



CRM Leadership & Followership 2.0

When anyone asks how I can best describe my experience in nearly 40 years at sea, I merely say, uneventful. Of course there have been winter gales, and storms and fog the like, but in all my experience, I have never been in any accident of any sort worth speaking about. I never saw a wreck and never have been wrecked, nor was I ever in any predicament that threatened to end in disaster of any sort. I cannot imagine any condition which would cause a ship to founder. I cannot conceive of any vital disaster happening to this vessel. Modern ship building has gone beyond that.

Captain Edward Smith quoted in 1907.
He was the Captain of Titanic when it sunk in 1912.

- Introduction**
- Leadership Philosophy**
- Characteristics of Capable Leaders**
- Authority with Participation**
- Characteristics of Effective Followers**
- Assertiveness with Respect**
- Transcockpit Authority Gradients**
- Conclusion**

Chapter Checklist • You Should be Able to:

- Provide a personalized definition of leadership and of followership.
- Explain the leadership and followership aspects of the CRM theme.
- List characteristics of capable leaders and of effective followers.
- Explain the Five Steps of Assertiveness.
- Describe the relevance of transcockpit authority gradients to CRM.

INTRODUCTION

There is an old story about captains' leadership in the aviation industry. As the story goes, a group of friends decide to go on a hunting trip out west. When they check-in at the hunting lodge they asked the manager if they can rent a good hunting dog to increase their odds of a successful hunting outing the next day. The manager replies that he has a relatively new and inexperienced hunting dog named "Copilot." The hunters seem a little perplexed by such an odd name and voice their concern about whether the inexperienced dog will be able to perform up to their expectations. The manager says that the dog is extremely eager to please and is actually relatively inexpensive because the dog is so new.

The next day the hunters go out into the field with Copilot and are greatly impressed by the dog's enthusiasm and performance. The next year, the hunters return and once again requested Copilot's services. The manager of the hunting lodge informs the men that Copilot is

still available, but because he is much more experienced and capable as a hunting dog, he is also much more expensive. The hunters agree that the increased cost is a worthwhile investment and go out into the field with Copilot for what proved to be, again, a highly successful hunt.

On the third year, the hunters return once again and ask how much more the price is for Copilot this year. The manager of the hunting lodge says, *"Well, we still have the dog, but he goes by the name of 'Captain' now and he is twice as expensive as he was the last time you were here."* The hunters eagerly agreed to pay the increased fee and are excited at the thought of how much better the dog will be this year than in previous occasions. However, after only a few hours into the hunt, the men returned to the lodge to confront the manager and say, *"We don't understand what happened. This doesn't seem like the dog we once knew, all that Captain does is sit on his ass and bark!"*

The moral of the story is that **every copilot is a captain in training**. How the copilot is treated by his or her captains and what the copilot learns from observing his or her captains will help determine their own behavior after the upgrade to the left seat. In the same way that being a good musician does not guarantee that one will be an effective conductor, or that being a winning athlete will guarantee that one can be a winning coach, and that being a good pilot is no guarantee that one will be a capable instructor pilot, being a good copilot is no guarantee that one will make a good captain. Although the technical skills are highly transferable amongst either position, the soft skills of leadership are not and must be trained and honed in order to excel as a captain.

LEADERSHIP PHILOSOPHY

For those who are involved in the study of leadership it proves difficult to believe that some people claim that leaders are born and not made. Although military academies, business schools, and executive training programs across the world all existing for the purpose of training leadership skills, some people still believe that strong leaders result from genetic inheritance and not from the hard work of individuals who seek self-improvement. In part, the misunderstanding may stem from the once popular belief that monarchies passed on the "royal blood" of leadership. In 1869, Sir Francis Galton stated quite clearly that the traits of the most effective leaders were passed down through inheritance.¹

In the 21st century, most educated members of society acknowledge that **leadership skills can be trained and honed through formal education and through one's personal commitment to self-improvement**. A cursory glance at the business section of any bookstore will show seemingly countless self-help guides for improving one's leadership or management skills. Although leadership is inherently situational, generalizations can be made of desirable leadership traits, as will be shown later on in this chapter. Many capable leaders have produced personal mantras that embody their philosophy for leadership. Some claim that leadership is, "all about setting the example for others to follow." Others state that leadership consists of designing a system of incentives and disincentives for encouraging the behavior of followers.

Napoleon supposedly went as far as to link all successes or failures to leadership. Napoleon is thought to have said, *"There are no bad regiments, only bad colonels."* In some extreme cases, leadership has been seen as instilling an instinctive and highly disciplined sense of obedience. The training motto of the French foreign Legion, for example, is simply, *"Don't think!"* Presumably, such a model is an attempt to instill an automatic sense of obedience amongst legionnaires who are taught to never question orders and never contemplate consequences too deeply; simply to execute instructions they are given immediately and without hesitation. From a CRM perspective it would prove easy to argue that using a model of the Legion as a Leadership philosophy in an aircraft cockpit would produce a sharp rise in the accident rate.



Figure 1. Would Legionnaire leadership work in the cockpit? Maybe some principles, but certainly not all!

Leadership is highly situational. In the sixth century before the Common Era, the Chinese philosopher Lao Tsu said, "A leader is best when we hardly know he exists. When his work is done, his aim fulfilled, his followers will say, 'we did this ourselves!'"² How would such a philosophy of "invisible" leadership impact flying an aircraft? Nelson Mandela is lauded as a formidable leader of the human rights movement in South Africa. Perhaps because he was inspired by Lao Tsu, Mandela refers to leadership in his book, "A Long Walk to Freedom," by stating, "A leader is like a shepherd. He stays behind the flock, leading the most nimble go out ahead, whereupon the others follow, not realizing that all along they are being directed from behind." Such a philosophy of leadership apparently proved extremely effective for social change but would be a complete disaster in a cockpit. Crewmembers look to the captain for solid leadership, but what does this mean?

Part of the confusion surrounding leadership is that **leadership is both a science and an art**. There are volumes upon volumes of research studies that detail leadership traits, decision-making styles, behaviors, and models to follow. However, since leadership is inherently a human enterprise, and each individual is an extremely complex amalgam of motivations, strengths, weaknesses, personality, experiences, and skills; implementing leadership skills requires tremendous flexibility and intuition.

In the past, famous war-time leaders have proven to be highly ineffective during times of peace, and vice versa. Similarly, different leadership is required in high-stress and high-consequence undertakings than what is required for running day-to-day operations at the corner grocery store. It is precisely the need for flexibility, intuition, and even an emotional intelligence that has caused some to erroneously believe that leaders are born and not made.

What exactly is Leadership?

As one might expect when examining such a complex topic as leadership, there are numerous definitions proffered to explain what leadership is. Some definitions are philosophical, others are inspirational, and others are pragmatic. The Random House Unabridged Dictionary and The American Heritage Dictionary equate leadership with providing *guidance* and *direction*.³ The American psychological Association's dictionary states that leadership involves *organizing, directing, coordinating, and motivating* followers in order to fulfill given objectives. The dictionary goes on to say that leaders *influence* followers and followers influence leaders.⁴

Others have attempted to explain **leadership as, "...the process by which an individual influences the behavior and attitudes of others."** The difference between

ineffective and effective leadership can therefore be seen in the way that influence is operationalized."⁵ Such a concept of influence has been investigated by others. For example, some define leadership as the use of "*non-coercive influence* to direct and coordinate the activities of the members of an organized group towards the accomplishment of group objectives."⁶



Figure 2. Follow me because you want to; because I will take you where you want to go.

