Learning the Hard Way:

Lessons from Complex Operations

by Michael Miklaucic

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omplex operations, where military and civilian personnel work shoulder to shoulder, are the new face of war. The nature of complex national security challenges is inherently multi-dimensional. Success in these operations requires much more than traditional military "lethal" tools—it requires the coordinated application of the full range of national security resources, including economic, diplomatic, developmental, and information resources in addition to the military. Moreover, to be successful in this rapidly changing, high velocity operational environment, U.S. personnel must be adaptable, quick learners. This article examines a sample of issues related to bureaucratic culture and conceptual approaches that impede the learning process particularly, but not exclusively, for U.S. civilians in the complex operations space.

Complex Operations

There is no universally accepted formal definition of complex operations. In the 2010 National Defense Authorization Act, Congress defined them as "stability, security, transition, and reconstruction operations, counterinsurgency, and irregular warfare." Experience with such operations over the past decade—particularly in but not limited to Afghanistan and Iraq— has forced American practitioners to re-examine their knowledge with respect to the security environment of the 21st century, the nature of contemporary conflict, and the national capacity to articulate and protect the interests of the U.S. At the strategic level, if any single lesson has emerged, it is that the line between war and peace is blurred, if indeed, there is any line at all, and that blurriness exemplifies complex operations.

Disciples of von Clausewitz and Sun Tzu will say this lesson was learned centuries or even

Michael Miklaucic is the Director of Research, Information and Publications at the Center for Complex Operations, National Defense University and the editor of Prism. He is also an adjunct professor of U.S. Foreign Policy at American University, and Conflict and Development at George Mason University.

millennia ago. Indeed many in the U.S. have known this for quite a long time. However the bureaucratic architecture remains structured as though war and peace were separable and independent processes that require separate and autonomous elements of national power. This "bureaucratic stove-piping" is true of both the executive branch as well as the legislative branch, where separate committees of each

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chamber deal with armed services, foreign relations, and appropriations.

Even today, after nearly a decade of the challenges of complex operations, the U.S. remains structured as though war requires military tools and the armed services, while peace requires civilian tools and agencies. This disjunction between form and function has led the U.S. belatedly toward adopting the comprehensive or whole-of-government approach. Sometimes it is referred to as the 3D approach, highlighting diplomacy, defense, and development. Civilian and military organizations now work together to an unprecedented degree, which has led civilians into "non-permissive" theaters where there is no presumption of humanitarian or development space. They are for all practical purposes working in zones of military conflict or active insurgency.

It has also led the U.S. military into

domains traditionally the preserve of civilian agencies, such as development, stabilization, and reconstruction, which in turn has led critics to caution against the militarization of U.S. foreign policy. It is not clear that this is a serious issue beyond the individual bureaucracies involved. Even at the height of Operation Iraqi Freedom (OIF), the most critical U.S. foreign policy decisions were driven by civilian leaders, and many were approved by Congress. That the views and guidance of military leaders are sought and given the utmost gravity in times of war should come as no surprise, nor should it be a cause for concern.

Today it might even be argued that the more forceful vector has been the civilianization of the military. With the adoption of Department of Defense Directive 3000.05 in November 2005 and even its watered down September 2009 version, the U.S. military remains committed to "maintain or reestablish a safe and secure environment, provide essential governmental services, emergency infrastructure reconstruction, and humanitarian relief." This brings the U.S. military into the world of "rebuilding basic infrastructure; developing local governance structures; fostering security, economic stability, and development; and building indigenous capacity for such tasks." Indeed the defense community has been an enthusiastic adapter and gone the furthest in terms of adopting the whole-of-government approach. It is the civilian agencies who continue to lag behind.

As the U.S. enters the second decade of the 21st century, the likelihood of future complex operations appears no less. Though it is not likely the U.S. will soon engage in another full-scale operation such as those in Iraq or Afghanistan, the multi-dimensional nature of national security threats is here to stay, and the approaches must continue to evolve. There has been great deliberation, debate, and discussion in the past decade of lessons learned

in complex operations. Yet despite impressive intellectual prowess and educational attainment, U.S. practitioners do not seem very good at identifying, validating, and institutionalizing actionable lessons that enable the U.S. to consistently improve its execution of complex operations—especially on the civilian side.

