



A U.S. Army Soldier assigned to the Joint Multinational Readiness Center Timberwolf Observer Coach Trainer Team takes notes during an after action review with the 2nd Cavalry Regiment during Dragoon Ready 21 at the Hohenfels Training Area, April 15, 2021. (U.S. Army photo by Spc. Uriel Ramirez)

# Fixing the System

## How Leaders can Prevent Complex Problems

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**W**hen people make mistakes, leaders, at times, make judgments relating to the character of the person rather than considering external situational factors that may have contributed to the mistake. This phenomenon is known as the *fundamental attribution error* and results in leaders attributing negative character traits (such as laziness or ignorance) to individual Soldiers rather than the system or the circumstances that led to the mistake (i.e., misinformation of the event time/ location, traffic accidents, car troubles, etc.) (Healy, 2017). This article details the “six principles of improvement” approach and how leaders can use it to

improve their current systems and prevent mistakes and delays before they happen.

### **A Solution Aimed at the System**

As defined by Meadows (2008), a system “is an interconnected set of elements that is coherently organized in a way that achieves something” (p. 11). An example would be a unit, which consists of elements such as Soldiers, noncommissioned officers (NCOs), and officers who all interact with each other through a set of rules and regulations to achieve Army missions.

The great thing about addressing shortcomings in a

system is it avoids the negative issues associated with the fundamental attribution error and helps leaders get “upstream” of the problem. In other words, it proactively creates conditions, so the problem doesn’t happen again (Heath, 2020). Luckily, there is a well-researched and proven system improvement method called the “six principles of improvement,” which can guide NCOs (Carnegie Foundation, n.d.).

### **Principle One: Make the Work Problem-Specific and User-Centered**

Normally, NCOs lead good Soldiers who do their best in a complicated system. Therefore, NCOs must try to see the problem from the lens of the individual Soldier and attempt to separate the misattributions of character from the problem. However, they must also actively define the problem, seek the expertise needed to solve the problem, and discuss what conditions must change to enable a change in behavior (Bryk, Gomez, & Grunow, 2011). An example would be an NCO telling a Soldier to stop being late for formation instead of first inquiring if he or she is ill, injured, troubled at home, etc.

### **Principle Two: Variation in Performance is the Core Problem to Address**

The second Carnegie principle suggests leaders consider specific variations in performance rather than individual character traits as the root cause of problems (Bryk, 2015). Everything we measure involves a form of variation. In sticking with the example of the Soldier late to formation, one can identify that sometimes a Soldier is late and sometimes he is not. Simply put, if one Soldier is late, and another in the same unit is on time, there is clear variation in measurement stemming from individual performance or circumstance.

However, Soldier tardiness is not enough to identify a problem in the system (unit). While one can infer the Soldier who is late is not as conscientious as a Soldier who is on time, NCOs must track data over time to understand if a problem exists. Once you have enough information, you can then identify specific changes that need to occur within a system to achieve different behaviors and improve results, which avoids the fundamental attribution error of thinking that a late Soldier is “just lazy and oversleeping.”

### **Principle Three: See the System that Produces the Current Outcomes**

Another key point leaders must consider is that system supervisors cannot fully visualize a system from their perspective. While this concept is counterintuitive to the conventional wisdom one sees more as they advance in their careers, only those operating within the system can observe its nuances entirely.

For example, if NCOs want to increase retention



Soldiers stand in formation during a graduation ceremony March 11 at Hilton Field on Fort Jackson, South Carolina. An example of Carnegie's first principle would be an NCO telling a Soldier to stop being late for formation, instead of first inquiring if he or she is ill, injured, troubled at home, etc. (U.S. Army photo by Robert Timmons)

rates in their unit, they must speak with both re-enlisting and exiting Soldiers to discover what factors led to their decisions. Leaders who have been in the Army for more than 20 years will not understand the motivations of a 22-year-old exiting the Army. Thus, if NCOs truly wish to understand the reasons why their Soldiers do not reenlist, they must observe the motivations for this behavior from their Soldiers’ perspective.

### **Principle Four: We Cannot Improve at Scale what we Cannot Measure**

The Army measures leadership through the application of the leadership requirements model (LRM) outlined in *Army Doctrine Publication 6-22: Army Leadership and the Profession*, which focuses on leadership attributes and are measured by performance indicators (PIs) outlined in *Field Manual 6-22: Leader Development* (Department of the Army, 2015; 2019). However, LRM and PIs allow leaders to measure leadership from an individual basis but not from an organizational standpoint.

Again, NCOs must link measurements specific to the change they want to affect. They must operationalize the leadership concept into measurable observations by clearly identifying the variable outcomes and indicators of good or poor leadership (i.e., retention rates). The key concept here is regardless of the problem one aims to solve through a system modification, one must identify specific measures related to the outcomes of the system.

### **Principle Five: Anchor Practice Improvement in Disciplined Inquiry**

It is critical not to improve an entire system all at once, nor to wait for the “perfect solutions” to implement improvements. An effective approach to system modification is the Plan, Do, Study, Act (PDSA) cycle, which means planning, trying, and observing the results of a change, and then deciding if it should be maintained or

abandoned (“Science of Improvement,” n.d.).

PDSA cycles are critically important in complex systems because they encourage only small parts of the solution to be implemented at a time, to determine if specific changes result in either improving or worsening the problem. In addition, PDSA cycles also offer the advantage of speed, because they do not require a solution to be implemented in a single effort.

### **Principle Six: Accelerate Improvements Through Networked Communities**

The Army has used networked communities to improve the system for some time. In particular, the Center for Army Lessons Learned. However, NCOs should also consider the Sergeants Major Academy (SGM-A). For example, the SGM-A had long desired to more closely align its curriculum to its officer counterpart to better improve mission accomplishment.

Using the six Carnegie principles, the SGM-A reached out to the Command and General Staff College (CGSC) for assistance; and, in 2009, the SGM-A adopted a large

portion of CGSC’s curriculum. The results of this effort have produced better and more well-rounded sergeants major for the U.S. Army. This could not have happened without networking and corroborating with the CGSC.

### **Conclusion**

Fundamental attribution error is common in situations where Soldiers fail to meet a standard. Yet stopping at this basic leadership level offers a disservice to the organization. While there are times when poor performance is directly related to an offender’s character, leaders miss opportunities to improve systems for their whole organization when they only stop at attributing problems to character issues. NCOs should strongly consider employing Carnegie’s six principles of improvement to identify the root cause of problems and avoid similar problems in the future. Incremental system improvement is vital for leaders to understand and apply as we enter a multi-domain environment of near-peer competitors who seek to challenge the will of our Nation. ■

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