THE U.S. ARMY'S AFTER ACTION REVIEWS: SEIZING THE CHANCE TO LEARN

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The U.S. Army is one of the few organizations to have institutionalized these reflection and review processes, especially at the group level. After Action Reviews (AARs) are now standard Army procedure. [49] They were introduced in the mid-1970s and were originally designed to capture lessons from the simulated battles of the National Training Centers. The technique diffused slowly—according to the Army's chief of staff, it was a decade before the process was fully accepted by line officers and embedded in the culture—and only in recent years have AARs become common practice. The turning point was the Gulf War. AARs sprang up spontaneously as small groups of soldiers gathered together, in foxholes or around vehicles in the middle of the desert, to review their most recent missions and identify possible improvements. Haiti marked a further step forward. There, for the first time, AARs were incorporated into all phases of the operation and were used extensively to capture and disseminate critical organizational knowledge.

The technique is relatively straightforward. It bears a striking resemblance to "chalk Talks" in sports, where players and coaches gather around a blackboard shortly after a game to discuss the team's performance. Both chalk talks and AARs are designed to make learning routine, to create, as one commander put it, "a state of mind where everybody is continuously assessing themselves, their units, and their organizations and asking how they can improve." In practice, this means that all participants meet immediately after an important activity or event to review their assignments, identify successes and failures, and look for ways to perform better the next time around. The process maybe formal or informal, may involve large or small groups, and may last for minutes, hours, or days. But discussion always revolves around the same four questions:

- What did we set out to do?

- What actually happened?

- Why did it happen?

- What are we going to do next time?

Time Criteria
According to Army guidelines, roughly 25 percent of the time should be devoted to the first two questions, 25 percent to the third, and 50 percent to the fourth.

Establish The Facts
The first question is deceptively simple. Group members must agree on the purpose of their mission and the definition of success. Otherwise, there will be no basis for evaluating performance or comparing plans with results. In the Army, objectives are normally defined with great precision. They include three elements: "the key tasks involved, the *conditions* under which each task may need to be performed, and the acceptable *standards* for success. (For example, at a range of 2,000 yards, hit an enemy tank moving at 20 miles per hour over uneven terrain at night with an 80% success rate.)" [50] With objectives like these, there is little ambiguity, and it is easy to determine whether a job has been done well or poorly. Such clarity also avoids confused, inconclusive reviews. According to an experienced AAR facilitator:

Unsuccessful AARs are often those where the boss has the attitude, "I don't know what I want, so I can't tell you exactly what to do. But I'll recognize it when I see it. So just go out there and do good things." That's not helpful. We insist that our leadership, from the

very top officer to those in charge of three to five men, give soldiers clear guidance. They must have a standard.[51]

The second question requires that participants agree on what actually happened during a mission. This too is more difficult than it first appears. Facts can be slippery, especially when stress is high and events move rapidly. All too often, memories are flawed, leading to competing or inconsistent stories. Reality—what soldiers call "ground truth"—becomes difficult to pin down, resulting in gridlock and AARs that progress slowly if at all. But these problems can be overcome. At the National Training Centers, facts are verified by pooling information from three diverse, objective sources: observer-controllers, instrumentation, and taping.

Observer-controllers are skilled, experienced soldiers who shadow individual officers throughout their training exercises. The also provide on-the-spot coaching and lead AARs. (Not surprisingly, many later do a tour of duty at the Center for Army Lessons Learned [CALL], where they are assigned to a Lessons Learned Division.) A training exercise for three thousand to four thousand people normally involves approximately six hundred observer-controllers. Typically, their time in service makes them a bit senior to the officers they are observing, providing both credibility and clout. And because they have complete access to battle plans, are intimately familiar with the terrain, and are constantly present during maneuvers, they can effectively arbitrate debates when facts are in dispute.

