintaining the national morale is so much empty puff.

*Adm Isoroku Yamamoto,
Commander, Combined Fleet,
Imperial Japanese Navy*

The best way to defend the bombers is to catch the enemy before it is in position to attack. Catch them when they are taking off, or when they are climbing, or when they are forming up. Don't think you can defend the bomber by circling around him. It's good for the bomber's morale, and bad for tactics.

Brig Gen Robin Olds, USAF

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C H A P T E R

I remember when my spirits sank.... There's one characteristic of war—you get the big answer here—that I think has not changed in 2,500 years since Sun Tzu worked for the Emperor Wu and trained the palace guard. That is the human dimension.

As I thought about the young people from the 507th Maintenance Company who had been captured, and as I watched the Iraqi Minister of Information and I recognized that we were having our young people killed, as I recognized we were having our young people captured, as the weather became terribly uncooperative for about three days, I would characterize the confluence of those events as a low point.

As quickly as I tell you that, I will also tell you that there was never a doubt in my mind that at the end of the day it would be exactly as our people said it would be—the regime would be gone, the Iraqi people would be free. A low point in terms of doubting, no sir, I never had it.

Gen Tommy R. Franks, USA

I think combat is a sine wave in terms of adrenaline available to the physiology, a sine wave in terms of emotion that a trooper or commander feels, but at the end of the day the outcome is never in doubt.

Gen Tommy R. Franks, USA

The mind of the enemy and the will of his leaders is a target of far more importance than the bodies of his troops.

Brig Gen S.B. Griffith II, USMC

When a general complains of the morale of his troops, the time has come to look at his own.

Gen George C. Marshall, USA

The morale of the soldier is the greatest single factor in war.

*Field Marshal Viscount Bernard L. Montgomery,
Royal Army*

The dominant feeling of the battlefield is loneliness

Field Marshal Viscount William J. Slim, Royal Army

There is no such thing as a hopeless cause—only insufficiently motivated soldiers.

Col Stephen Wollett, USA

Ability is what you're capable of doing. Motivation determines what you do. Attitude determines how well you do it.

Raymond Thornton Chandler

For success, attitude is equally as important as ability.

Harry F. Banks

A teacher who is attempting to teach without inspiring the pupil with a desire to learn is hammering on a cold iron.

Horace Mann

How to achieve the moral breakdown of the enemy before the war has started—that is the problem that interests me. Whoever has experienced war at the front will want to refrain from all avoidable bloodshed.

Adolf Hitler

Good Quartermasters may win more battles than brilliant tacticians by providing creature comforts which boost morale.

Editor of the Royal United Service Institution Journal

Loss of hope, rather than loss of life, is the factor that really decides wars, battles, and even the smallest combats. The all-time experience of warfare shows that when men reach the point where they see, or feel, that further effort and sacrifice can do no more than delay the end, they commonly lose the will to spin it out and bow to the inevitable.

B. H. Liddell Hart

The soundest strategy is to postpone operations until the moral disintegration of the enemy renders the delivery of the mortal blow both possible and easy.

Vladimir I. Lenin

True economy of force is using the indirect approach to effect a psychological defeat without engaging in actual combat.

B. H. Liddell Hart

Morale makes up three quarters of the game, the relative balance of manpower accounts for only the remaining quarter.

Napoleon Bonaparte

The soldier's heart, the soldier's spirit, the soldier's soul, are everything.... Unless the soldier's soul sustains him, he cannot be relied on and will fail himself and his country in the end.

Gen George C. Marshall, USA

National strength lies only in the hearts and spirits of men.

Gen George C. Marshall, USA

An army lives in the shadow of its tradition. It looks to the heroic deeds of the past and the performance of its great soldiers to enlighten and inspire its present membership.

Gen Fred C. Weyand, USA

The unfailing formula for production of morale is patriotism, self-respect, discipline, and self-confidence within a military unit, joined with fair treatment and merited appreciation from without. It cannot be produced by pampering or coddling an army, and is not necessarily destroyed by hardship, danger, or even calamity.... It will quickly wither and die if soldiers come to believe themselves the victims of indifference or injustice on the part of their government, or of ignorance, personal ambition, or ineptitude on the part of their leaders.

Gen Douglas MacArthur, USA

[Australian air attacks] exacted the most frightful sacrifice from [troops], severely damaging their morale. The feeling of helplessness in the face of the enemy fliers instilled a paralysis in both officers and men. The columns of savaged artillery pieces, automobiles, and motor transport, together with shattered wagons, horses, and men, blocked the road in many places.

Gen Liman von Sanders

How dreadful it is when the right judge judges wrong!

Sophocles

Credit you give yourself is not worth having.

Irving Grant Thalberg

It is better to do one's own duty, however defective it may be, than to follow the duty of another, however well one may perform it. He who does his duty as his own nature reveals it, never sins.

Lao Tzu

It's absolutely impossible, but it has possibilities.

Samuel Goldwyn

The feeble tremble before opinion, the foolish defy it, the wise judge it, the skillful direct it.

Jeanne Marie Roland de la Platiere

PLANS AND PREPARATION

Despise the enemy strategically but take him seriously tactically.

Mao Tse Tung

Never discount randomness.

Benjamin Franklin

It will not do to leave a live dragon out of your plans if you live near one.

John Ronald Reuel Tolkien

In preparing for battle I have always found that plans are useless, but planning is indispensable.

Dwight D. Eisenhower

You can discover what your enemy fears most by observing the means he uses to frighten you.

Eric Hoffer

If you don't know where you are going, you might not get there.

*Lawrence Peter (Yogi) Berra,
Baseball Player*

Obstacles are those frightful things you see when you take your eyes off the goal.

Henry Ford

While the horizon of strategy is bounded by war, grand strategy looks beyond the war to the subsequent peace.

B. H. Liddell Hart



C H A P T E R

Our life is frittered away by detail.... Simplify, simplify.

Henry David Thoreau

Things should be made as simple as possible, but not any simpler.

Albert Einstein

However beautiful the strategy, you should occasionally look at the results.

Winston S. Churchill

To doubt everything or to believe everything are two equally convenient solutions; both dispense with the necessity of reflection.

Jules Henri Poincaré

Strategy is the application of common sense to the conduct of war. The difficulty lies in its execution....

*Field Marshal Helmuth Johan Ludwig von Moltke
(the Younger)*

Everything in strategy is very simple, but that does not mean that everything is very easy.

Carl Philipp Gottfried von Clausewitz

...it is the task of military science to prevent the doctrines from being too badly wrong.