It proves interesting to analyze leadership from the perspective of *influence*. The word, *influence*, originally derives from the Latin *influentem*, meaning "to flow into." The use of the word in modern language can be traced back to 14th Century French when *influence* was used in astrology to describe the energy that flowed from stars down to earth and which was thought to impact the destiny of humans. The use of *influence* to describe a personal power of someone over others dates back to 1439.⁷

Today, ***influence is defined as the ability of someone or something to produce a compelling force that alters the behavior or opinions of others.***⁸ In some leadership settings, influence stems directly from a person's position of authority, as designated by institutional hierarchy, and can be used to prompt behavior in others that would normally not be desired by such individuals. Such would be the case with the influence that a drill sergeant has over a new recruit or that a state trooper has when pulling over a speeding motorist. In other leadership settings, influence is produced due to the charisma or intellectual arguments made by someone. Such would be the case when a student attempts to convince peers to pursue a certain presentation topic. In the first case, influence literally flows due to the nature of the situation in a predictable and almost scientific process. In the second situation, influence is exerted in artful manner due to the complex interplay of emotional intelligence and awareness of the dynamics of the group and requires awareness of individual motivations within the group.

The International Civil Aviation Organization (ICAO) also defines leadership in the context of influence, but goes further and explains how the leader should **recognize the desires of the crew, set an example, and use persuasion to create an understanding of goals that need to be met.** ICAO stresses that leadership and followership skills can be learned and states that leadership training is essential for all crewmembers, since even junior employees may be called to perform leadership duties at different times.⁹

In the aviation industry, captains must use a combination of their authority and their emotional intelligence (soft skills) in order to guide the behavior of crewmembers. Authority is inherent in the captain's position, often indicated by four prominent stripes on epaulets or jacket sleeves. Such a designated position of authority certainly sets the stage for the proper use of influence, but does not guarantee it. This is similar to the badge on the police officer's chest. The mere presence of the badge commands respect amongst many but does not guarantee that everyone will follow the police officer's instructions. In other words, **authority is assigned and may or may not be used to produce effective leadership.** However as shall be shown later on,

leadership can exist with or without authority in much the same way that authority can exist with or without leadership. When someone on a crew assumes a leadership role that is not in harmony with their level of authority, a dangerous role reversal can occur resulting in crew behavior being influenced by someone who is not the assigned leader.

The Greatest Tragedy of Leadership

A great number of individuals placed in leadership positions do not realize that they are in a position that requires them to use leadership skills. How can such confusion exist? Often we are placed in new positions that we do not think of as being leadership positions. However, if we are placed in a position where we can exert influence, regardless of whether it is officially a leadership position or not, others will come to view us as being leaders. Think of the numerous individuals in our own personal lives who are asked to coordinate projects, run committees, or train other employees, but who are never officially told that they are in a leadership position. **Such individuals may be oblivious to their leadership status and may therefore take no proactive steps to develop and use leadership skills.**

Parents are the leaders of their families. Professors are the learning-leaders of their students. Senior employees are often, by default, leaders of their peers. Student teams have either designated or functional leaders that guide projects to fruition. It is a great tragedy to witness someone being appointed to a leadership position who does not grasp the fact that they are now perceived as leaders of a group. Often, such individuals continue functioning as a follower and never rise to the challenges of leadership because they are not even aware that such a requirement exists! All along, members of the group will turn to the "leader," either implicitly or explicitly, for guidance. When no such guidance is forthcoming from the leader, others may step up and assume the leadership role by exerting influence, or perhaps no one will attempt to do so. In either circumstance, the result is often confusion and frustration.



Figure 3. Sometimes it is obvious we are filling a leadership role. What about the other times? ¹⁰

In aviation, the tragedy of leaders who do not know they are leaders is all too apparent sometimes. Ramp agents or customer service representatives are often perceived by other agents as being leaders, although such a perception may only be based on relative differences in seniority or an awareness of different pay grades. Similarly, a flight attendant acting as the "number one," or "lead flight attendant," or "purser," is placed in a leadership role yet often does not grasp the responsibilities inherent in such a position. In the airline industry and some corporate flight departments, first officers are offered the opportunity to upgrade to captain based solely on their seniority and not on the potential for leadership.



Figure 4. Susie is seen as a leader by other ramp agents. Too bad nobody bothered to tell Susie.

Often, individuals who are placed in these leadership positions have never had mentioned to them that these are, in fact, leadership positions. No leadership training is provided. The result is often dysfunction. Of course, as one can imagine, the cause of such dysfunction is often the fact that the leader's leader does not know that he or she is in a leadership position as well. So the process continues unchecked for far too long sometimes. **Another version of this tragedy occurs when individuals are placed in leadership positions and are told that they are to lead other individuals; yet absolutely no training is provided in leadership skills.** Perhaps the assumption is that someone proficient in a technical task is qualified and capable of leading others in the accomplishment of the same task. The soft skills required for effective leadership are extremely different from the skill sets required in most technical undertakings. Therefore, individuals promoted into leadership positions may not be provided leadership training and end up being embarrassed, humiliated, and even ridiculed by their followers because of the perceived incompetence.

The aviation industry provides numerous examples of individuals who are perceived as being leaders by others while not knowing that they are in a leadership position and while never having received even a mere hour of leadership training throughout their entire professional life. An example of this tragedy is the average university professor. Such faculty members are placed in a position that requires leading a group of individuals, many who are reluctant participants, towards a common objective. Leadership skills have a direct bearing on the successful accomplishment of the learning outcomes in the course, yet many professors do not realize the link between teaching and leadership, and even if they did, most have not received even the most basic training in leadership. In similar fashion, this author has frequently witnessed captains of aircraft who, although technically proficient in cockpit operations, were completely ineffective as leaders.

Such captains truly are tragic figures in aviation. They sit in the left seat and they wear four stripes; they know their aircraft inside and out and they know how to fly in the system; but they don't have the first idea of how to influence the behavior of their crew. Such captains are often wonderful people who mean well but who have been placed in a very delicate leadership role without having been provided the tools required to fulfill their responsibilities. Fortunately, the industry also has very capable leaders in the left seats. Such captains look after the welfare of their crew and strive to make a synergistic team that shares common objectives. It would be attempting to perform a study which attempts to correlate the leadership effectiveness of captains, as perceived by their crew, with the amount of leadership training that they have formally received during their career.



Figure 5. This captain is a skilled technician, but has he ever been taught how to lead his crew?

Since the birth of the CRM movement decades ago, some aviation companies have gone to great lengths to teach basic leadership skills and particular applications for captains. Other companies are still in great need of such programs. The sad reality is that some companies expect their captains to magically pick up the skills required of leadership through trial-and-error. Such an approach is akin to asking a captain to learn leadership skills by practicing such skills. One is left to ask, "What?" Figure 6 shows a cartoon that comes to mind in such situations.

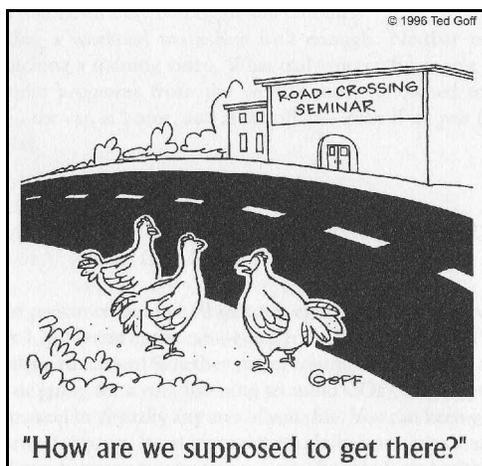


Figure 6. Are we supposed to wait to learn about leadership until we are a captain?