Technology, in the form of instrumentation and taping, provides an additional source of objective information. The resulting record is extremely detailed and leaves little room for argument. Onboard microprocessors track the exact position and movement of vehicles over time, while sophisticated, laser-based technologies note when and where weapons were fired as well as the resulting hits and misses. Video cameras, mounted at critical locations throughout the training centers, record troop movements. These films provide vivid, compelling testimony, with extraordinary fidelity. As one officer put it: "If a picture is worth a thousand words, a motion picture must be worth a million." Audiotapes round out the story, conveying the exact timing and content of communications both within and across units.

Together, these tools and approaches ensure that facts are reconstructed with considerable accuracy. During AARs at the National Training Centers, soldiers have little problem answering the question, What actually happened? Unfortunately, they face many more difficulties in the field, where observer-controllers and recording technologies are not always available. Occasionally, CALL teams and combat video crews will be on hand to provide objective data. But in most cases, accurate reconstruction depends on pooling multiple perspectives in a process that resembles "majority rules." Then, immediacy is crucial to success, as is wide participation. To minimize memory losses, AARs must be conducted as soon after the event as practical—preferably, the very same day. They should include, whenever possible, all key participants, as well as unbiased third-party observers, members of staff and supporting units, and even senior commanders. Participants should agree on some mechanism to resolve disagreements and ensure that discussion does not grind to a halt when differences emerge.

Why Questions #1 and #2 Are "Keys To Success"
Once the facts are established, diagnosis can begin. Outside the Army, many groups start their reviews at this stage, assuming that prior steps can be omitted without problems. But agreement on both the standards to be met (question one) as well as actual performance (question two) is essential to avoiding endless debates. The Army's insistence that the first 25 percent of every AAR be devoted to these topics is a critical insight. And the benefits are hardly confined to the military. Companies can also gain by devoting time up front to clarifying goals and targets and setting unambiguous standards—expected levels of customer satisfaction, milestones for project completion, penetration rates for new products—and then comparing

them with results during the review process. By deferring diagnosis, these two steps vastly improve the odds that ensuing discussions will be grounded and productive.

The third question begins the process of analysis by asking for an examination of cause and effect. At this stage, the goal is to tease out the underlying reasons for success or failure. A tank unit expected to reach a critical checkpoint at a certain hour but was twenty minutes late; what caused the discrepancy? A scout sent out to inspect a position to the north but ended up five miles east; how did he become lost? A commander planned to coordinate artillery attacks with two other battalions but never communicated his intentions; what caused the breakdown? Answering these questions requires problem-solving skills, as well as a willingness to accept responsibility. Groups must brainstorm possible explanations and then find ways to choose among several plausible alternatives, often in the face of limited and conflicting data. They must also be ruthlessly honest. Individuals need to face up to their own deficiencies, avoiding the all-too-common tendency to turn a deaf ear when personal errors or weaknesses are uncovered. This is particularly true of leaders. As one commander observed: "If you are not willing to hear criticism, you probably shouldn't be doing an AAR."

At times, analysis is simple, and cause and effect are easy to untangle. Missed opportunities or roads not taken are usually obvious to both individuals and groups. In Haiti, a sergeant responsible for convoying soldiers to the beach returned several hours late because one of his trucks became stuck in the sand. The ensuing AAR was brief and to the point: he had failed to pack a tow bar. The first units entering Port-au-Prince were startled to discover that delivering babies was an important part of their mission. They quickly wrote an AAR to ensure that all medics received at least rudimentary obstetrics training.

On other occasions, challenges are more complex, and a series of AARs may be required to hone in on the problem. Then, a process of progressive refinement is useful for teasing out explanations and developing possible solutions. Units assigned the task of clearing guns from suspected rebel strongholds in Haiti initially had little success. Their first AAR examined the current process, the resulting resistance, and how it might be overcome. Soldiers noted the absence of dogs in the area and the locals' frightened response to German Shepherds used by the military police. Perhaps, they suggested, the dogs should be more visible. In the next town, they were placed up front, and cooperation immediately improved. Soon after, during another AAR, soldiers noted that they had encountered no women in their sweeps through the towns. Perhaps they could be encouraged to assist in the collection effort if they had a woman soldier to identify with. In the next village, one unit assigned a female commander as leader and visibly acknowledged her authority. The result was further gains in cooperation. Finally, during a third AAR, soldiers noted that they faced far more resistance when confronting people in the streets than when they approached them in their homes. The unit shifted its modus operandi to house-to-house searches, and even more guns were secured.