Sir Michael Eliot Howard

At the very heart of warfare lies doctrine. It represents the central beliefs for waging war in order to achieve victory. Doctrine is of the mind, a network of faith and knowledge reinforced by experience which lays the pattern for the utilization of men, equipment, and tactics. It is the building material for strategy. It is fundamental to sound judgment.

Gen Curtis E. LeMay, USAF

A strategist should think in terms of paralyzing, not of killing.

B. H. Liddell Hart

...in war everything is uncertain, and calculations have to be made with variable quantities.

Col John A. Warden, USAF

If there is one attitude more dangerous than to assume that a future war will be just like the last one, it is to imagine that it will be so utterly different that we can afford to ignore all the lessons of the last one.

Air Marshal Sir John C. Slessor, RAF

...history, whatever its value in educating the judgment, teaches no lessons, and the professional historian will be as skeptical of those who claim that it does as professional doctors are of their colleagues who peddle patent medicines guaranteeing instant cures.... Historians may claim to teach lessons, and often they teach very wisely. But history as such does not.

Sir Michael Howard

Yesterday's winning formula ossifies into today's conventional wisdom before petrifying into tomorrow's tablets of stone.

*Sumantra Ghoshal and Christopher A. Bartlett,
Changing the Role of Top Management: Beyond
Structure to Processes*

The dogmas of the quiet past are inadequate to the stormy present. The occasion is piled high with difficulty, and we must rise with the occasion. As our case is new, so we must think anew, and act anew.

Abraham Lincoln

To be practical, any plan must take account of the enemy's power to frustrate it; the best chance of overcoming such obstruction is to have a plan that can be easily varied to fit the circumstances met; to keep such adaptability, while still keeping the initiative, the best way to operate is along a line which offers alternative objectives.

B. H. Liddell Hart

The key to this operation is synchronicity, and violence of action with spontaneity and simultaneity.

Anonymous, Uphold Democracy plans officer

Intelligence information is much more often imprecise than it is precise.

Gen Tommy R. Franks, USA

Adherence to dogma has destroyed more armies and cost more battles than anything in war.

Gen J. F. C. Fuller, Royal Army

You will usually find that the enemy has three courses open to him, and of these he will adopt the fourth.

General Field Marshal Helmut Karl Bernhard Von Moltke (the Elder)

One falls into a feeling of security by mental laziness and through lack of calculation concerning the intentions of the enemy. To proceed properly it is necessary to put oneself in his place and say: What would I do if I were the enemy? What project would I form? Make as many as possible of these projects, examine them all, and above all reflect on the means to avert them. But do not let these calculations make you timid. Circumspection is good only up to a certain point.

Frederick the Great (Frederick II of Prussia)

If I always appear prepared, it is because before entering on an undertaking, I have meditated for long and have foreseen what may occur. It is not genius which reveals to me suddenly and secretly what I should do in circumstances unexpected by others; it is thought and preparation.

Napoleon Bonaparte

Know the enemy and know yourself; in a hundred battles you will never be in peril. When you are ignorant of the enemy but know yourself, your chances of winning or losing are equal. If ignorant both of your enemy and of yourself, you are certain in every battle to be in peril.

Sun Tzu

History is not kind to nations that go to sleep. Pearl Harbor woke us up and we managed to win, although we are already forgetting the dark days when victory was uncertain, when it looked as though the scales might be tipped the other way.

Gen George C. Kenney, USAAF

The general who wins a battle makes many calculations in his temple before the battle is fought. The general who loses a battle makes but few calculations beforehand. Thus many calculations lead to victory, and few calculations to defeat. It is by attention to this point that I can foresee who is likely to win or lose.

Sun Tzu

In war, only the simple succeeds.

Field Marshal Paul Von Hindenburg

Sometimes it is entirely appropriate to kill a fly with a sledge hammer.

Major Holdridge

An irresolute general who acts without principles and without plan, even though he lead an army numerically superior to that of the enemy, almost always finds himself inferior to the latter on the field of battle.

Napoleon Bonaparte

The chief cause of problems is solutions.

(Arnold) Eric Sevareid

If you're in a fair fight, you didn't plan it properly.

*Nick Lappos, Chief Research and Development Pilot,
Sikorsky Aircraft*

A riot is a spontaneous outburst. A war is subject to advance planning.

Richard M. Nixon

Bravery without forethought causes a man to fight blindly and desperately like a mad bull. Such an opponent must not be encountered with brute force, but may be lured into an ambush and slain.

Ts'ao Kung

History shows that there are no invincible armies.

Joseph Stalin

Simplicity is the most difficult thing to secure in this world; it is the last limit of experience and the last effort of genius.

George Sand (Amandine-Aurore-Lucile Dupin)

There is no problem so complicated that you cannot find a very simple answer to it if you look at it in the right way.

Douglas N. Adams

Very simple ideas lie within the reach only of complex minds.

Remy de Gourmont

Before anything else, preparation is the key to success.

Alexander Graham Bell

It is better to be prepared for an opportunity and not have one than to have an opportunity and not be prepared.

Whitney M. Young

Victorious warriors win first and then go to war, while defeated warriors go to war first and then seek to win.

Sun Tzu

Always mystify, mislead, and surprise the enemy if possible.

Gen Thomas J. (Stonewall) Jackson, CSA

...by due foresight, preparation and initiative, material obstacles can always be overcome.

Gen William T. Sherman, USA

Any sustained period of peace challenges military institutions. It requires holding on to the immutable and terrifying realities of war in a climate of peacetime pursuits and ease, because only by an understanding of what war has been can we hope to glimpse what it will be. To prepare for the future, we must keep a grip on the past.

Lt Gen Paul K. Van Riper, Commandant of the Marine Corps' Combat Development Command, and Maj Gen Robert H. Scales Jr, Commandant of the Army War College, Preparing for War in the 21st Century

Fortune favors the prepared mind.

Louis Pasteur

War is not an affair of chance. A great deal of knowledge, study, and meditation is necessary to conduct it well.

Frederick the Great (Frederick II of Prussia)

War is a matter of vital importance to the State, the province of life or death, the road to survival or ruin. It is therefore mandatory that it be thoroughly studied.

Sun Tzu

When blows are planned, whoever contrives them with the greatest appreciation of their consequences will have a great advantage.