Delegate Authority but Never Responsibility

Many years ago when this author started studying leadership, he had the chance to work with a senior noncommissioned officer in the United States Marine Corps. During a discussion with the sergeant about the most important aspects of leadership, the sergeant offered a piece of advice that is still remembered to this day. The sergeant said, *"The essence of leadership is actually quite simple. If something goes wrong, you did it! If something goes right, the men did it!"* Although leadership is certainly more involved than what can be encapsulated in such a short quote, the sergeant's personal leadership mantra struck a chord and depicts a very effective philosophy for motivating people into action.

When one becomes a leader, he or she is given a certain amount of authority that comes with an equal level of responsibility. One cannot have authority without responsibility. One of the most critical tasks that a leader must learn to perform is to delegate actions that need to be accomplished to the numerous subordinates who form part of a crew. It is impossible for a single individual to accomplish all the tasks required as part of operating commercial or military aircraft.

For example, during an airline 30 minute quick-turn at an out station, it is impossible for the captain to monitor passenger loading and briefings, review the new flight plan, weather report and NOTAMs, load the new route into the Flight Management System, perform the exterior inspection of the aircraft, study the departure, set the airspeed bugs, open the charts and airport diagrams to the proper pages, ensure the proper fuel is loaded, take care of any maintenance required on the aircraft, and the numerous other duties that need attention. Because of the inability to perform all such tasks, the captain must delegate tasks to flight attendants, the first officer, the flight engineer, and even to the jumpseating pilot if one is present.

Regardless of which duties have been delegated by the captain, and regardless of how the delegated tasks are accomplished, the captain is ultimately responsible for the proper accomplishment of the delegated tasks. Such a responsibility may seem unfair but it forms the entire basis of the authority provided to the captain. It is incumbent on the captain to ensure that the individuals who have had tasks delegated to them are capable of fulfilling the tasks correctly. Essentially, **the captain delegates his or her own authority to members of the crew to perform different tasks while always retaining responsibility for the proper accomplishment of such tasks.**

Such a concept ties back to the leadership philosophy of the Marine sergeant who said, *"If something goes wrong, you did it! If something goes right, they did it!"* The author cannot help but recall a specific incident where his captain seemed to follow the exact opposite philosophy. Shortly after graduating from Air Force pilot training, the author was an inexperienced new copilot in the C-21 Learjet and was flying a senior official from the Department of Defense into a small general aviation airport in Georgia. In an effort to stop the Learjet in the short runway available, a firm landing was produced and aggressive braking ensued. Although a firm landing had been briefed, the touchdown turned out to be much firmer than expected.

After the aircraft was parked at the ramp and the engines were shut down, the aircraft commander (military PIC) hurriedly jumped out of his seat and went to the back of the aircraft to start apologizing to the distinguished passenger. As the author finished the shutdown checklist alone in the cockpit he could not help but hear how the aircraft commander was placing the blame for the hard landing squarely on, *"...the new copilot who is still learning how to land and doesn't know any better."* The aircraft commander may have thought that he had protected his reputation by deflecting blame for the landing, but in reality he had suffered a fatal blow to his credibility as a leader in the eyes of the copilot. Additionally, one can only wonder how the distinguished passenger assessed the leadership capability of the aircraft commander in light of his panicky attempt to deflect responsibility.

In stark contrast to the previous story, this author was once administering a checkride in a Learjet and noticed that a new copilot had neglected to remove the nosewheel chocks from the aircraft during the preflight walkaround inspection, as previously requested by the aircraft commander. Since the flight was a checkride, the flight examiner was not supposed to interfere with crew duties and thus made no mention of the chalked nosewheel. The aircraft door was closed, both pilots strapped into the cockpit and prepared for departure. After both engines were started and checklists were completed, the copilot obtained clearance to taxi and the aircraft commander applied power to the engines. Much to the dismay of both pilots, the jet refused to move and, in a flash of insight, both pilots simultaneously realized that the chocks had not been removed.

As the copilot started to confess that he had forgotten to remove the wheel chocks, the copilot was cut off by the aircraft commander in midsentence. The aircraft commander turned around in his seat to face the examiner pilot and stated, without hesitation, *"It seems that I forgot to remove the chocks. That is my mistake. Let's set the parking brake and I will go out to remove the chocks."* While the copilot monitored the aircraft, the aircraft commander slid by the examiner pilot, opened the cabin door, and proceeded outside to remove the chocks. At that point the copilot turned to the examiner pilot and said, *"He is a class act, isn't he?"* Indeed he was a

fantastic leader. Although the aircraft commander was a relatively junior pilot, he quickly gained an excellent reputation in the squadron and before long all the copilots wanted to fly with him.

CHARACTERISTICS OF CAPABLE LEADERS



Figure 7. Captains use influence to form a team out of a crew. ¹¹

In many ways, the pilot-in-command (PIC) of an aircraft, whether called a "captain" in civilian aviation or an "aircraft commander" in military aviation, is the chief executive officer (CEO) of the aircraft. Just like a CEO is responsible for the well-being of employees, satisfaction of customers, financial health of a company, and ethical decision-making, so too is the captain for all that regards a given flight where he or she is in command. Passengers, cargo customers, flight attendants, and other pilots on the crew all view the captain as essentially performing the same duties as a CEO.

For example, if a flight attendant spills a drink on a passenger and the passenger complains to the captain after the flight, it would be inexcusable for the captain to stare back at the complaining passenger and say, "*Why are you talking to me? I just work here.*" **In the eyes of the irate passenger, the captain is the senior representative of the airline at that moment and should take responsibility for what has happened.** Some airlines go as far as to dictate just what a captain has authority to do to compensate for passenger inconveniences in such circumstances. Although it used to be a somewhat common occurrence, the grueling financial pressures of airline operations today curtail the captain from responding to passenger inconveniences and minor mishaps by offering free drinks or free frequent flyer miles. It is amazing how much goodwill such a treat by the captain can generate in an otherwise volatile circumstance where passengers perceive the airline has let them down.

The following section contains a relatively extensive list of the characteristics exhibited by capable leaders in any industry, and has a direct bearing on aircraft captains. Although adjustments may have to be made to any list of characteristics of capable leadership in order to deal with particular circumstances, and although it is highly unlikely that any one leader will exhibit all the characteristics of capable leadership contained in a list, we should all strive to show as many of the following characteristics of capable leadership as possible. A leader should strive to:

Set the Stage for Excellence

When the captain first meets the crew, he or she is meeting a group of individuals who may not be performing as a team. There is a difference between a group and a team. As the crew is meeting each other and preparing to perform their assigned duties, they are relying on the

individual contributions of each member for performance and lack a sense of mutual accountability. Transitioning to a team mindset of shared accountability requires a leap of faith on behalf of crewmembers. An effective captain can commence the process of team-building by explaining the challenges that will likely be faced during the flight and by depicting how open communication and shared input into the decision-making process can overcome those obstacles.

Captain's must recognize the importance of first impressions. The first few minutes when a captain meets his or her crew are paramount for setting the proper tone for the flight. Remember that what a captain does during those first few minutes of his or her leadership when meeting a crew is an accurate predictor of overall crew performance later during the flight.¹²



Figure 8. Set the tone early and it will pay dividends throughout the rest of the flight.¹³

One of the most effective ways to start building a team out of a crew is to create a climate of mutual respect amongst the crew. Such a climate can be established when the captain introduces her or himself to the crew. A firm handshake and positive eye contact show a sincere desire to meet a person. By asking how each crewmember is doing and inquiring about their background, respect and interest can be shown. However, respect can only be shown in credible fashion if the captain actually listens to what the crewmembers are saying during the introduction. A concerted effort must be made to remember each crewmember's name. Each crewmember should be made to feel valued and a statement should be made by the captain which solicits and respects input from crewmembers during the initial meeting.