This last example suggests that the final step in an AAR—deciding what to do next time—is often inseparable from diagnosis. Participants are usually eager to propose solutions, and many arise naturally once problems are well understood. It is particularly important that participants focus on the things they can fix, rather than external forces outside their control. Otherwise, the process is likely to have little immediate impact. This stage has another goal as well: identifying areas where groups are performing well and should stay the course. In Army lingo, these are activities to be "sustained." Surprisingly, they are often difficult to identify. When standards are met, variation is limited and there are few obvious clues to the sources of superior performance. Failures are far easier to diagnose.[52] Yet if successes are to be repeated, the underlying causes must be clearly articulated.

Identifying activities to be sustained was one of the assignments of the first unit in Haiti. Because soldiers faced a host of unfamiliar challenges—keeping the peace, delivering food, overseeing elections, even collecting trash—they were asked to review virtually all of their missions and develop a set of standard operating procedures for follow-on units. AARs were the

primary tool. As one participant recalled: "We AAR'd everything." Small squads conducted them daily, debriefing orally and informally; larger sections conducted them after every critical mission, presenting the results in a formal report; and platoon leaders conducted then weekly, submitting their findings to commanders for further distillation and review. Quick feedback led to quick implementation, sharply increasing the rate of learning.

Initially, soldiers found many areas for improvement and strove only to make each effort better than its predecessor. But with experience, there were fewer and fewer problems, and attention shifted to sustaining successes. Eventually, the unit developed a series of "cookbook recipes" that captured their own best practices, wrote them up, and submitted them for review. Frequently the practices were set in Army doctrine and used by both CALL and the National Training Centers to prepare follow-on units for their upcoming assignments.

Together, these examples show that AARs are a powerful, appealing tool. They have many advantages. The concept is easy to grasp and inexpensive to apply, amounting to little more than organized reflection. The four questions provide a simple roadmap, appropriate for any situation. The process demands few skills other than careful observation and systematic problem solving. Even so, success is not guaranteed. A number of conditions must first be met.

Preconditions Required

To begin, reviews must be framed as dialogues, not lectures or debates. Army experts suggest that participants speak as much as 75 percent of the time. The process must also be as egalitarian as possible: the broader and more even the participation, the better. Under no circumstances should leaders dominate discussions or seize control. They should also refrain from posing their own problems for analysis or lobbying for preferred solutions. Such actions undermine AARs by suggesting that they exist for the leader's benefit rather than the group's.

Skilled facilitation is essential. Facilitators guide the discussion from beginning to end, ensuring that participants stay on track. They introduce the topic, keep the group focused, establish and enforce ground rules, monitor and maintain the schedule, transition from one question to the next, and summarize the resulting action plans. Even more important, they personally set the tone. AARs require openness and candor, a willingness to set aside traditional lines of authority. There must be honest interchange between superiors and subordinates, a recognition, in the words of the Army's chief of staff, that "disagreement is not disrespect." Because this attitude seldom comes naturally to hierarchical organizations, it must be carefully and consciously cultivated. According to a facilitator at one of the National Training Centers:

> We preface our AARs by saying, "We're not judges, and we're not evaluators. We're not going to talk—you are. But to be successful, we have to have an information exchange between the lowest soldier in the ranks and the highest, because the highest ranking officer doesn't see everything that's going on. This is his opportunity to get feedback."

Of course, feedback will be forthcoming only if commanders are willing to publicly acknowledge their flaws. Such statements have enormous symbolic value, and skilled facilitators try to draw them out early in AARs. As one facilitator observed:

> When leaders admit up front that they did some things right and some things wrong, it really opens up the whole group. They understand that this isn't a "Who shot John?" type of review. It's "Let's figure out what's best so that we can do better next time."