Frederick the Great (Frederick II of Prussia)

The military student does not seek to learn from history the minutiae of method and technique. In every age these are influenced by the characteristics of weapons currently available and the means at hand for maneuvering, supplying, and controlling combat forces. But research does bring to light those fundamental principles, and their combinations and applications, which, in the past, have produced success.

Gen Douglas MacArthur, USA

If we should have to fight, we should be prepared to do so from the neck up instead of from the neck down.

Lt Gen James H. (Jimmy) Doolittle, USAFF

In wars throughout history, events have generally proved the prehostilities calculations of both sides, victor as well as loser, to have been seriously wrong.

Bernard Brodie

The most important thing is to have a flexible approach.... The truth is no one knows exactly what air fighting will be like in the future. We can't say anything will stay as it is, but we also can't be sure the future will conform to particular theories, which so often, between the wars, have proven wrong.

Brig Gen Robin Olds, USAF

The ordinary man is much more likely to do the right thing if he really understands why he is doing it and what will probably happen if he does something else ... the best basis for sound judgment is a knowledge of what has been done in the past, and with what results.

Air Marshal Sir John C. Slessor, RAF

SUPPLY AND TRANSPORTATION

The Dell Theory of Conflict Prevention argues that no two countries that are both part of the same global supply chain will ever fight a war as long as they are each part of that supply chain.

Thomas L. Friedman

*The greatest
secret of war and
the masterpiece
of a skillful
general is to
starve his enemy.*

*Frederick the Great
(Frederick II of
Prussia)*

Supply chains cannot tolerate even 24 hours of disruption. So if you lose your place in the supply chain because of wild behavior you could lose a lot. It would be like pouring cement down one of your oil wells.

Thomas L. Friedman

Underway replenishment was the US Navy's secret weapon of World War II.

Adm Chester W. Nimitz, USN

Cannibalization is a quality-of-life issue.

Lt Gen Michael E. Zettler, USAF

To a hungry rifleman the question of his rations is a matter of vital importance.

Patrick MacGill

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C H A P T E R

When you do battle, even if you are winning, if you continue for a long time it will dull your forces and blunt your edge.... If you keep your armies out in the field for a long time, your supplies will be insufficient. Transportation of provisions itself consumes 20 times the amount transported.

Sun Tzu

...any commander with three months to prepare before he is besieged, who lays in only six days stocks of ammunition deserves to be censured in the strongest terms.

*Maj Gen Julian Thompson, Royal Marines,
speaking of the French defeat at Dien Bien Phu*

There is nothing more common than to find considerations of supply affecting the strategic lines of a campaign and a war.

Carl Philipp Gottfried von Clausewitz

The cost of information has been declining relative to other expenses, such as land, labor, and capital. Thus, it is more efficient to use information, wherever possible, in lieu of more expensive assets.

Martha Cooper

Bringing supply chain integration to reality will transform Air Force supply management.

Brig Gen Robert Mansfield, Jr, USAF

...no such thing as choking off supply lines in a country as wild as Korea.

Gen Matthew B. Ridgway, USA

The line of supply may be said to be as vital to the existence of an army as the heart to the life of a human being. Just as the duelist who finds his adversary's point menacing him with certain death, and his own guard astray, is compelled to conform to his adversary's movements, and to content himself with warding off his thrusts, so the commander whose communications are suddenly threatened finds himself in a false position, and he will be fortunate if he has not to change all his plans, to split up his force into more or less isolated detachments, and to fight with inferior numbers on ground which he has not had time to prepare, and where defeat will not be an ordinary failure, but will entail the ruin or surrender of his whole army.

Col George Francis Robert Henderson, Royal Army

Free supplies and open retreat are two essentials to the safety of an army or a fleet

Rear Adm Alfred Thayer Mahan, USN

In the final campaign, Colonel Worth resorted to a series of summer offensives aimed at destroying the Indian's subsistence, so that the issue finally was settled by striking at enemy logistical resources.

James Hudson

The quartermaster has only two sizes, too large and too small.

Murphy's Ninth Military Law

Our trouble will never be in raising soldiers. Our trouble will always be the limit of possibility in transporting, clothing, arming, feeding, and caring for our soldiers....

Secretary of War Elihu Root

The supply and maintenance of armies had become the master of strategy instead of its servant.

A Critical Analysis of the Need for Specialized Mobile Maintenance Units in Air Force Operations, Report Number 817, Maxwell AFB, Alabama: Air Command and Staff School, May 1949

The great delay in declaring war in this session of 1811-1812 was primarily because of the lack of means with which to fight.

Reginald Horseman

One of the greatest perplexities of the government is to avoid receiving troops faster than it can provide for them.

Abraham Lincoln

The Atlanta campaign would simply have been quite impossible without the use of railroads.

Gen William T. Sherman, USA

Twentieth-century warfare demands that the blood of soldiers must be mingled with from three to five parts of the sweat of the men in the factories, mills, mines, and fields of the nation in arms.

Howard W. Coffin

Hitler's failure to build up the necessary capacity to provide the transport essential for mobile warfare was one of the principal reasons for the failure of the German invasion of the Soviet Union [Operation Barbarossa].

Maj Gen Julian Thompson, Royal Marines

Armies will go as far as practical and then wait until the supply system in [the] rear will permit further advance.

Gen Omar N. Bradley, USA

It's dangerous to use Desert Shield and Desert Storm as a good example of what we can do in sealift because 47 percent of it came from foreign ships, which might not be available in the next emergency.

Vice Adm Paul D. Butcher, USN

By the war's end it was evident that the American construction capacity was the one factor of American strength which our enemies most consistently underestimated. It was the one element of our strength for which they had no basis for comparison. They had seen nothing like it.

Lt Gen Eugene B. Reybold, USA

For our air offensive to attain its full effect, it is necessary that our ground offensive should be of a character to throw the greatest possible strain upon the enemy's communications.

Winston S. Churchill

No form of transportation ever really dies out. Every new form is an addition to, and not a substitution for, an old form of transportation.

Air Marshal Viscount Hugh M. Trenchard, RAF

[The French army in Vietnam] suffers from the considerable disadvantage attaching to those who seek to protect and preserve rather than simply destroy. It is much easier to cut a railway line or blow up a bridge than to protect them from destruction.

Gen G. J. M. Chassin, Armée de l'Air

Those airplanes that used to spend 4 or 5 months in depot status are now spending upwards of a year in depot status, just because of the aging problem.

Gen John P. Jumper, USAF

TECHNOLOGY

One machine can do the work of 50 ordinary men. No machine can do the work of one extraordinary man.

