Strategic Communication on a Rugged Landscape

Principles for Finding the Right Message

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January 7, 2008

Report #0801

Consortium for Strategic Communication

Arizona State University

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EXECUTIVE SUMMARY

For approximately the last decade, the United States has been moving to centralize and more tightly control its messages. Accelerating this trend, U.S. strategic communication efforts under the current administration follow the dictum that effectiveness equals control of a singular message. The problems with this approach were described in a previous CSC white paper. But there is also a more basic issue: How do we know when we have the best message? Is there only one best message? A control-oriented approach to these questions means that the optimal message or combination of messages will probably never be found in the "war of ideas" with terrorist groups and hostile governments.

This paper addresses this issue by applying the concept of rugged landscapes to the problem of finding the right message(s) in strategic communication. The current U.S. approach assumes that the landscape is simple, consisting of a single, modular solution that can be optimized by a controlled, systematic search. However, the situation is more accurately described as a complex, rugged landscape, with multiple integral solutions. This means the optimal solution can only be found by an evolutionary approach using multiple, diverse search methods.

Treating a rugged landscape as simple leads to inappropriate search strategies that virtually guarantee suboptimal performance. To improve its chances of success in the search for the right message(s), we recommend that the United States reform its current control oriented strategies by applying four principles:

1. *Leap before You Look*: Abandon systematic search methods in favor of techniques based on random jumps and multi-variable optimization.
2. *Use the Force*: Accept, expect, and seek to exploit interdependencies in the communication system.
3. *Simplify Structure*: Take steps to reduce legal and organizational interdependencies that make the landscape more complex.
4. *Accept Downside Risk*: Promote changes in an organizational culture that is reluctant to tolerate the temporary performance decreases that are inherent in complex landscape searches.

MESSAGE CONTROL IN U.S. STRATEGIC COMMUNICATION

An earlier CSC white paper[1] argued that U.S. strategic communication efforts are based on an outdated, 20th century model of communication. This *message influence model*, which uses an underlying metaphor of telephone systems, had its heyday during the Eisenhower Administration. Subsequently its fundamental assumptions became the conventional wisdom of political campaigns, of the business domains of public relations and marketing, and of the government/military domains of public diplomacy, public affairs, information operations, and international broadcasting. Chief among these assumptions is that control of the message is paramount.

For approximately the last decade, the United States has been moving to centralize and more tightly control its messages in the context of strategic communication. A clear manifestation of this is passage of the Foreign Affairs and Restructuring Act of 1999,[2] which abolished the U.S. Information Agency and absorbed its public diplomacy functions into the State Department's Bureau of Public Affairs. This transformed what was largely a decentralized, *field directed* communication effort into a more centrally coordinated one, with message activities controlled by the "home office."

The trend toward control shifted into high gear when the Bush administration came to office.

This trend shifted into high-gear when the Bush administration came to office. During the 2000 election the Bush campaign had great success with message control strategies. One of the defining features of modern political communication is control of the message[3] and the Republicans raised it to an art form by deploying carefully coordinated issues positions and talking points into a group of sympathetic media outlets. The objective was to create an "echo chamber"[4] that repeated a tightly controlled message through a large number of channels.

After the campaign, these techniques became standard operating procedure for the Bush administration. "Bush's presidential campaign team was known for disciplined 'message management' in the 2000 campaign and brought the same skills and priorities to Washington."[5] This was due in significant part to the influence of Karen Hughes, a former journalist and advisor to the Bush campaign who held several advisory positions in the Bush administration. Hughes was well known for her desire to control messages about the United States that were destined for foreign audiences.[6]

In 2005 Hughes was appointed Under Secretary of State for Public Diplomacy, bringing her "message discipline" principles to that job as well. Mimicking the Republican campaign tactic, she instituted a regular dispatch to U.S. embassies called "The Echo Chamber" that contained talking points for use in contacts with foreign publics and media. In the first such dispatch she said

> After only one day on the job, I have realized that you are inundated with vast amounts of information. My hope is that my office can help you synthesize and provide a quick and easily absorbed summary of information that you can feel confident using on major issues. This will be updated periodically, as events warrant.[7]

In the more recent U.S. National Strategy for Public Diplomacy and Strategic Communication[8] (NSPDSC) the quest for control of the message is plainly evident. The report begins by setting out a group of themes—essentially broad talking points—that are designed to promote American values and support national security objectives. A separate section of the report, entitled "Interagency Coordination," establishes a framework for imposing message discipline on the government, with the State Department implementing the communication strategies. It creates an "interagency crisis communication team" with members from the White House, National Security Council, State Department, and Department of Defense whose job is to "coordinate message points:"

> Following the response decision, a conference call will be conducted with public affairs and communication representatives from relevant agencies to refine and coordinate unified messaging. The resulting message from the Counterterrorism Communications Center and appropriate official statements will be relayed to Cabinet secretaries, ambassadors and the military chain of command through the Rapid Response Unit at the State Department. (p. 8, emphasis original).

A control-oriented approach virtually guarantees that the best messages will never be found

Clearly then, U.S. strategic communication efforts under the current administration follow the dictum that effectiveness equals control of a singular message. This idea has its own problems, detailed in the previous paper. But there is an even more basic issue: How do we know when we have the best message? Is there only one best message? In this paper we argue that a control-oriented approach to answering these questions is also inappropriate. It is unrealistic, and virtually guarantees that the best message(s) will never be found, leading to suboptimal performance in the "war of ideas."