Learning from Experience

To evolve effectively the U.S. must become better at learning from experience. There has been great lamenting at the cost paid for forgetting the counterinsurgency lessons learned long ago in Vietnam. Today there is a lessons learned cottage industry. Unfortunately, persistent stove-piped and dysfunctional bureaucracies compounded by lack of rigor and discipline in learning have handicapped these efforts and resulted in the failure either to articulate clear, actionable lessons or to disseminate what has been learned through hard experience to those who are on the ground executing complex operations.

Despite the desire and profound need to learn from experience in complex operations, no system has been developed to serve this purpose on the civilian side. The key civilian agencies involved in foreign policy in the U.S. —the Departments of State, Treasury, Agriculture, Homeland Security, and Justice and the U.S. Agency for International Development (USAID)—do not have robust institutional cultures of learning. Most learning is on the job. It is neither cumulative nor closely related to career development. It is not systematic and tends to be based on personal and anecdotal experience and absorbing the institutional culture of the home organization. Unlike the military, civilians have no doctrine; no accepted tactics, techniques and procedures; and no clear chain of command, so lessons learned are much more difficult to nest institutionally. Moreover, no civilian agency has complex operations as its core mission, so lessons from complex

operations tend to get diluted and blended down into traditional diplomacy, development, and defense core missions.¹

According to a senior Foreign Service officer at the State Department, "This is an issue for State—that there isn't any existing institutional architecture—although S/CRS (the Office of the Coordinator for Reconstruction and Stabilization) is making some headway." At USAID, the Center for Development Evaluation and Information was dismantled in 2005, effectively destroying the structured lessons learning function that linked field experience

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into a dissemination structure within USAID.* A key finding of a recent study of monitoring and evaluation practices in both State Department and USAID foreign assistance programs is that: "Evaluations do not contribute to community-wide knowledge. If 'learning' takes place, it is largely confined to the immediate operational unit that commissioned the evaluation rather than contributed to a larger body of knowledge on effective policies and programs."³

The U.S. military, by contrast, has a mature and more disciplined approach to learning the lessons of experience embedded in an elaborate institutional system of professional

^{*} USAID's training and lesson learning function had been atrophying for over a decade when it was officially dismantled in 2005. An attempt to re-create or revive the lesson learning and dissemination function within USAID is currently underway.

education. Continuing professional education is now a requirement for advancement within the military services. The various military "schoolhouses" provide ongoing educational opportunities for all levels of Soldier, Seaman, Airman, or Marine. There is nothing comparable on the civilian side and, thus, no method or practice of joint civil military development of lessons. That, in addition to very different

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learning cultures has made civilian-military joint learning problematic.

There are many obstacles to developing an interagency lessons learned function, not the least of which is the persistent bureaucratic resistance to joint action within the civilian Goldwater-Nichols agencies. While the Department of Defense Reorganization Act of 1986 required and over time improved inter-operability cooperation and the armed services, no similar dynamic has forced fusion of the civilian agencies, let alone between the civilian and military agencies. To protect the identity of personnel who provide information, some civilian agencies have restrictive rules concerning the sharing of data collected from agency personnel regardless of the reason. There are often competing claims of ownership of information within the agency itself. The more mature military processes long

ago resolved these issues.4

There is resistance within U.S. civilian agencies to participating in any process that might cast their efforts in a negative light. A recent study by professional foreign assistance program evaluators quotes a respondent as saying: "USAID doesn't want to know the facts or truth....Branding and success stories are the primary interests." Of the State Department, they write: "At the Department, the de facto decision has been to not evaluate (their foreign assistance programs)."5 An unofficial military lexicon defines lessons learned as, "capitalizing on past errors in judgment, material failures, wrong timing, or other mistakes ultimately to improve a situation or system."6 Such candid acknowledgement rarely takes place within the civilian agencies. Failure to accomplish objectives is routinely attributed to unforeseen or mitigating circumstances and never to errors in judgment or timing. To concede failure is to invite budget cuts or, worse yet, a black mark against career advancement.

For just this reason civilians tend to articulate their projects, programs, or other professional objectives such that failure is not really verifiable. A common example from foreign assistance project objectives is "building local capacity." Building local capacity for development is a laudable activity, but there is no empirical method for determining whether or not the objective has been achieved. Local capacity is not development. It is neither economic growth nor political liberalization. Until tested and proven, the capacity to accomplish such goals is unknown. A local capacity guarantees no particular outcome; it does not even necessarily increase the likelihood of any particular outcome. Lack of precision in identifying objectives leads to a lack of precision in measuring outcomes, which makes it difficult to determine the dynamics of the causal chain. It is precisely an understanding of these dynamics that will improve the likelihood of successfully adapting to the challenges of complex operations.