Elbert G. Hubbard

Our military culture must reward new thinking, innovation and experimentation.... Every dollar of defense spending must meet a single test—it must help us build the decisive power we will need to win the wars of the future.

George H. W. Bush

Let it be admitted that the modern technological revolution has confronted us with military problems of unprecedented complexity, problems made all the more difficult because of the social and political turbulence of the age in which we live. But precisely because of these revolutionary developments, let me suggest that you had better study military history, indeed all history, as no generation of military men have studied it before.

Frank Craven

Progress is not inevitable.

William James (Will) Durant

We have to admit that we are in ruts. We are in stovepipes. We have been taught to think one way. We have been taught to defend our prerogatives.... We've got to break out of that....

Gen John P. Jumper, USAF

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C H A P T E R

We are witnessing a revolution in the technology of war, power is increasingly defined not by size but by mobility and swiftness—influence is measured in information....

George W. Bush

Today, we are on the verge of another revolution. Inventions like the computer, fiber-optic cable, and the Internet are changing the way we work, learn, and communicate with each other.

William J. Clinton

Prediction is a risky thing, especially when it's about the future.

Lawrence Peter (Yogi) Berra

Information technology is a key enabler for managing the Defense Department's vast transportation continuum and is the linchpin for defense logistics distribution in peace and war.

Gen John W. Handy, USAF

We need to continue the transition from a threat-based Cold War garrison force, focused on containment, to a capabilities-based expeditionary force focused on responsiveness.

Gen Michael E. Ryan, USAF

The illiterate of the future will not be the person who cannot read. It will be the person who does not know how to learn.

Alvin Toffler

I worry about the technology base of this country. The degree of competition is declining in the defense industry. The longer the large defense contractors deal with the Defense Department, the more they become like the Defense Department—and I don't say that as a compliment. They get big, and slow, and sluggish, and bureaucratic.

Secretary of Defense Donald H. Rumsfeld

What we need to look at are those systems referred to as transformational; that are going to give us an even greater capability in the future. But you cannot get the transformation if you try to do everything ... you are going to have to make some choices.

David Kieth (Dave) McCurdy

We are following a consumption-oriented rather than investment-centered approach toward our military forces. As a result, the nation will be faced with the obsolescence of a large fraction of its stock of military equipment and a massive bill for the modernization of the Armed Forces if we are to maintain our foreign policy of global leadership and our defense strategy of military preeminence.

*Center for Strategic and International Studies,
March 1998*

A gentleman armed with my invention can keep a dozen ruffians at bay.

Samuel Colt

However far modern science and techniques have fallen short of their inherent possibilities, they have taught mankind at least one lesson—nothing is impossible.

Lewis Mumford

A popular fallacy is to suppose that ... flying machines could be used to drop dynamite on an enemy in time of war.

William Henry Pickering (American astronomer at Harvard College Observatory), Aeronautics, 1908

As a peace machine, the value (of the aeroplane) to the world will be beyond computation. Would a declaration of war between Russia and Japan be made, if within an hour thereafter, a swiftly gliding aeroplane might take its flight from Saint Petersburg and drop half a ton of dynamite about the [Japanese] war offices? Could any nation afford to war upon any other with such hazards in view?

John Brisben Walker (Publisher of Cosmopolitan, March 1904)

With the discovery of the atom, everything changed, except man's thinking. Because of this we drift toward unparalleled catastrophe.

Albert Einstein

Everything that can be invented has been invented.

Charles H. Duell, Commissioner, US Office of Patents, 1899

Where is the knowledge we lost in information?

Thomas Stearns (T. S.) Eliot

Man is still the most extraordinary computer of all.

John F. Kennedy

In a few hundred years, when the history of our time will be written from a long-term perspective, it is likely that the most important event historians will see is not technology, not the Internet, not e-commerce. It is an unprecedented change in the human condition. For the first time ... substantial and rapidly growing numbers of people have choices. For the first time, they will have to manage themselves. And society is totally unprepared for it.

Peter F. Drucker

First and foremost, it's about changes in human behavior rather than changes in equipment.

Vice Adm Arthur K. Cebrowski, USN

But remember, please, the law by which we live,
We are not built to comprehend a lie,
We can neither love nor pity nor forgive,
If you make a slip in handling us, you die!

Rudyard Kipling, The Secret of the Machines, 1911

The challenge of today's DoD [Department of Defense] policymakers is to help shape an industrial base that will supply the 21st century warfighters as effectively as it has prior generations of American men and women in uniform. The DoD must inspire the roadmap. Without such a roadmap, we run the risk—after expending considerable time and money—of reaching the wrong destination.

Office of the Secretary of Defense study, February 2003

The gravest danger to freedom lies at the crossroads of radicalism and technology. When the spread of chemical and biological and nuclear weapons, along with ballistic missile technology ... occurs, even weak states and small groups could attain a catastrophic power to strike great nations. Our enemies have declared this very intention, and have been caught seeking these terrible weapons. They want the capability to blackmail us, or to harm us, or to harm our friends—and we will oppose them with all our power.

George W. Bush

Strategy in peacetime is expressed largely in choices among weapons systems....

Bernard Brodie

America is now threatened less by conquering states than we are by failing ones. We are menaced less by fleets and armies than by catastrophic technologies in the hands of the embittered few.

National Security Strategy, September 2002

New technology requires new thinking about when a threat actually becomes imminent.... We must adapt the concept of imminent threat to the capabilities and objectives of today's adversaries.

Secretary of State Condoleezza Rice

...instant history [was] invariably shallow history.

Anthony Cordesman

...satellites were the single most important factor that enabled us to build the command, control, and communications network for Desert Shield.

Gen Colin L. Powell, USA

Preparing for the future will require us to think differently and develop the kinds of forces and capabilities that can adapt quickly to new challenges and to unexpected circumstances. An ability to adapt will be critical in a world where surprise and uncertainty are the defining characteristics of our new security environment.

Secretary of Defense Donald H. Rumsfeld

You can rest assured that USTRANSCOM's [United States Transportation Command] crystal clear vision of the way ahead will provide constantly improving, seamless, and responsive support to the warfighters. America's military might moves with us and we are stepping out smartly.

Gen John W. Handy, USAF

Warfighters want simplicity, speed, visibility, reliability. When there's confusion, they want a single face to deal with for answers.

Lt Gen Gary H. Hughey, USMC

It's through information technology that we will have the visibility of the processes that we will further validate. And it's time to do the same thing with the supply chain—start to finish, factory to foxhole.