Straight talk must also be supported by the larger organization. Incentives and rewards must reinforce the openness required by AARs; otherwise, mistakes will never be discussed

and the process will continue to be viewed with suspicion. Here, actions speak louder than words. According to a mid-level officer:

> I think one of the reasons why we are able to talk so frankly in AARs is that our superiors have set the conditions that they want to know what is truly the problem and what you are really thinking—not just the answer they want to hear. If they find out that you are hiding a fact or are less than completely honest, recently that has been death to your career. People who have lacked integrity or candor are leaving the service because they are not getting promoted.

Ground Rules

Yet even with the proper incentives, discussions can still derail. Candor comes in many forms, not all of them constructive. For this reason, the Army has developed ground rules for AARs that are enforced by facilitators. Tact and civility are required, and personal attacks are forbidden. There will be no searches for the guilty. As one facilitator put it:: "We don't use the 'b' or the 'f' words. We don't place blame, and we don't find fault." Plain speaking, however, is essential, and facilitators normally suggest to participants that they enter AARs with "no thin skins." They are also told that "discussions will stay in house." There will be no report cards and no relaying of information to bosses. Mistakes admitted in an AAR cannot be held against soldiers later on. They are opportunities for learning, not blemishes on one's record, and are excluded from personnel evaluations. Reprisals—either during AARs or after the fact—are not allowed.

Structure

Some structure is necessary to ensure coherence and avoid random, rambling discussions. The best AARs therefore follow a well-defined path. They normally begin shortly after the activity was completed but not so soon that there is no opportunity to plan carefully or identify likely learning opportunities. To begin, facilitators usually write the topic of discussion on a flip chart in front of the group and suggest that speakers confine their comments to that topic. The group then marches through events in sequence, using the timeline of the mission to guide them. At each step, the facilitator pauses to ask participants the four basic questions. Occasionally, when tasks are complex, the group will break the chronology of events down further, using additional categories, such as intelligence and maneuver, drawn from the Army's Blueprint of the Battlefield, to organize discussion. Many facilitators anticipate factual disputes before they arise and have videotapes or other documentation on hand for resolving them. During wrap-ups, the entire group generates two lists, one of activities to be sustained and another of activities to be improved. To ensure that these learnings are not lost, one member is assigned the role of secretary and recorder.

The Art Of Facilitation

As discussion unfolds, facilitators ask questions. This is a high art, for AARs must be tough and probing without causing defensiveness. Facilitators must therefore choose their words carefully, pressing for honest self-assessments without directing criticism at specific individuals. They must keep the spotlight on the group, asking, for example, how a platoon could have done better escorting a convoy, rather than questioning the platoon officer about his personal failings and lack of direction. At the same time, facilitators must remain attuned to differing points of view. They must ensure that disagreements surface and conflicts are ironed out; both are essential to learning. Not surprisingly, many facilitators have become experts at reading body language and drawing people into discussions at just the right moment, using subtle cues: "I see you shaking your head over there; do you see the situation differently?" Poor AARs can often be

traced to facilitators who have misunderstood their roles and use the occasion to tell personal war stories and anecdotes.

Clearly, facilitators require a multitude of skills. They must be sensitive observers and artful discussion leaders. They must be knowledgeable about the subject at hand. And they must be respected by subordinates and peers. This combination is hard to find in one person, so the Army relies on diverse sources. At the National Training Centers, all facilitators are observer-controllers. They are considered to be ideal for the task because they combine intimate, objective knowledge of operations with extensive experience leading discussions. But because they are seldom available in the field, line officers must at times lead their own AARs. This presents few problems for small, intimate groups like squads or sections, which have close working relationships. Difficulties increase, however, as units become larger. Then, one mid-level officer observed, "too often, the person in charge is intimidating." A few commanders till insist on leading their own AARs because they consider themselves capable of encouraging openness and debate. But most Army experts agree that the task is best left to individuals with less at stake, either staff members outside the chain of command or higher ranking officers with a broader perspective. Commanders, they believe, are more likely to benefit from AARs by listening attentively and contributing selectively, rather than assuming their customary positions of leadership.