More importantly, civilian agencies lack a system to circulate lessons identified and disseminate them through training and education to ensure they inform future effort. Perversely, there is no incentive within the civilian agencies for formal ongoing professional education and training. Indeed the opposite is true. Since promotion is not based on educational or training accomplishments, there is a distinct disadvantage in taking time for training that could be used for climbing the career ladder. Time invested in education and training is time lost.

Affirmations

Civilian discussions, reports, or lists of lessons learned in complex operations typically include a heavy dose of such nostrums as "we need to achieve unity of effort" or "unity of command" or "we need a better understanding of the human terrain and political context of complex operations." Another common lesson offered is "no two complex operations are exactly the same." These lessons are truisms; too self-evident to require much elaboration and well enough established to belie any new claims to discovery. While relevant, they are not lessons learned from complex operations but rather from all conflict or even from life itself.

The principle of unity of command for example was articulated as a "combat principle" as early as 1914 in U.S. Field Service Regulations and should be fully internalized by now. It can hardly be considered a lesson learned from contemporary complex operations. It is more appropriate to consider it a lesson learned long ago that has been affirmed.

Other common examples of contemporary experience affirming lessons that should not require re-learning, yet which are frequently sited as lessons learned include: "We must think outside of the box," and "Always question

assumptions." Again, these represent good advice in most situations. It does not hurt to reiterate these principles, but practitioners should not dwell on them, and the U.S. did not need to lose over 5,000 Americans in Iraq and Afghanistan to re-learn these lessons. There is no reason to boast of re-discovering the obvious; it is time to move on.

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Assumptions

Far more pernicious in their impact are assumptions dressed in "lessons learned clothing." Through widespread repetition, certain assumptions have attained the status of "conventional wisdom." In these cases repetition—often of something said by a senior official or highly esteemed expert or an article of faith important to a specific communityreplaces corroboration by experience. For example, "the military is best suited to conduct kinetic warfare operations, while development or humanitarian relief is best left to development agencies or NGOs [nongovernmental organizations] that know these fields better and therefore get better results." How many times

have we heard about schools built by Soldiers in remote locations in Iraq or Afghanistan where there are no teachers or clinics abandoned because there are no doctors or no electricity?

To this valid criticism of military efforts in development and humanitarian relief should be added that the developing world is littered with the detritus of well-intentioned projects

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designed and executed by development professionals. Indeed there is a long litany of far more egregious and damaging projects wholly planned and executed by development professionals. Look for example at the case World Bank-driven liberalization of the Mozambique cashew industry. In 1995 international economic development professionals from the World Bank insisted on liberalization measures which within 3 years resulted in closing 10 of Mozambique's 15 sizable cashew processing factories and laying off over 5,000 workers.7 Or the case of the village mosquito net manufacturer in an impoverished West African country who was put out of business by the free provision of hundreds of mosquito nets by a well-meaning humanitarian NGO.8

Throughout the global south, you will find abandoned schools, deteriorating roads, dilapidated clinics, and other failed development

projects designed and implemented by the World Bank, United Nations Development Programme, USAID, and countless other international organizations and NGOs. "Longrunning aid programs have left many African countries mired in poverty. Arguing that the aid may even have retarded progress, some informed voices in poor countries are pleading for an end to the assistance."

The superiority of developmental agencies and NGOs in development work is an unproven assumption. Indeed over the last decade, the military has accumulated unparalleled experience in certain environments and sectors. The military has been providing development assistance in areas civilian development agencies have been unable to reach due to security concerns, in particular, reconstruction and stabilization assistance in Iraq, Afghanistan, Colombia, Philippines, and some countries in the Horn of Africa.

The U.S. military has developed substantial experience in the field of stabilization and reconstruction, and particularly in security sector reform and local law enforcement capacity development in non-permissive environments. Moreover, much of this experience is being captured within the military's disciplined lesson learning process to inform and improve future efforts.** One should not forget that historically the U.S. military has been the primary agency in major reconstruction and stabilization efforts, such as in post-World War II Europe and Japan.