The German poet and renaissance man, Johann Wolfgang von Goethe (1749-1832) once wrote, *"If you treat an individual as he is, he will stay as he is, but if you treat him as if he were what he ought to be and could be, then he will become what he ought to be and what he could be."* Such a philosophy can be used adroitly to establish a climate of respect amongst the crew that also fosters team-building. However, such an approach must be backed-up through supervision.

During the first meeting with the crew, captain's often elect to perform **the first and possibly most important of all briefings: the CRM briefing. This briefing sets the tone for the flight, asserts the captain's authority, and opens the lines of communication for all other briefings and crew coordination activities.** As the old aviation saying goes about

captains who skip this briefing, *“By not setting the tone, you have set the tone.”* That is why this key event is called the “CRM Briefing.” It takes place at the start of every day and can be accomplished at any time prior to commencing checklists. It should be briefed by the captain and should strive to accomplish all items that are general to the flight or series of flights that the crew is paired to fly.



Figure 9. If you do not set the tone, you have set the tone. ¹⁴

The tone can also be set by projecting enthusiasm for the flight that lies ahead and by explaining that the flight will be run in strict accordance with standard operating procedures. Many captains invite participation in the decision-making process of the flight by stating that they encourage input from the crew. Lines of communication can further be opened when a captain states that he or she also makes mistakes. Perhaps one of the best tone-setting statements that can be used is when a captain briefs, *“I follow SOPs. If you see us deviating from SOPs without me having briefed why, bring it to my attention immediately.”*

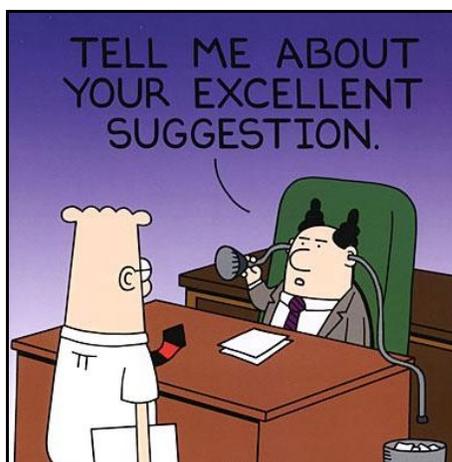


Figure 10. Sincerity is the foundation of respect when dealing with your crew.

Now that the importance of the captain’s first meeting with the crew has been stressed, it must be noted that actually having such a meeting can sometimes prove challenging. Military flights have formal briefing times that mandate such meetings. Corporate crews sometimes operate as a single entity for days at a time. However, the airline industry often has crewmembers joining and leaving the crew at different times throughout a trip. Such a scheduling practice can make the team-building task of a captain seem impossible. For example, often flight attendants report directly to the aircraft and may be replaced or augmented on very short notice. In fact, it is not unusual for captains to meet some of the flight attendants *after* a flight. Because of such difficulties, some captains resort to performing a CRM briefing over the public address system on

the aircraft after all the crew is onboard but before the passengers start to arrive. Such a workaround is far from optimal, but it is better than nothing and is a common procedure in the frenetic and fluid pace of airline operations.

Constantly Work on Building the Team

Throughout a trip with the crew, the captain must make it a point to make each crewmember feel valued. When major decisions are to be made, the captain should solicit and respect input from crewmembers. If a certain crewmember's recommendation is not followed, the captain should explain the logic behind the decision that was made and encourage the crewmember to voice future opinions; stressing that it is very important to do so. Only by voicing such respect can the captain ensure that communication continues to flow freely. As the flight progresses, teambuilding can continue by thanking crewmembers for their efforts. The captain must never forget that, in the eyes of the crew, he or she is the senior company representative onboard the aircraft. Act accordingly.

One key method for building a team out of the crew is to redirect any praise that comes to the captain so that it falls on the crewmembers who helped achieve success. In similar fashion, the captain should avoid using "I" when discussing the flight and should opt instead to use "we" when addressing the crew.

Difficult situations are bound to arise during a flight. Sometimes the situations are a result of friction between crewmembers. Other times, irate passengers or company officials can create tense situations. A capable captain may consider the use of humor to diffuse difficult situations, but tact must be used so that no one is offended.



Figure 11. Sometimes humor is the only way out of inescapable situations.

As previously mentioned, the task of continued team-building can often be easier for corporate or military crews that work together for long lengths of time. Some military crews have been known to work together for months at a time. It is not unusual for corporate crews to work closely for an entire week. Some airline flights may operate with a fixed crew over several days and the bonding in such situations can be extraordinary. A great sense of shared purpose and community can emerge in such situations. When true team status is accomplished, it is not unusual to see captains at an airport terminal purchasing dinner for all the crew during a quick-turn or to have flight attendants that bring coffee and bottled water to the cockpit without even being requested to do so. Unfortunately, all too often in airline operations, the high-paced tempo and interchangeability of crews does not allow achieving such team harmony. In extreme cases, pilots may change tail numbers and flight attendants on every leg of a day's worth of flying. The challenge of team-building under such situations is extreme, if not impossible.

Lead by Example

A captain should always strive to set the example for the crew and for other company employees who may not be on the immediate crew. Depth of commitment to the company and to the particular flight can be exemplified by going beyond the work that is expected of the captain. Some would even advocate that captains lend a hand to ramp agents when they are falling behind on their bag-loading or with flight attendants or cleaning crews who need help preparing the cabin. However, such practices are fraught with controversy from the perspective of pilot unions, can distract pilots from their primary workload, and incur the risk of injury for performing tasks that one has not been trained to do.



Figure 12. Everything a captain does will influence the behavior of the crew.

Leading by example means that the captain should be an enthusiastic champion of the mission and should try to motivate his or her crew to excel in meeting the mission objectives. It also means that captains should readily acknowledge mistakes instead of constantly working to protect personal image or ego. The captain should always follow-through on what he or she previously agreed to accomplish and should be quick to accept responsibility for any shortcomings of the crew while striving to make corrections.

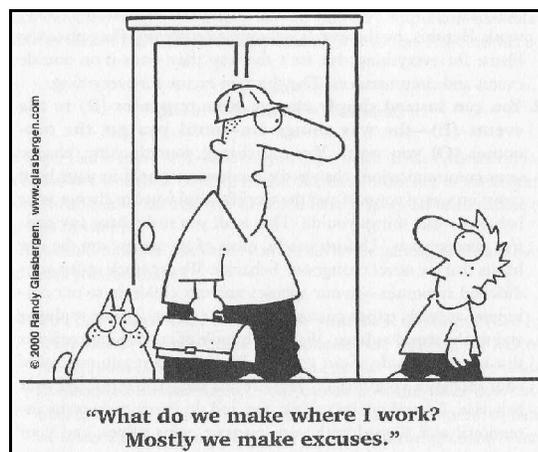


Figure 13. Good leaders own up to mistakes, fix them quickly, and move on.

At times the cockpit environment can create a sense of psychological isolation from the events that happen in the cabin. Make no mistake, though, the passengers clearly see the captain as the representative of the company on the aircraft. As such, captains must always be aware of the symbolic status that they play. They are their company's ambassador and lead customer service representative aboard the aircraft.