Gen John W. Handy, USAF

We must replace top-down operations with distributed operations—and use information technology to empower whomever is in need of a solution, regardless of where that individual is.

Assistant Secretary of Defense for Networks and Information Integration John P. Stenbit

We are not condemned to repeat the lessons of forty years at the nuclear brink. We can do better than condone a world in which nuclear weapons are enshrined as the ultimate arbiter of conflict. The price already paid is too dear, the risks run too great. The nuclear beast must be chained, its soul expunged, its lair laid waste. The task is daunting but we cannot shrink from it. The opportunity may not come again.

Gen George Lee Butler, USAF

There will one day spring from the brain of science a machine or force so fearful in its potentialities, so absolutely terrifying, that even man, the fighter, who will dare torture and death in order to inflict torture and death, will be appalled, and so abandon war forever.

Thomas A. Edison

Only the spirit of attack, borne in a brave heart, will bring success to any fighter aircraft, no matter how highly developed it may be.

Otto Lilienthal

The atomic bomb made the prospect of future war unendurable. It has led us up those last few steps to the mountain pass; and beyond there is a different country.

J. Robert Oppenheimer

640K ought to be enough for anybody.

William Henry (Bill) Gates III, 1981

The 32-bit machine would be overkill for a personal computer.

Sol Libes, ByteLines

Where a calculator on the ENIAC is equipped with 18,000 vacuum tubes and weighs 30 tons, computers in the future may have only 1,000 vacuum tubes and perhaps weigh 1.5 tons.

Popular Mechanics, March 1949

It would appear that we have reached the limits of what it is possible to achieve with computer technology, although one should be careful with such statements, as they tend to sound pretty silly in 5 years.

John von Neumann, 1949

There is no reason for any individual to have a computer in his home.

Kenneth H. (Ken) Olson, President, Digital Equipment, 1977

I have traveled the length and breadth of this country and talked with the best people, and I can assure you that data processing is a fad that won't last out the year.

The editor in charge of business books for Prentice Hall, 1957

DOS addresses only 1 Megabyte of RAM because we cannot imagine any applications needing more.

Microsoft, 1980, on the development of DOS

Windows NT addresses 2 Gigabytes of RAM which is more than any application will ever need

Microsoft, 1992, on the development of Windows NT

Man is the best computer we can put aboard a spacecraft ... and the only one that can be mass produced with unskilled labor.

Wernher von Braun

I think there's a world market for about 5 computers.

*Thomas J. Watson, Chairman of the Board, IBM
(around 1948)*

I knew then [in 1970] that a 4K-byte minicomputer would cost as much as a house. So I reasoned that after college, I'd have to live cheaply in an apartment and put all my money into owning a computer.

Apple cofounder Stephen Gary (Steve) Wozniak

You can't stop change any more than you can stop the
suns from setting.

Shmi Skywalker, Star Wars (Episode I)

Heavier-than-air flying machines are impossible.

Lord William T. Kelvin

Microsoft has had clear competitors in the past. It's a good
thing we have museums to document that.

William Henry (Bill) Gates III

The real danger is not that computers will begin to think
like men, but that men will begin to think like computers.

Sydney Harris

To me, there is something superbly symbolic in the fact
that an astronaut, sent up as assistant to a series of
computers, found that he worked more accurately and
more intelligently than they. Inside the capsule, man is still
in charge.

Adlai E. Stevenson

Attaining that goal requires the steady infusion of new
technology and modernization and replacement of
equipment. However, material superiority alone is not
sufficient. Of greater importance is the development of
doctrine, organizations, training and education, leaders,
and people that effectively take advantage of the
technology.

Joint Vision 2020

Is this a revolution in military affairs? Revolutions require revolutionaries, not just gadgets.

Lt Col Ralph Peters, USA

We're approaching being able to make one machine that can make any machine.

Neil Gershenfeld, Massachusetts Institute of Technology's Center for Bits and Atoms

The need for control of these new technologies is more important now than in previous times of scientific development.

North Atlantic Treaty Organization's Special Report on Emerging Technologies

...not more than \$125,000 ... for the purchase, maintenance, operation and repair of aeroplanes and other aerial machines.

Direct appropriation for US military aviation for 1912

Engines of war have long since reached their limits, and I see no further hope of any improvement in the art.

Frontinus, 90 AD

Few people who know the work of Langley, Lilienthal, Pilcher, Maxim and Chanute will be inclined to believe that long before the year 2000 AD, and very probably before 1950, a successful aeroplane will have soared and come home safe and sound.

Herbert George (H. G.) Wells, 1901

In this increasingly competitive, often hostile, and rapidly changing world, Americans seem to have only one real choice. Clearly our national well-being cannot be based on unlimited raw materials or on unlimited manpower and cheap labor. Rather it must be based on our ability to multiply and enhance the limited natural and human resources we do have. Technology thus appears to offer us our place in the sun—the means to insure our security and economic vitality.

Malcolm R. Currie

Yet there are dangers in allowing oneself to become mesmerized by technological promise. It is often much easier to make technological decisions than it is to make social or political decisions.

Jonathan Alford

It may be said that warfare has acquired a new phase—technological war. In the past, research and development were only preparation for the final and decisive testing of new systems in battle. Today the kind and quality of systems which a nation develops can decide the battle in advance and make the final conflict a mere formality—or can bypass conflict altogether.

Gen Bernard A. Schriever, USAF

So long as there remains a substantial period (often up to 10 years) between the inception of a new weapon system and its deployment, even the very latest weapons are out of date in terms of what technology could deliver.

Jonathan Alford

The first essential of the airpower necessary for our national security is preeminence in research. The imagination and inventive genius of our people—in industry, in the universities, in the armed services, and throughout the nation—must have free play, incentive, and every encouragement. American air superiority in this war has resulted in large measure from the mobilization and constant application of our scientific resources.

Gen Henry H. Arnold, USAAF

The most signal contribution made by Alfred Thayer Mahan in the field of military doctrine was his recognition that the conduct of war changes rapidly with technological advance. Weapons, he said, advance faster than the tactics and concepts of war for employing those weapons. Thus military systems always lag behind weapon capabilities.

Dale O. Smith

Another debate concerns the interaction of technology and doctrine—which should be paramount? Should technology serve doctrine and so produce weapons that fit preconceptions and prejudices? Or should doctrine be adapted to make best use of what technology has to offer?

Jonathan Alford

The development of a new weapon is generally hindered by a kind of enthusiasm that concentrates attention on maximum capabilities in performance. This particular kind of violation of the law of diminishing returns incurs the penalties [of two] mistakes—premature use and failure to exploit initial gains.