Conclusions

AARs, then, have a number of strict requirements (see Table 4-1). Among the most critical are immediacy, broad participation, a structured process, the availability of objective data, skilled facilitation, attention to recording and dissemination, and a climate of openness and candor. Even more important, however, is simple repetition. Unless reviews are carried out routinely at all levels of the organization, they will never be viewed as more than an interesting diversion. Consistency breeds comfort and acceptance. It is for this reason that most Army training exercises now include daily AARs and that AARs were used so extensively in Haiti. It is also why General Gordon Sullivan, the Army's former chief of staff, did not exempt himself from the process. He too engaged in regular AARs. For example, early in his tenure, he and his staff reviewed responses to difficult questions from the House Appropriations Committee; later, they focused on major policy initiatives. Such practices ensure that AARs become second nature. Eventually, a new mind-set develops in the organization, a recognition that no activity is truly complete until participants have reflected on their experiences and understood the reasons for success or failure. Then, and only then, has learning been incorporated into daily work.

TABLE 4-1

CONDUCTING AFTER ACTION REVIEWS

Do	Don't
Schedule AARs shortly after the completion of an activity.	Conduct AARs without planning.
Make reviews routine.	Conduct reviews infrequently or irregularly.
Collect objective data whenever possible.	Allow debates to bog down when establishing the facts.
Use trained facilitators.	Allow dominating leaders to run AARs.
Establish clear ground rules: encourage candor and openness, focus on things that can be fixed, keep all discussions confidential.	Base performance evaluations or promotions on mistakes admitted in AARs.
Proceed systematically: What did we set out to do? What actually happened? Why did it happen? What are we going to do next time?	Permit unstructured, meandering, disorganized discussions.
Involve all participants in discussions.	Allow senior managers or facilitators to dominate discussions.
Probe for underlying cause-and-effect relationships.	Criticize or fault individual behavior or performance.
Identify activities to be sustained as well as errors to be avoided.	Conclude without a list of learnings to be applied in the future.

NOTES

[49] The AAR story is based primarily on interviews conducted in December 1995 and January 1996 with General Gordon R. Sullivan, chief of staff of the U.S. Army; Colonel Orin A. Nagel, director, Center for Army Lessons Learned; and various commanders and officers who had recently returned from Haiti and were participating in exercises and AARs at the National Training Center at Fort Polk, Louisiana (Lieutenant Colonel Michael Trahan, Colonel Ray Fitzgerald, Colonel Sharp, Major Patrick MacGowan, Captain Favio Lopez, Sergeant Dawson, and Lieutenant Fogg). Portions of these interviews, as well as excerpts from the AARs at the National Training Center, appear in the videotape *Putting the Learning Organization to Work: Learning After Doing* (Boston: Harvard Business School Video, 1996). Other sources include an interview with Captain Andrew D. Clarke, a former observer-controller at the National Training Center, in September, 1998; and Baird, Henderson, and Watts, "Learning from Action," 385-395; William Blankmeyer and Terry Blakely, "Leaders Conduction After Action Reviews Often Deliver Substandard Feedback," *ARMOR* (November/December 1998): 15-18; Henderson and Watts, "Creating and Exploiting Knowledge for Fast-Cycle Response"; Richard Pascale, "Fight, Learn, L*E*A*D," *Fast Conpany* (August/September 1996): 65-69; Richard Pascale, Mark Millemann, and Linda Gioja, "Changing the Way We Change," *Harvard Business Review* 75 (November/December 1997): 127-139; Thomas E. Ricks, "Army Devises System to Decide What Does and Does Not Work," *Wall Street Journal,* 23 May 1997, Ar Aro; Gordon R. Sullivan and Michael V. Harper, *Hope Is Not a Method* (New York: Times Business/Random House, 1996), 189-203; and U.S. Army, "A Leader's Guide to After Action Reviews," Training Circular 25-20, 30 September 1993, photocopy.

[50] Pascale, Millemann, and Gioja, "Changing the Way We Change," 137. Italics in original.

[51] This principle has long been recognized by the quality movement. See, for example, John Guaspari, *I Know It When I See It* (New York: AMACOM, 1985).

[52] Roger Schank, *Virtual Learning* (New York: McGraw-Hill, 1997), ch.3.