Development is a remedy for conflict and will win "hearts and minds" is another fundamental assumption in the complex operations field that has been elevated to the

^{**} Examples include Combined Security Transition Command—Afghanistan; Police Reform Challenges" (2008) and "Stabilization, Security, Transition, and Reconstruction in a Counterinsurgency" (2006) both cited in Joint Center for Operational Analysis Journal, Spring 2010.

status of "conventional wisdom" and catalogued as a lesson learned without empirical validation. Evidence from Afghanistan suggests the opposite. "At a time when more aid money is being spent in Afghanistan than ever before, popular perceptions of aid are overwhelmingly negative." As far back as the early 1960s, the economist Mancur Olson warned that development and, particularly, rapid economic growth, can be a profoundly de-stabilizing force. And yet the U.S. continues to embrace the assumption that development is a remedy for conflict, a tonic for stabilization, and a tool for winning hearts and minds, as though this represents an indisputable lesson learned.

An assumption that has recently developed a wide but cult-like following is that the more institutional inclusion in the analysis, planning, and execution of a complex operation the better. As discussed above, the concepts of comprehensive or whole-of-government approaches to complex operations have emerged and become orthodoxy in both development and military circles, widely proclaimed by secretaries of defense as well as secretaries of state and leaders in the development community. Moreover if whole-of-government is good, whole-of-society must be even better. While these assertions may be true, they have not been corroborated persuasively. Analysis tends to begin from the assumption that the comprehensive approach is superior to other approaches, without analyzing the extent of corroboration or the superiority of this approach. A credible argument could be made that too many agents in a complex operation further complicate the operation. At the very least, the tension between the comprehensive approach and the desire to achieve unity of effort should be acknowledged and understood.

Awkward Epiphanies

There is a variety of lessons that can be called awkward epiphanies—the lessons, which

though they may have become clear, no one wants to learn. As discussed above, the importance and desirability of unity of command or unity of effort is well-established. A lesson the U.S. should have learned in recent years is that there is a potentially inverse relationship between the democratic accountability of its allied governments and their ability to support U.S. efforts without the consent of their constituents.

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Turkish government could support U.S. efforts in Iraq over the heads of Turkish legislators or beyond what the Turkish parliament would permit. As a result, the U.S. was denied what was considered an extremely important launching platform for OIF in 2003. In 2004, the pro-American government of Jose Aznar in Spain was decisively defeated by the Socialist opposition that had pledged to defect from the U.S.-sponsored coalition of the willing in Iraq. His defeat was followed by the rapid withdrawal of Spanish troops. The lesson here is that the democratic accountability advocated by the U.S. for all governments forces those governments to put their constituents' interests ahead of any U.S. interest. That principle implies an inherent degree of instability in coalitions of democratic states.

One might even go as far as to say that the real lesson learned—though not liked by

many—is that even when unity of command is achieved in a coalition, unity of effort is a bridge too far. In Afghanistan, the coalition achieved unity of command when the various command authorities in-country were fused in the person of General Stanley McChrystal. However, even in the achievement of unity of command, the multiple national caveats limit unity of effort. Yet this is likely close to a best case scenario where the fusion of the North Atlantic Treaty Organization (NATO) and U.S. military missions resulted in the most unified command possible among coalition partners.

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Even in this environment, General James Jones has alluded to national caveats as "NATO's operational cancer," and "an impediment to success." The lesson, awkward as it may be, is unity of command, though desirable, does not guarantee unity of effort or unity of commitment. So long as coalition partners perceive their national interests as binding, unity of effort and commitment remain beyond reach.

Another awkward epiphany is that knowing the right thing to do does not mean the U.S. can do it—regardless of any lessons learned. The U.S. has long known for example the risks associated with holding elections early in a post-conflict environment. Officials knew that early elections in Iraq could be extremely divisive—and indeed they were as a result of the Sunni boycott. Yet deferring national elections in Iraq was not an option due to the relentless pressure for early elections coming from Ayatollah

Sistani and others.

Since the U.S. government under thenpresident Richard Nixon began the long "war on drugs" in 1971, the U.S. has tried a variety of strategies for reducing narcotic drug use and availability. A major element of the so-called "Plan Colombia," initiated during the Clinton administration, was and remains a military antinarcotics offensive relying heavily on aerial eradication of coca plants. This is despite the 1988 publication by the RAND Corporation of "Sealing the Borders: The Effects of Increased Military Participation in Drug Interdiction."

This extensive study funded by the U.S. Department of Defense found that the use of the U.S. military to interdict drugs en route to the U.S. would be minimal or even negative. This confirmed the findings of seven previous studies and was reaffirmed by a later RAND study on the same topic conducted in 1994. Fast forward to 2010 where the U.S. military is engaged in a robust effort to destroy poppy production in Afghanistan which, since the invasion of 2001, has become by far the world's greatest opium poppy producer. This appears to be a very awkward epiphany—a lesson the U.S. just does not want to learn no matter what the cost of not learning it.