J. M. Cameron

The great bomber can use weapons other than the hydrogen bomb, just as the policeman can discard his pistol for the truncheon.

Air Marshal Sir John C. Slessor, RAF

If a man's trust is in a robot that will go around the earth of its own volition and utterly destroy even the largest cities on impact, he is still pitifully vulnerable to the enemy who appears on his doorstep, equipped and willing to cut his throat with a penknife, or beat him to death with a cobblestone. It is well to remember two things: no weapon is absolute, and the second of even greater import—no weapon, whose potential is once recognized as of any degree of value, ever becomes obsolete.

J. M. Cameron

The scientific and technical talents of the contemporary world are spread rather evenly among all potential contenders. This means that whoever invents whatever new device to supplement his power, the other will not be long in shaping it himself for his own uses. While he is doing it, his primary interest will be not in bringing the device to maximum effectiveness, but in the study of it for deficiencies.

J. M. Cameron

The best way to predict the future is to invent it.

Theodore E. Hook

We must beware of needless innovation, especially when guided by logic.

Winston S. Churchill

Keep on the lookout for novel ideas that others have used successfully. Your idea has to be original only in its adaptation to the problem you're working on.

Thomas A. Edison

I have more respect for the fellow with a single idea who gets there than for the fellow with a thousand ideas who does nothing.

Thomas A. Edison

The significant problems we face cannot be solved by the same level of thinking that created them.

Albert Einstein

Never mind what Clausewitz thought, what do you think?

Field Marshal Erwin Rommel, Wehrmacht

TRAINING AND EXPERIENCE

Intuition is often crucial in combat and survivors learn not to ignore it.

Col F. F. Parry, USMC

Knowledge must come through action; you can have no test which is not fanciful, save by trial.

Sophocles

To lead an untrained people to war is to throw them away.

Confucius

Tomorrow's warriors will have to relearn the things that today's warriors have forgotten.

Gen Billy M. Minter, USAF

Knowledge is of two kinds. We know a subject ourselves, or we know where we can find information on it.

Samuel Johnson

You can know the name of a bird in all the languages of the world, but when you're finished, you'll know absolutely nothing whatever about the bird.... So let's look at the bird and see what it's doing—that's what counts. I learned very early the difference between knowing the name of something and knowing something.

Richard Feynman

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C H A P T E R

Have no fear of perfection—you'll never reach it.

Salvador Dali

The difference between what we do and what we are capable of doing would suffice to solve most of the world's problems.

Mohandas Karamchand Gandhi

One faces the future with one's past.

Pearl S. Buck

Tactics, evolutions, artillery, and engineer sciences can be learned from manuals like geometry; but the knowledge of the higher conduct of war can only be acquired by studying the history of wars and the battles of great generals and by one's own experience. There are no terse and precise rules at all; everything depends on the character with which nature has endowed the general, on his eminent qualities, on his deficiencies, on the nature of the troops, the techniques or arms, the season, and a thousand other circumstances which make things never look alike.

Napoleon Bonaparte

Four brave men who do not know each other will not dare to attack a lion. Four less brave, but knowing each other well, sure of their reliability and consequently of their mutual aid, will attack resolutely.

Col Charles Ardnant du Picq, 1880

The rules of strategy are few and simple. They may be learned in a week. They may be taught by familiar illustrations or a dozen diagrams. But such knowledge will no more teach a man to lead an army like Napoleon than a knowledge of grammar will teach him to write like Gibbon.

Col George Francis Robert Henderson, Royal Army

It is not big armies that win battles, it is the good ones!

Marshal General of France Hermann Maurice de Saxe

Those who cannot learn from history are doomed to repeat it.

George Santayana

I have but one lamp by which my feet are guided, and that is the lamp of experience. I know no way of judging of the future but by the past.

Edward Gibbon

We are made wise not by the recollection of our past, but by the responsibility for our future.

George Bernard Shaw

We ought not to look back unless it is to derive useful lessons from past errors and for the purpose of profiting by dearly bought experience.

George Washington

A pint of sweat, saves a gallon of blood.

Gen George S. Patton, Jr, USA

Experience is not what happens to you; it's what you do with what happens to you.

Aldous L. Huxley

From their experience or from the recorded experience of others [history], men learn only what their passions and their metaphysical prejudices allow them to learn.

Aldous L. Huxley

I've only been doing this 54 years. With a little experience, I might get better.

Harry Caray

An expert is a man who has made all the mistakes which can be made in a very narrow field.

Niels H. D. Bohr

Events will take their course, it is no good being angry at them; he is happiest who wisely turns them to the best account.

Euripides

The second half of a man's life is made up of nothing but the habits he has acquired during the first half.

Fyodor Dostoevsky

Iron rusts from disuse; stagnant water loses its purity and in cold weather becomes frozen; even so does inaction sap the vigor of the mind.

Leonardo da Vinci

The voice of intelligence ... is drowned out by the roar of fear. It is ignored by the voice of desire. It is contradicted by the voice of shame. It is biased by hate and extinguished by anger. Most of all it is silenced by ignorance.

Karl A. Menninger

All we know is still infinitely less than all that remains unknown.

William Harvey

I hear and I forget. I see and I remember. I do and I understand.

Confucius

Learn from the mistakes of others. You can't live long enough to make them all yourself.

Martin Vanbee

My life is full of mistakes. They're like pebbles that make a good road.

Beatrice Wood

If you want to zoom down the expert slope tomorrow, you have to fall down the bunny slope today.

Cynthia Copeland Lewis

The measure of success is not whether you have a tough problem to deal with, but whether it's the same problem you had last year.

John Foster Dulles

A wise man learns from his experience; a wiser man learns from the experience of others.

Confucius

It is right to be taught, even by an enemy.

Publius Ovidius Naso

I have flown in just about everything, with all kinds of pilots in all parts of the world—British, French, Pakistani, Iranian, Japanese, Chinese—and there wasn't a dime's worth of difference between any of them except for one unchanging, certain fact: the best, most skillful pilot had the most experience.

Brig Gen Chuck Yeager, USAF

A great captain can be formed only by long experience and intense study; neither is his own experience enough—for whose life is there sufficiently fruitful of events to render his knowledge universal?

Archduke Charles of Austria

Any act often repeated soon forms a habit; and habit allowed, steady gains in strength, At first it may be but as a spider's web, easily broken through, but if not resisted it soon binds us with chains of steel.