Promote Accurate and Free Communication

One of the most important and difficult elements of leadership is communication. Knowing when and what to communicate means knowing when to listen versus when to speak. It also means actively listening to what others are saying while consciously attempting not to filter or block the message that is being broadcast. A leader has the obligation to communicate performance expectations clearly and with full candor. For example, before a captain assigns a task, he or she must make sure that the person the task is assigned to has the ability to perform the task. Then, the captain must ensure that he or she provides a clear explanation of *why* the task needs to be accomplished, *how* to accomplish the task, and *what* the performance expectations are.

Communication requires that the captain be open to criticism about his or her performance. Hopefully other crewmembers will be respectful in how they convey criticism and will do so in private. Regardless of how respectful the criticism is, the captain must actively listen to what is being said instead of focusing on who is saying it.

Take Care of Followers

Since the captain is the "CEO" of the aircraft, it is incumbent on him or her to take care of the employees who work for them. In today's airline industry, many flight attendants will not view themselves as working directly for the captain, but such a perspective does not change the fact that the captain is the ultimate supervisory authority onboard the aircraft. As such, the captain should always think about how to achieve the objectives for the flight while being sensitive to the costs that reaching such objectives may impose on the crew. Similarly, the captain should make an effort to consider the special needs and circumstances of each crewmember.

Just because the captain works in an aircraft does not mean that traditional workplace supervisory duties do not apply. The captain should know that she or he is perceived as the lead representative of the company. As such, the captain should be honest and prompt when there is a need to reprimand a crewmember and should do so only in private. When a crewmember has excelled by performing beyond the call of duty, the captain should consider informing supervisors higher in the chain-of-command of the crewmember's actions. For example, if a flight attendant performs an outstanding service, the captain should consider writing a short report about the service to the supervisor of flight attendants back at the home base for the airline. By the way, if the flight attendant being lauded is not the lead flight attendant, it would show respect to invite the lead flight attendant of the flight to comment on the action being cited.

The following figures show examples of reports that have been completed by captains to laud the performance of different crewmembers. In Figure 14, a military aircraft commander commends the performance of a flight engineer who faced a seemingly endless cascade of mechanical problems with professional aplomb. In Figure 15, an airline captain compliments the continued high performance of a first officer.

AIRCRAFT COMMANDER'S REPORT ON CREW MEMBER			1. INCLUSIVE DATES
2. CREW MEMBER (Last Name, First, Middle Initial and Grade)		3. ORGANIZATION	
██████████ SSGT		6TH AIRLIFT SQUADRON, MCGUIRE AFB, NJ	
4. CREW POSITION	5. TYPE AIRCRAFT	6. GRADE	
FLIGHT ENGINEER	C-141B	<input checked="" type="checkbox"/> OUTSTANDING <input type="checkbox"/> SATISFACTORY <input type="checkbox"/> BELOW AVERAGE <input type="checkbox"/> UNSATISFACTORY	
REMARKS			
<p>This is not the first "outstanding" Form 196 that I have submitted on SSgt ██████████. His performance on missions continues to impress me. He stands out amongst the squadron's corps of flight engineers as an insightful, motivated and resourceful crewmember on every mission he flies.</p> <p>This particular report is written in response to SSgt ██████████'s performance on a U.S. Navy Carriibbean Airlift Mission supporting the Atlantic Fleet. Although fragged as a quick, routine overnight run to Puerto Rico via Norfolk, the mission quickly transformed itself into a week-long logistical juggernaut replete with aircraft malfunctions, MRTs and enroute diverts due to failing systems.</p> <p>In the end, over twenty pages of 781A forms were filled out for a simple 4-leg mission. Malfunctions included oil leaks on the #2 and #4 engines, a hydraulic leak on the #4 pylon, a potentially dangerous flight control malfunction over the open sea that required a divert into Charleston, S.C.; failures of a boost pump, radar, HF radio, UHF radio and autopilot. Additionally, the crew faced a #2 engine that refused to start, plus overheats and failures of the #2 and #3 CSDs. At one point, the aircraft malfunctions came so fast and furiously that the crew ran straight from one corrective action into the next, in a very simulator-like moment.</p> <p>Throughout the long week of frustrations, SSgt ██████████ never lost his cool. He faced each problem with great aplomb, patiently analyzing each situation and calmly conversing with the pilots and other engineer to arrive at the safest course of action. One moment deserves special highlighting. Rather than launching an MRT to fix us while broken at Roosevelt Roads NAS, SSgt ██████████ used his excellent maintenance knowledge from his previous career field to extract a thrust reverser pump and pin the #2 and #3 thrust reversers with absolutely no maintenance support, in the tropical heat and humidity of Puerto Rico. This action, closely coordinated with AMC/LGRC and 6AS/DOV, saved the Air Force from funding an MRT and prevented a huge mission delay.</p> <p>I was extremely impressed by ██████████'s depth of knowledge in general mechanics and how seamlessly he applied it to Starlifter operations. He literally "saved" the mission and pleased dozens of stateside-bound passengers who had been stranded in Puerto-Rico for a week. I salute him for his efforts, but especially for his outstanding Bully Beef Express "CAN-DO" attitude!</p>			
AIRCRAFT COMMANDER (Name, Grade, & Organization)		SIGNATURE	DATE
██████████, CAPT, 6 AS		██████████	██████████

Figure 14. Captains should inform superiors when crewmembers go beyond the call of duty.¹⁵

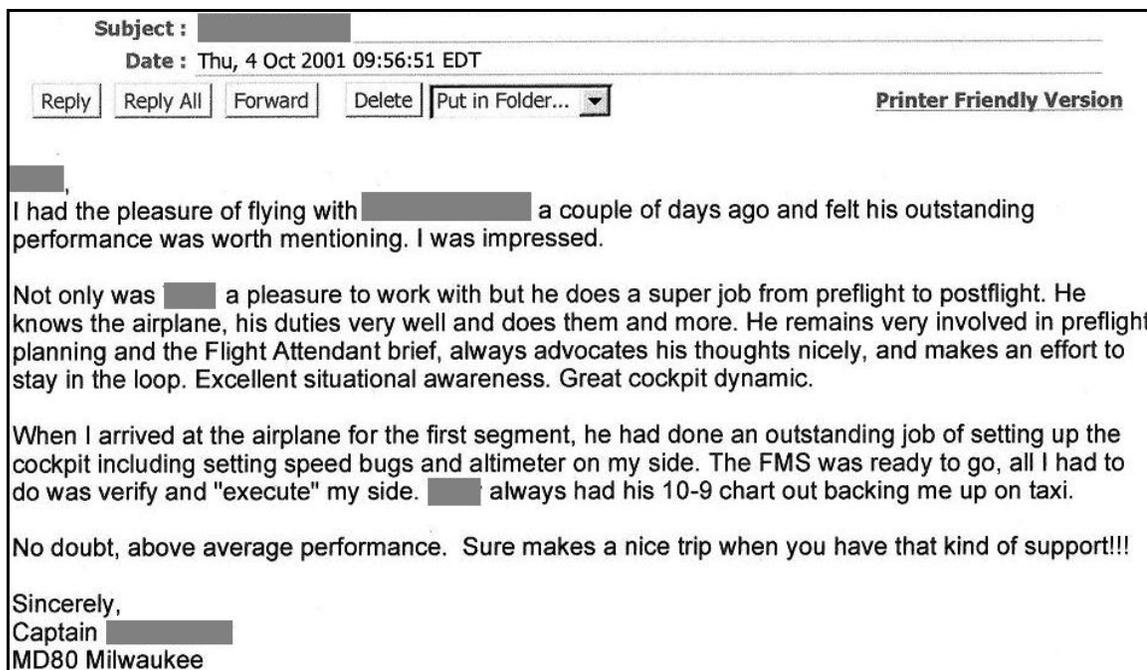


Figure 15. A complimentary email to the chief pilot can make the day of a junior crewmember.¹⁶

Manage Resources and Performance

Continuing with the discussion of the captain as the leader of a crew, it should be mentioned that a key aspect of leadership is knowing how to distribute and manage workload effectively. Much of the organizing scheme for workload in aviation is already stipulated as part of standard operating procedures (SOPs). However, the SOPs often provide much leniency in how the workload is performed and who is supposed to perform certain tasks. When such leniency is provided, and it should be, the captain must step in to establish what tasks should be done, when the work should be accomplished, and by whom.