The Syntax of Lessons Learned

Unlike conventional war where the U.S. has a successful history of military dominance, the record on complex operations, at least in recent decades, is ambiguous. The infamous "Blackhawk down" experience in Somalia in 1993 was traumatic and singed American leaders, casting such a pall on the appetite for complex contingencies that a restrictive national policy was codified as Presidential Decision Directive 25, Reforming Multilateral Peace Operations (PDD-25). This directive established a "vital national interests" test for engagement and required a clear plan for terminating the engagement. There was much

wringing of hands and gnashing of teeth, but ultimately no U.S. intervention to stop the Rwanda genocide of 1994 was partially a result of this "vital national interests" threshold.¹³

Later U.S. experiences in complex operations in the Balkans and East Timor were ambivalent, and from the outset the George W. Bush administration was decidedly opposed to involvement in complex operations, with all the main administration leaders on record opposing. Indeed the nullification by that administration of all the relevant presidential directives of the preceding administration reflected this bias.

The attacks of September 11, 2001, changed the disposition of the Bush administration toward complex operations. The invasions of Afghanistan in 2001 and Iraq in 2003 thrust the Bush administration into the two most challenging complex operations since Vietnam. And it was only when things in Iraq started to go wrong in 2004 that the lesson learning cycle began again. Yet as discussed above, even years later the civilian agencies still have no effective institutional architecture in place for joined lessons learned.

The institutional deficit is compounded by conceptual handicaps for some of the reasons discussed above. The focus on affirmations, dependence on un-validated assumptions, and reluctance to acknowledge awkward lessons impede the process. An appropriate syntax for articulating lessons or a clear concept of what a complex operations lesson looks like is lacking. The official U.S. military definition of a lesson learned is knowledge that "results from an evaluation or observation of an implemented corrective action that contributed to improved

*** Chairman of the Joint Chiefs of Staff Instruction; Joint Lessons Learned Program, CJCSI 3150.25D, 10 October 2008. The definition goes on to include: "results from an evaluation or observation of a positive finding that did not necessarily require corrective action other than sustainment." performance or increased capability."***
This definition would be stronger without the reference to "increased capability" for, as argued above, untested capability cannot validate a lesson.

Adapting the military definition of lessons learned to complex operations, one might say the purpose of lessons is to improve performance in accomplishing foreign policy and national security objectives in complex operations. In this view, increasing one's wisdom or appreciation of complexity is instrumental—potentially useful but only insofar as it improves performance. Not all knowledge has such a pragmatic and operational purpose; not all knowledge is adaptable to "lessons learned" functionality. In order to frame lessons effectively one needs a syntax based on the following principles: 1) lessons learned for complex operations should be refutable; 2)

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lessons learned should be actionable; and 3) lessons learned should include an irreducible element of inter-disciplinary or inter-agency content.

Lessons learned from complex operations should be firmly grounded in the logic of scientific discovery. Science moves forward via an iterative process of hypothesis and experiential corroboration or refutation. As long as the hypothesis is corroborated by experiment, it retains the assumption of validity, but as soon as it is refuted in experiment or experience, that assumption is nullified. It is this iterative process that permits both incremental building

of the scientific knowledge base, as well as paradigm shifts when the existing knowledge base is out of touch with reality.

What is most critical and relevant to the lessons learned process is that a scientific hypothesis must be refutable—it must be subject to being proven false. Likewise a lesson learned must be refutable in theory. A lesson learned that cannot theoretically be refuted can likewise not be corroborated. The injunction to "think outside the box" may be good advice, but as a lesson learned, it fails. That someone

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has "thought outside the box" cannot be corroborated or refuted. This advice lies outside the syntax of a lesson and is meaningless in the lessons learned sense.

To serve the practitioner community in a meaningful way, a lesson should be actionable and reveal specific causal dynamics in complex operations. The practitioner needs to know what impact his/her actions will have on a given situation or system. If the lesson proposed cannot be articulated in such a way that it at least in principle could help to improve outcomes, it has only marginal value at best. The oft repeated observation that civilians and Soldiers have "different cultures" may be accurate, but it prescribes or guides no action.