Tryon Edwards

Education is a two-edged sword. If it indoctrinates with rigid principles, constantly hammering home the fixed and immutable nature of those principles, and if it offers neat solutions to every human problem in terms of these fixed principles, then change and development cannot take place.

Dale O. Smith

Perhaps the most valuable result of all education is the ability to make yourself do the thing you have to do, when it ought to be done, whether you like it or not.

T. H. Huxley

Few men during their lifetime come anywhere near exhausting the resources dwelling within them. There are deep wells of strength that are never used.

Rear Adm Richard E. Byrd, USN

Be as economical with your men's physical resources as you must be with your own, and guard both as carefully as material, munitions or fuel. Above all, practice in peace—on yourself and your men. Industriousness is too often equated, falsely, to efficiency in a peacetime force; yet if it becomes a habit it could be, in war, a self-inflicted wound.

Vice Air Marshal John R. Walker, RAF

I have never met a man so ignorant that I couldn't learn something from him.

Galileo Galilei

Every art has its rules and maxims. One must study them—theory facilitates practice. The lifetime of one man is not long enough to enable him to acquire perfect knowledge and experience. Theory helps to supplement it; it provides a youth with premature experience and makes him skillful also through the mistakes of others. In the profession of war the rules of the art are never violated without drawing punishment from the enemy who is delighted to find us at fault.

Frederick the Great (Frederick II of Prussia)

For over a month after the V-1s began to fall, interception was poor and most missiles reached London. Through desperate efforts the defense system eventually attained a 90 percent efficiency. Yet this improvement was gained more through revised techniques and coordinated teamwork than through the introduction of new technology.

We expected the V-1s to bombard Antwerp after we had taken that city for our principal European port of supply, and hence we set up the most formidable air-raid defense system ever devised. Nothing was spared to make it work. The buzz bombs came as predicted. Again, over a month of operational development was necessary before the efficiency level was raised to the point where most of the V-1s dispatched against us were destroyed.

All this ... illustrates that what is technically feasible is not necessarily tactically possible.

Dale O. Smith

VICTORY AND DEFEAT

The price of victory is blood!

Napoleon Bonaparte

Treaties are observed as long as they are in harmony with interests.

Napoleon Bonaparte

Victory goes to the player who makes the next-to-last mistake.

*Savielly
Grigorievitch
Tartakower*

The problems of victory are more agreeable than those of defeat, but they are no less difficult.

Winston S. Churchill

What counts is not necessarily the size of the dog in the fight—it's the size of the fight in the dog.

Dwight D. Eisenhower

Success isn't permanent, and failure isn't fatal.

Mike Ditka

The best victory is when the opponent surrenders of its own accord before there are any actual hostilities.... It is best to win without fighting.

Sun Tzu

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CHAPTER

Those who know how to win are much more numerous than those who know how to make proper use of their victories.

Polybius

Force is all-conquering, but its victories are short-lived.

Abraham Lincoln

We must become the change we want to see.

Mohandas Karamchand Gandhi

I am a soldier, I fight where I am told, and I win where I fight.

Gen George S. Patton, Jr, USA

We held the enemy by the nose and kicked him in the pants.

Gen George S. Patton, Jr, USA

I wouldn't give a hoot in hell for a man who lost and laughed. That's why Americans have never lost nor will ever lose a war; for the very idea of losing is hateful to an American.

Gen George S. Patton, Jr, USA

You know that I have never asked one of you to go where I have feared to tread. I have been criticized for this, but there are many General Pattons and there is only one Third Army. I can be expended, but the Third Army must and will be victorious.

Gen George S. Patton, Jr, USA

When you are in any contest you should work as if there were—to the very last minute—a chance to lose it.

Dwight D. Eisenhower

If you concentrate exclusively on victory, with no thought for the after effect, you may be too exhausted to profit by the peace, while it is almost certain that the peace will be a bad one, containing the germs of another war.

B. H. Liddell Hart

...the most decisive victory is of no value if a nation be bled white gaining it.

B. H. Liddell Hart

While such bloodless victories have been exceptional, their rarity enhances rather than detracts from their value.

B. H. Liddell Hart

The mindless rejoicing at home is really appalling; it makes me fear that the first blow against Tokyo will make them wilt at once.... I only wish that [the Americans] had also had, say, three carriers at Hawaii....

*Adm Isoroku Yamamoto, Commander, Combined Fleet,
Imperial Japanese Navy*

Glory is fleeting, but obscurity is forever.

Napoleon Bonaparte

When you win, nothing hurts.

Joe Namath

It is not so much the existence of a military establishment that determines a people's will to resist as it is their confidence in it, as witness the collapse of Japan while still armed with effective ground forces numbering over three million. In other words, the will of a nation to resist is not always dependent on armed strength, but rather upon its belief in its chances for political success.

Dale O. Smith

Forces that cannot win will not deter.

Gen Nathan F. Twining, USAF

Deterrence is not just aircraft on alert and missiles in the silos. It is not defined by the size of the defense budget. It is a product of both capability and credibility.

Gen Jerome F. O'Malley, USAF

Successful operations depend on the entire wing organization working as a team with but one purpose in mind. The purpose, of course, is to make certain of the destruction of the selected target at exactly the right time and place. All of the years of planning and training, and the great financial and personal costs and sacrifice, will be vindicated by the successful execution of the mission; likewise, all will be wasted by failure, regardless of its cause.

Air Force Manual 51-44, 1953

A battle sometimes decides everything; and sometimes the most trifling thing decides the fate of a battle.

Napoleon Bonaparte

WAR AND PEACE

The humanising of war! You might just as well talk of humanising hell.

Adm Sir John Fisher, Royal Navy

Violence either solves problems or changes them.

Thucydides

*A great country
cannot wage a
little war.*

*The Duke of
Wellington*

There is many a boy here today who looks on war as all glory, but boys, it is all hell.

Gen William T. Sherman, USA

War is the remedy that our enemies have chosen, and I say let us give them all they want.

Gen William T. Sherman, USA

Nuclear war is a raging, insatiable beast whose instincts and appetites we pretend to understand but cannot possibly control.

Gen George Lee Butler, USAF

Mankind has reached the ultimate stage in the long history of war—either he must find a way to live without war, or he must cease to live at all. It is the task of the generation of the nuclear age to study this inescapable problem and to solve it.