For example, it is common for SOPs to provide a list of tasks that should occur in the cockpit prior to departure, such as properly setting up the automation and performing different equipment checks, but the SOPs sometimes do not state who should perform these tasks. **An effective captain will explain who will accomplish what tasks *prior* to the pilots showing up at the aircraft, so there is no confusion regarding how the tasks will be accomplished.**

Inadequate performance on behalf of a crewmember should be addressed immediately, tactfully, honestly, and privately. **It may prove tempting to avoid commenting on inadequate performance in hopes of avoiding interpersonal conflict or damaging someone's feelings, but there is a professional obligation to correct substandard behavior.** Of course, a captain's tone of voice can make a great impact in terms of how the feedback is received by the erring crewmember.

Good performance should be complimented, but not excessively. The art of leadership lies in knowing what to compliment and how often to do so in order to prevent the devaluation of the compliments. When positive feedback is provided, it should address the specific behavior that was noticed and should explain why the behavior was important.



Figure 16. What proactive actions do you take to create a climate of respect in the cockpit? ¹⁷

AUTHORITY WITH PARTICIPATION

From a CRM perspective, the captain's most important leadership task is to use the authority that has been given to him or her so as to produce influence while simultaneously encouraging participation. Although such a process is typically discussed in the context of the captain's leadership, it applies equally to anyone on the crew who is in a position of leadership. When the captain is away from the aircraft, the first officer will use his or her authority to resolve issues that are brought up by flight attendants, ramp agents, customer service personnel, or other company representatives. **In the absence of the captain, the first officer is viewed as the senior company representative on the aircraft and will be treated as such.**

In similar fashion, the lead flight attendant becomes the lead company representative when both pilots are absent. Regardless of whether the first officer or lead flight attendant are exerting authority, each must be aware that participation of other crewmembers must be encouraged when making decision. For example, if an airline captain is performing the exterior inspection of the aircraft and the customer service agent calls the first officer from the gate and requests to commence boarding passengers, the first officer has the authority to approve the boarding. However, such authority would be used irresponsibly if the lead flight attendant is not allowed to participate in the decision. Even if it is obvious to the first officer that the flight attendants are ready to receive passengers, it shows respect to request input from the flight attendants prior to making the decision. By showing such respect, the first officer would help set a tone that encourages future open communication.

The captain should start exerting authority with participation during the first few moments with the crew. **After the initial CRM briefing, the captain should request input on specific decisions that must be made for the flight and should open up for questions.** For example, if weather is approaching the field and the captain plans to leave a few minutes early to beat the weather, the captain may brief that to the crew and then ask, *"Does anyone see a problem with leaving early?"* Even if no input is required, requesting input on a specific issue helps set the tone for participation and open communication. Imagine all that is lost by captains who never brief the crew prior to a flight. Imagine the tremendous statement that is being made by the captain in such situations.

During the preflight planning process, the captain sets the tone for authority with participation by asking the first officer, flight engineer, or jumpseating pilot for input with regards to the planned route of flight, cruising altitude, weather, NOTAMS, and maintenance issues. **If the captain disagrees with any input that is received, the reasons for the final decision should be explained while simultaneously thanking the crewmembers for their input and encouraging them to voice their opinions in the future.** By encouraging participation, the captain works to maintain open lines of communication. The process is continuous and must remain at the forefront of all actions performed by the captain.

Authority with participation can be summed up by saying that when we forget to include or shut out a crewmember from the decision-making process, either by not caring about their input or by ignoring their potential for contribution, we cripple the team-building process. Such a situation has been described as analogous to placing the player of a hockey team on the penalty bench. That player is no longer able to score goals on offense. The situation is worse, however, because often an aircraft's captain does not realize that they have lost the input from a valuable crewmember. In accidents it has been shown that **it is often the quiet person on the crew who could have saved the day but that individual did not bother to speak up because they were never encouraged by the captain to provide input.**

CHARACTERISTICS OF EFFECTIVE FOLLOWERS



Figure 17. What words would a captain use to describe an ideal first officer? ¹⁸

Since captains represent people from all walks of life who have different value systems and perspectives, opinions tend to vary as to the specifics of what makes a good follower. Some captains may describe an ideal first officer as someone who is eager to learn, really makes an effort to fly well, and respects the captain. At the other end of the expectation spectrum, captains may describe their ideal first officer as one who shows up to the aircraft early and not only accomplishes the typical first officer tasks, but also completes much of the captain workload. Such a captain may expect the first officer to set up airspeed bugs for the captains, make sure that the seatbelts are fully extended so that the captain does not have to inconvenience him or herself with such a menial task, write down the ATIS and clearance and clip it to the yoke of the captain, and have a cup of coffee waiting next to the captain's seat (prepared exactly as the captain likes it, of course).

There is bound to be much humor and variance in how captains describe ideal first officers and other followers, but most leaders would agree that the items provided below are desirable qualities of followers.

Show Respect for Fellow Crewmembers

Showing respect to the other members of the crew, naturally including the captain, is not just a matter of courtesy, it is fundamental to fostering a sense of shared purpose that is the building block for teamwork. **One of the most important ways of showing respect is by listening to others.** This means actively listening for content in what another crewmember is saying, not just “hearing” what is being said. Another way of showing respect is by offering to help in tasks without being asked to help. This is particularly important if the task is considered undesirable. Granted, a crewmember should always make sure his or her obligations are covered before taking time to help others. Sometimes such a professional obligation to one’s own duties will not be noticed by other crewmembers and may be perceived as avoiding helping out. That can present a delicate situation.

Another important way to show respect for those in leadership positions is to always disagree with them in private. **Nothing is more corrosive than to have a crewmember disagree with the captain in front of the entire crew.** Interestingly, the resulting impact of such a situation often proves more damaging to the dissenting crewmember than to the captain. After a public meeting, such as a crew briefing, a crewmember who disagrees with the captain should ask to speak with the captain in private. The concern can thus be brought up. If the concern is valid, the captain can then bring the matter up again with the crew. In so doing, the lines of communication will remain open for future input since the captain will not have been embarrassed in public. If the concern is not valid, the crewmember who brought up the issue will not be embarrassed. That too will ensure the lines of communication remain open.

The worst possible example that comes to mind of such a situation is when a first officer disagrees with the captain in front of a flight attendant, customer service representative, ramp agent, mechanic, or passenger. Word will quickly spread throughout the crew that, “There is disagreement” or “bad blood” in the cockpit. Such a situation is like throwing a wrench into the gears of CRM. Such a crisis can be easily averted by having the first officer ask to speak with the captain in private when a disagreement needs to be voiced.

Be Dependable

A follower has an obligation to the captain and to the employer to be dependable. The captain needs to be able to count on people to fulfill their professional responsibilities and also to complete any tasks that they agree to perform. Part of this “social contract” is showing up early for any scheduled activity. Notice that we are not talking about showing up on-time. **Showing up on-time is the same as showing up late!** Not only does showing up early show our depth of commitment to the profession, but it shows that we are willing to help pick up the slack for other crewmembers who may be running late.