To be meaningful in a lessons learned

sense, the syntax must be adjusted so the lesson identifies causal dynamics of complex operations. It might be argued for example that the performance of civ-mil teams in complex operations is enhanced if they are given the opportunity to train jointly pre-deployment and break down some of their respective cultural barriers. This is a plausible hypothesis that can be tested, validated, and refuted and if proven valid, can guide future action. U.S. Army instructions specify a lesson learned should result in a prescribed change of behavior: "An observation or insight does NOT become a lesson learned until behavior has changed." That is what is meant by actionable.

In order to avoid redundancy with the robust military lessons learned systems, complex operations lessons learned should have distinctive interagency or inter-disciplinary elements that the standard military lessons learned process will not likely capture. Among the key challenges of complex operations is to apply the diverse elements of national power optimally so as to achieve the best results for national security. Overcoming interagency cultural respective frictions. barriers, unfamiliarity, and working jointly effectively should be core elements of complex operations lessons learned.

However one should not interpret the comprehensive or 3D approach to necessarily or exclusively refer to operations involving multiple agencies. In some cases single agencies may be applying multiple elements of national power; the Department of Defense and the armed services frequently are agents for humanitarian assistance and increasingly development assistance. Their application of both defense and development tools in the same operational environment should be examined for lessons learned as well. The perspective of the lesson in any case should be a multi-agency (or non agency-specific) perspective.

A Systematic Approach

The U.S. cannot afford to rely on processes that are random, coincidental, or episodic to learn lessons in complex operations. A methodical process should be established that can identify prospective areas for examination, effectively articulate proposed lessons in the appropriate syntax, validate lessons by distinguishing true lessons from individual experiences, and disseminate them. The Army has developed a formal learning process and established the Center for Army Lessons Learned to manage the process. The lesson learning cycle begins with observation followed by collection, analysis, validation, dissemination, and archiving. 16 This cycle constitutes a rational and self-conscious method to learn from experience in a systematic fashion and ensure that what is learned becomes institutionalized so that others may benefit from it.

In developing a lesson learning process or system, the civilian agencies should establish an equally rigorous methodology. Typically, raw information should be gleaned through after-actions reviews. post-assignment debriefings and interviews, and a variety of other sources. What is important at this initial stage is instituting these processes to insure that experience is documented. This might also be called "observation." The point is to require reflection on experience and a self-conscious effort to capture information relating to specific challenges, behaviors, and outcomes. These procedures take time and resources and, above all, an institutional commitment, but if learning is to be systematic, they are necessary.

As raw information is collected, it must be "binned" or sorted to enable analysts to compare against similar categories of information. The processing and analysis steps are critical for recognizing patterns and determining potentially fruitful areas for discovery. Only when patterns have emerged from multiple sources is there a

justifiable expectation of a credible lesson. Just because a claim is made, one cannot assume it represents a valid lesson. The lessons learned process must distinguish between interesting individual experiences and widely applicable lessons. That is not to say individuals cannot or should not learn from their own individual experiences (a perverse notion), but that an individual experience is less likely to indicate significant dynamics of a situation or system than a pattern derived from multiple sources.

The lessons learned process must distinguish between interesting individual experiences and widely applicable lessons.

Once a pattern is observed, additional collection and analysis is required to articulate, validate, corroborate, or refute the potential lesson. This is not a simple process. It requires time and precision. Yet, this is the core of the lessons learned process—the core of the scientific approach and of discovery. It is only through such a process that a lesson can be tested. The testing might be through actual field experience or through simulations, but until tested and corroborated, no claim can be made for the validity of the lesson. Even when repeatedly validated, no lesson can make the claim of absolute and permanent verification. In complex operations, at least, but likely in all political-economic situations, many variables are in a state of continuous mutation and thus rendering all knowledge ultimately ephemeral. This is widely recognized even if not always acknowledged within the world of the hard sciences. Nevertheless, without corroboration, a putative lesson is merely speculation.

The final critical element is dissemination.

Lessons not disseminated to those who might benefit from them are lessons lost—and as Santayana said, "Those who cannot learn from history are doomed to repeat it." A proactive system for disseminating validated lessons from experience to those in need of that knowledge and in a position to modify their behavior accordingly is the only way to institutionalize knowledge.

To send personnel, whether civilian or military, into a complex operation without the benefit of the learning that has taken place previously is to send them unprepared. Given complex operations include reconstruction and stabilization operations, security and counterinsurgency operations, transition, and irregular warfare, to be unprepared is to be in grave danger. This is not only morally unacceptable from the standpoint of the Soldier or civilian working to achieve U.S. national objectives in complex operations, it is also a formula for failure in protecting national security.

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NOTES

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