Gaston Bouthoul

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C H A P T E R

Never, never, never believe any war will be smooth and easy, or that anyone who embarks on the strange voyage can measure the tides and hurricanes he will encounter. The statesman who yields to war fever must realize that once the signal is given, he is no longer the master of policy but the slave of unforeseeable and uncontrollable events.

Winston S. Churchill

An eye for eye only ends up making the whole world blind.

Mohandas Karamchand Gandhi

A bad peace is even worse than war.

Publius (or Gaius) Cornelius Tacitus

Modern war is a death grapple between peoples and economic systems, rather than a conflict of armies alone.

Bernard M. Baruch

Everybody changes in combat, everybody. It's dramatic sometimes; other times it's subtle. But everybody changes, whether it be for the better or for the worse.

Gen Mark A. Welsh III, USAF

The expenses required to prevent a war are much lighter than those that will, if not prevented, be absolutely necessary to maintain it.

Benjamin Franklin

Spartans, in the course of my life I have taken part in many wars, and I see among you many people of the same age as I am. They and I have had experience, and so are not likely to share in what may be a general enthusiasm for war, nor to think that war is a good thing or a safe thing.

Thucydides

Our nation's cause has always been larger than our nation's defense. We fight, as we always fight, for a just peace—a peace that favors liberty. We will defend the peace against the threats from terrorists and tyrants. We will preserve the peace by building good relations among the great powers. And we will extend the peace by encouraging free and open societies on every continent.

George W. Bush

Only a few years ago, our world was a bipolar nightmare in which two superpowers threatened a fight to the finish and the soldier was seen as the bringer of destruction. No longer. The relevance of the soldier today is increasingly as a bringer of peace.

Ray Mosley, What Went Wrong with Pax Americana

We wage war not as we would like but as we must.

Lord Horatio Kitchener

Having an exit strategy on the shelf at the beginning of hostilities and sticking to it until the end assumes away the potent influences of military performance on war aims as well as the law of unintended political consequences that attends any major military intervention.

Jeffrey Record

War involves a train of unforeseen and unsupported circumstances that no human wisdom could calculate the end.

Thomas Paine

Vietnam was a reaffirmation of the peculiar relationship between the American Army and the American people. The American Army really is a people's army in the sense that it belongs to the American people who take a jealous and proprietary interest in its involvement. When the Army is committed the American people are committed, when the American people lose their commitment it is futile to try to keep the Army committed. In the final analysis, the American Army is not so much an arm of the Executive Branch as it is an arm of the American people. The Army, therefore, cannot be committed lightly.

Gen Fred C. Weyand, USA

Today, the international community has the best chance since the rise of the nation-state in the 17th century to build a world where great powers compete in peace instead of continually prepare for war.

George W. Bush

...they might have won the war had they been allowed to run it.

Kenneth Werrell

Wars are fought to convince the enemy leadership to do what one wants it to do—that is, concede something political.... The enemy leadership agrees that it needs to make these political concessions when it suffers the threat or the actuality of intolerable pressure against both its operational and strategic centers of gravity.... Thus, one does not conduct an attack against industry or infrastructure because of the effect it might or might not have on fielded forces. Rather, one undertakes such an attack for its direct effect on national leaders and commanders.

Col John A. Warden, USAF

Mental force does not win a war; moral force does not win a war; physical force does not win a war; but what does win a war is the highest combination of these three forces acting as one force

Maj Gen J.F.C. Fuller, Royal Army

...modern war is concerned more with acceptable political outcomes than with seizing and holding ground.

Alan Stephens

...of a superpower willing to bomb but not to fight, willing to inflict a tremendous amount of pain on others to avoid the slightest risk to itself, under a leadership more sensitive to polls than to the moral considerations involved in deciding what is just—that is a picture that should repel us.

Elliott Abrams

The whole art of war consists of a well-reasoned and extremely circumspect defensive followed by a rapid and audacious attack.

Napoleon Bonaparte

It is not the object of war to annihilate those who have given provocation for it, but to cause them to mend their ways.

Polybius

Choose your friends carefully. Your enemies will choose you.

Yassir Arafat

The difficulties of peace are better than the agony of war.

Menachem Begin

We would fight not for the political future of a distant city [Danzig], rather for principles whose destruction would ruin the possibility of peace and security for the peoples of the earth.

Neville Chamberlain

Army: a body of men assembled to rectify the mistakes of the diplomats.

Josephus Daniels

Peacekeeping is not a job for soldiers, but only soldiers can do it.

Dag Hammarskjöld

In peace sons bury fathers, but war violates the order of nature, and fathers bury sons.

Heroditus

The most persistent sound which reverberates through man's history is the beating of war drums.

Arthur Koestler

Today the real test of power is not the capacity to make war but the capacity to prevent it.

Anne O'Hare McCormick

The quickest way of ending a war is to lose it.

George Orwell (Eric Arthur Blair)

Only the dead have seen the end of war.

Plato

The shovel is the brother to the gun.

Carl A. Sandburg

Future years will never know the seething hell and the black infernal background, the countless minor scenes and interiors of the secession war; and it is best they should not. The real war will never get in the books.

Walter (Walt) Whitman

The war has developed not necessarily to Japan's advantage.

Hirohito

...since war is not an act of senseless passion but is controlled by its political object, the value of this object must determine the sacrifices to be made for it.

Carl Philipp Gottfried von Clausewitz

As a nation we were not prepared for World War II. Yes, we won the war, but at a terrific cost in lives, human suffering, and material, and at times the margin was narrow. History alone can reveal how many turning points there were, how many times we were near losing, and how our enemies' mistakes often pulled us through. In the flush of victory, some like to forget these unpalatable truths.

Gen Henry H. Arnold, USAAF

Five great enemies to peace inhabit with us—avarice, ambition, envy, anger, and pride. If those enemies were to be banished, we should infallibly enjoy perpetual peace.

Petrarch

There is no other science where judgments are tested in blood and answered in the servitude of the defeated, where the acknowledged authority is the leader who has won or who instills confidence that he can win.

Bernard Brodie

War, like most things, is a science to be acquired and perfected by diligence, by perseverance, by time, and by practice.

Alexander Hamilton

Generally in war the best policy is to take a state intact; to ruin it is inferior to this. To capture the enemy's army is better than to destroy it. To subdue the enemy without fighting is the acme of skill. Thus, what is of extreme importance in war is to attack the enemy's strategy; next best is to disrupt his alliances, next best is to attack his forces. The worst policy is to attack his cities; do so only when there is no alternative.

Sun Tzu

In war, important events result from trivial causes.

Julius Caesar

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