Such a late crewmember may be the captain. If an assigned task cannot be completed on time or as requested, the crewmember should advise the captain as soon as possible so that workload can be reassigned. Will you be ready to step in and assume the captain’s role when the captain is running half an hour late at show time? Will you be ready to coordinate flight attendant activities and brief the crew in such a situation?

Strive for Self-Improvement

Part of the obligation of being a professional aviator is the need to strive for self-improvement. We should all continue fanning the flames of excellence throughout our career. Only by aspiring for more can we work towards being at the peak of our game. As soon as we settle for “good enough,” we psychologically start sliding backwards and our performance as aviators soon follows. A hunger to always exceed expectations and better ourselves is at the very core of what it means to be a professional.

For first officers, such a concept ties in directly with their status as “captains in training.” First officers should first focus on mastering the technical elements of their position. After they are comfortable in their flying duties, first officers should start studying the leadership exhibited by their captains in hopes of identifying behaviors that can serve as models for their own leadership development.

A key part of the self-improvement effort of every first officer or flight engineer is to seek performance feedback from their captain after every flight. Not doing so constitutes missing a golden opportunity for improving performance. No one has better insight into how we can improve than someone we just spent several days flying with. **Hopefully, the feedback received will include comment on one’s strengths as well as one’s weaknesses.** Focusing just on weaknesses during performance feedback can backfire by severely demoralize those on the receiving end of the comments.

Adopt a Sense of Ownership

One important quality exhibited through teamwork is a sense of ownership over the profession, the company, and each flight we are involved in. Such a responsibility is a matter of pride and comes from the realization that each of our actions impacts the bottom-line of an operation. It can be very challenging to instill a sense of ownership in employees who are underpaid or who are perceived as being underappreciated. Nevertheless, **it is a professional obligation for us to act as if we were part owners of the aircraft we fly** and of the company we work for.

An example of ownership is the flight attendant who notices trash on the jetway when getting ready to board the aircraft and takes the time to remove the trash so that passengers do not see it. Another example is the first officer who stays behind for an extra minute after a long day’s worth of flying to ensure that the cockpit is left in a clean and organized fashion.



Figure 18. This picture illustrates the “*it’s not my job*” mindset. We must adopt a sense of ownership.

ASSERTIVENESS WITH RESPECT

As was previously stated, accident investigations reveal that crewmembers frequently have the knowledge or ability to prevent mishaps but fail to speak up in time to stop the accident from happening. Why would people allow such a chain of events to happen without speaking up? Such a lack of assertiveness certainly stems directly from the lack of encouragement to provide input, which is the captain’s job. However, just because the captain has not done a good job encouraging authority with participation does not mean that crewmembers are off the hook to provide input. **Regardless of what tone has been set by the captain, crewmembers have an obligation to be assertive and to voice concerns and opinions on matters of importance to the safety of the flight.** The concept of assertive input by followers is so important and CRM that it deserves its own section in this chapter.

Assertiveness is not just limited to first officers, flight engineers, and jumpseating pilots in the cockpit. The concept applies with equal force to flight attendants, ramp agents, mechanics, customer service agents, and dispatchers. For example, flight attendants must be taught to be assertive and voice safety concerns to the lead flight attendant. Input must be provided honestly and frequently by all, even when not requested by the captain. Of course, it is a matter of experience and judgment to know just how much input to provide and when. For example, a first officer who always “cries wolf” will quickly be tuned out by a captain and may be unconsciously labeled as lacking credibility. Similarly, **crewmembers who are assertive in a disrespectful manner may be tuned-out by the captain and labeled as “sour grapes” who have nothing to contribute.**

At the heart of the matter is the notion that crewmembers must have the willingness to contribute. Such an attitude can be tested and developed as a student in college during class discussions and exercises. Remaining silent is unacceptable. Each of us must make a concerted

effort to be part of the solution; whatever the solution may be. That is not to say that we should speak for the sake of speaking, but **we should be mentally aggressive in pursuing perspectives that can help solve problems and then should voice our opinions once we have them.**

There are a couple of terms used by accident investigators to describe the phenomenon of crewmembers who have important information or the ability to stop a mishap sequence but take no action. Such a phenomenon is often called “**passenger**” or “**copilot**” syndrome. Such terms stem from the fact that passengers feel as though they have nothing they can do to affect the outcome of a flight and copilots often “lock up” and psychologically act like they are just along for the ride. Assertiveness starts by realizing that each crewmember can directly affect the outcome of the flight and is empowered to do so.

What happens when a crewmember needs to convey important information and the captain is not listening, or does not grasp the importance or critical nature of what the crewmember is attempting to convey? To deal with such situations, **the industry has adopted a 5-step assertiveness process.** The process is usually used by a crewmember when input that is provided is not listened to or not acted upon by the captain. In such circumstances, the crewmember should make sure she or he has the captain’s attention, then should state the concern by explaining the problem and possible consequences, then should offer possible solutions and seek agreement.

It is important to practice using the assertiveness process. When used, crewmembers should only deal with one issue at a time and should not embellish or exaggerate the problem. Stick to the facts and stay in control. The five steps are outlined in the following box:

1. Get the captain’s attention (use name or crew position/opposite typical):

“Jim, I have a concern I want to discuss with you.”

(Some military services use a “Time Out” phrase to get attention)

2. State the concern:

“I am not comfortable with this heading that we are on.”

3. State the problem and consequences:

“If we continue on this heading, we will be too close to the buildup.”

4. Give solutions:

“I think we should turn 20 degrees further west.”

5. Solicit feedback and seek agreement:

“What do you think?” or “Don’t you think so?”

Do not compromise your standards!

TRANSCOCKPIT AUTHORITY GRADIENTS (TAGs)

The captain’s ability to promote assertive behavior on behalf of other crewmembers is directly affected by the perceived authority that lies between the captain and the crewmember. The experience, proficiency and assertiveness of each pilot can be compared to determine which pilot exudes more authority in the cockpit. Ideally, a captain will show more authority than anyone else in the cockpit. A captain who shows too much or too little authority is a set-up for CRM problems. **It is the captain’s job to know what the TAG is in the cockpit and take measures to adjust the TAG for optimal communication flow.**

The left side of the following depiction portrays a gradient too steep for proper authority to be delegated while keeping communication channels open. When the TAG is too steep, the captain is often a domineering type who is paired with an unassertive first officer. In this circumstance, the first officer may be overloaded with tasks and fearful of the captain's wrath or condescending comments, and is therefore providing minimal input into the operation of the flight. This is especially dangerous during an emergency situation, where a captain depends on input from a first officer.

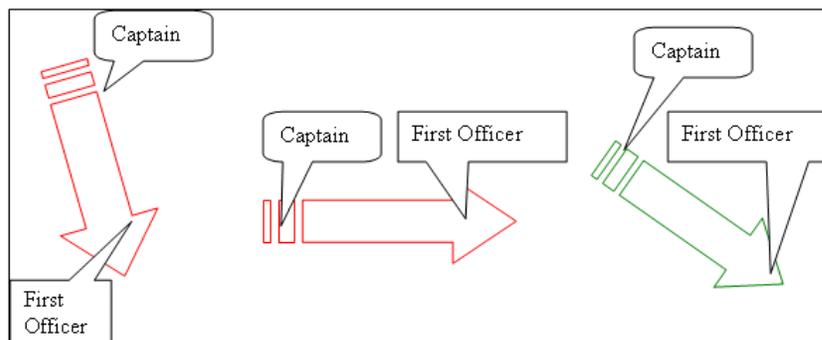


Figure 19. From left to right: Steep, Shallow, and Optimal TAGs.

The middle depiction in Figure 19 shows a flat authority gradient where there is equal authority amongst both pilots or between two crewmembers. This sounds like a great situation but can actually be very dangerous. Such a situation typically exists when two very experienced or two inexperienced pilots pair with each other for a flight. An example of this may be two senior captains or instructor pilots who fly together. A dead giveaway of a shallow TAG is when one of the pilots says, "I thought you did that." As in, "I thought you did the walkaround," or "Didn't you get the weather briefing?" Those two sample conversational exchanges are particularly worrisome when they occur *after* the aircraft has become airborne. It happens.

The right part of the depiction in Figure 19 shows the proper authority gradient, where the captain is making effective decisions while handling a portion of the workload and nurturing the FO's input. In such a gradient, the captain is taking on the proper role of a leader. While making effective decisions, the captain is also making the first officer feel comfortable with voicing opinions and input about the flight or situations of the flight.

The depiction shown in Figure 20 is that of a reverse or inverse TAG. This is a very dangerous situation that has led to several notorious accidents, such as the runway collision between a DC-9 and B-727 at Detroit in 1990. A reverse TAG exists when the first officer becomes the functional leader in the cockpit. This can be due to the captain's lack of experience in a model of aircraft or in a specific situation. This inverse relationship is detrimental because **the captain should be both the designated and functional leader.**

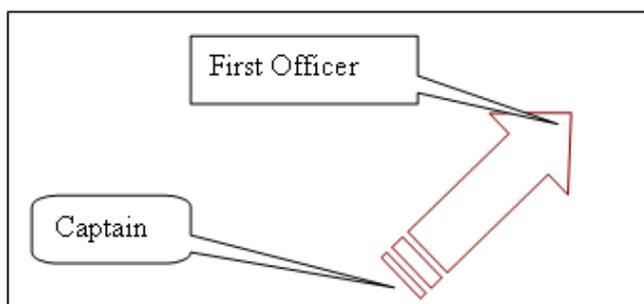


Figure 20. A very dangerous inverted TAG means the first officer is running the show.



Figure 21. Imagine being a junior C-130 aircraft commander with this colonel as a navigator. ¹⁹

CONCLUSION

Extensive research has been performed by business and human factors scholars into the science of leadership and followership. However, because leadership and followership are human endeavors, both can be considered an “art” as well. The artful nature of a leadership has led to the creation of false beliefs that leadership skills are inherited and not learned. We should make it our personal quest to improve our soft skills, in particular those of leadership and followership.

Leadership can be defined as the use of influence to affect individual behaviors and attitudes. Unfortunately, it is sometimes common for people in leadership positions to not know they are being perceived as leaders, resulting in operational dysfunction and much frustration. Others relish the authority that comes with leadership but do not realize that an equal measure of responsibility is also part of the deal. **Leaders can delegate authority but can never delegate responsibility.**

Fortunately, several readily identifiable leadership and followership traits can be studied and emulated as part of self-improvement efforts. **The most important job of leader is to set a tone that encourages participation in the decision-making process by other crew members. The most important job of a follower is to assertively provide input to leaders while remaining respectful of the leader’s of authority.** Both leaders and followers must be cognizant of the authority gradient that exists between them. A transcockpit authority gradient (TAG) should slope downwards from the captain to the first officer and should be neither too steep nor too shallow in order to promote optimal assertiveness.

Both leaders and followers in the cockpit must remain acutely aware that every first officer is a captain in training. By learning leadership while still a first officer we can avoid falling into the trap illustrated by the joke about Copilot the hunting dog. If we don’t take advantage of the opportunity to learn about leadership before being placed in a position of leadership it is entirely possible that we will one day end up sitting in the left seat and just barking. We do not want to become on of “those” captains that every first officer and flight attendant ends up telling stories about!

QUESTIONS

For New Pilots

1. Who is the best flight instructor you have had? What were the top three leadership qualities that the instructor exhibited? Be very specific when you describe the qualities and explain how the qualities impacted the safety and efficiency of the flight, as well as the quality of your learning.
2. Imagine that you are chosen to ferry an aircraft across the United States and are told to pick out a copilot for the flight. You are given the names of five competent and current student pilots to interview for the position. They each have about thirty hours of total flight time and have all soloed. Come up with five questions to ask each candidate during an interview in order to determine who you will choose as your copilot.

For Professional Pilots

3. Choose a role model for the type of leadership a captain should exhibit. The person can be a real individual or a fictional character from a book or movie. Write a paragraph that depicts the leadership traits that your role model exhibits and how you can use similar traits to excel as a captain. Use the traits to produce your personal definition of captain's leadership.
4. Choose a role model for the type of followership a first officer, flight engineer, jumpseating pilot, or flight attendant should exhibit. The person can be a real individual or a fictional character from a book or movie. Write a paragraph that depicts the leadership traits that your role model exhibits and how you can use similar traits to excel as a captain. Use the traits to produce your personal definition of crew followership.

For Check Airmen or Faculty

5. Pick an aviation event that illustrates good captain leadership. Select the top three leadership qualities that are evident in the event that you selected and find a way to work those qualities into your own future lesson plans as behaviors that you will exhibit during the lesson.
6. Teachers are leaders of learning. Write a paragraph which explains how your teaching exemplifies "authority with participation." Write another paragraph that depicts how your teaching promotes "assertiveness with respect." Be very specific with your explanations.

¹ Wagner, J. A., & Hollenbeck, J. R. (2005). *Organizational behavior. Securing Competitive advantage*. Mason, OH: Thomson South-Western, p. 285.

² Zull, J. E. (2002). *The art of changing the brain. Enriching teaching by exploring the biology of learning*. Sterling, VA: Stylus Publishing, p. 221.

³ Leadership. (2008). *The American heritage dictionary of the English language, Fourth Edition*. Retrieved September 17, 2008, from Dictionary.com website: <http://dictionary.reference.com/browse/leadership>

⁴ VandenBos, G. R. (Ed.) (2007). *APA dictionary of psychology*. Washington, D.C.: American Psychological Association, p. 528.

⁵ Hines, W. E. (1998). *Teams and technology: Flight crew performance in standard and automated aircraft*. Unpublished doctoral dissertation. The University of Texas. Retrieved May 14, 2007, from ProQuest Dissertation Library.

⁶ Wagner, J. A., & Hollenbeck, J. R. (2005). *Organizational behavior. Securing Competitive advantage*. Mason, OH: Thomson South-Western, G-5.

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⁸ Influence. (2008). *The American heritage dictionary of the English language, Fourth Edition*. Retrieved September 17, 2008, from Dictionary.com website: <http://dictionary.reference.com/browse/influence>

⁹ ICAO HF Digest No. 1: Fundamental Human Factors Concepts. ICAO Circular 216-AN/131.

¹⁰ Photo courtesy of U.S. Army.

¹¹ Photo courtesy of U.S. Air Force.

¹² Kern, T. (1998). *Flight discipline*. New York: McGraw-Hill.

¹³ Photo courtesy of U.S. Air Force.

¹⁴ Photo courtesy of NASA.

¹⁵ Actual report submitted for U.S. Air Force C-141B flight engineer (document edited to preserve privacy).

¹⁶ Actual email sent by MD-80 captain at Midwest Airlines (document edited to preserve privacy).

¹⁷ Photo courtesy of U.S. Air Force.

¹⁸ Photo courtesy of Michael Franks.

¹⁹ Photo courtesy of U.S. Air Force.