The explanatory model we use to examine strategic communication is that of simple and rugged "landscapes." Real strategic communication takes place on a rugged landscape, but the signs are that U.S. decision-makers use a mental model of a simple landscape when they try to optimize strategic communication. In a nutshell, the disconnect is this: A control-oriented approach to message selection and delivery is akin to thinking that if you were dropped inside a mountain range and told to find the highest peak in the range, you would assume that the nearest mountain is the tallest. You might reach the top of that mountain, but you would never find the highest peak in the range. Next we explain the details of the landscape model.

IMPROVEMENT AS A LANDSCAPE

We can think of an optimal message as one that has maximum positive influence on the listener, according to overall strategic goals. The

optimal message consists of many things: the right words, conveying the correct sentiment and themes, delivered in the right manner by the best messenger, in the most appropriate medium, and at the right time. In a control-oriented framework, each of these aspects of an optimal message is considered an independent component of the overall message system, in the same way that computers have components like an operating system and a microprocessor. Just as the quality of the computer is determined by the quality of its operating system and microprocessor and how well they interact, the quality of a message is determined by the quality of its component parts and how well they interact. Finding the optimal message thus consists of finding the message components that collectively yield the most influence.

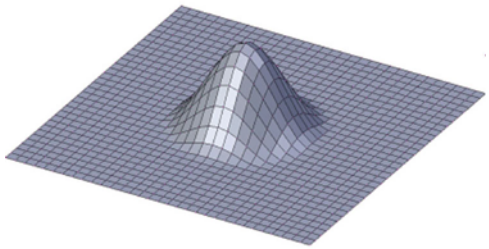
But is this the correct picture of the search for the right message in U.S. strategic communication? To answer this question, we turn to the ideas of Stuart Kauffman,[9] an evolutionary biologist. Kauffman invented the *NK*, or *rugged landscape* model, an elegant and far-reaching formulation that explains how a system of components continuously improves by evolving over time. The NK model has been used to examine evolution in both biological[10] and economic[11] systems. The model get its heuristic value from a strong visual metaphor: Evolving an optimal solution is analogous to finding the highest peak in a mountain range.

Evolving an optimal solution is analogous to finding the highest peak in a mountain range

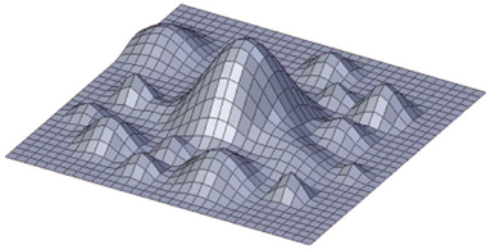
In Figure 1,[12] two different plots are shown, a simple landscape with a single peak (A), and a rugged landscape with multiple peaks (B). Think of the height (z-axis) as the performance or effectiveness of a given solution: The higher the peak the better the solution. The lateral directions (x- and y-axes) represent a field of many potential solutions.

Figure 1

A. Simple Landscape, $K \leq 1$



B. Rugged Landscape, $K > 1$



The shape of the landscape depends on the two parameters of the NK model:

- *The number of components in the system (N).* In our strategic communication example, components would include things like themes, audience segments, messages, interpretations of messages, media channels, and so on. A given solution consists of a configuration of *N* of these. As *N* increases, the peaks tend to become shorter. In other words, the greater the number of components, the lower the performance tends to be for any given solution.

- *The average number of components that interact with each other (K).* In our strategic communication example, components would interact if, for example, audience segment X interprets a message differently than audience segment Y, or if a theme in one message contradicts a theme in another message. When *K* is zero or one, there are few of these interactions and each component tends to contribute *independently* to the goodness of the solution. This leads to a smooth, simple landscape with a single peak, as in Figure 1A. But when *K* is greater, i.e. when there are many interactions between components, they tend to contribute *interdependently* to the goodness of the solution. This leads to a rugged landscape with multiple peaks, as in Figure 1B.

In a simple landscape the search for the optimal solution (highest peak) is uncomplicated: Move across the landscape in a systematic way, looking for any path that leads uphill. If you use multiple search parties, they can all apply this same strategy because moving uphill *always* gets you closer to the optimal solution, and moving downhill *always* gets you farther from it. This straightforward search procedure works because the independent components of the simple landscape represent a *modular system*. To improve a modular system all you need to do is improve each component—independently—and you will eventually find the best overall solution.

A good example of a modular system is a high-performance bicycle. Each of its components (e.g. frame, seat, tires, brakes, gears) contributes independently to the quality of the bicycle. The selection of a seat does not depend upon (or affect) the selection of tires, or brakes, or gears. To make the best bike, you try different seats, tires, brakes, and so on, looking for the ultimate combination. In fact, this is exactly how elite cyclists put together their bikes today—constructing their own custom designs by purchasing from the highest quality (and most trendy) component suppliers. On this smooth landscape, there is one "optimal" bike design which consists of the combination of the optimal individual components.

On a simple landscape there is one optimal solution, but on a rugged landscape the search is more complex

On a rugged landscape, on the other hand, the search for the optimal solution is complex. The search does not just involve looking for an uphill direction because uphill might lead to a suboptimal solution (one of the lower peaks). If you are standing on a low peak, you might have to actually go downhill (for a time) to get to the optimal solution. When you find what seems to be a good solution, it might not be optimal—it could just be the highest peak near you. So having a good solution does not imply that you have the *best* solution. You can use multiple search parties—in fact rugged landscapes require it—but they cannot engage in a systematic, coordinated search using a unified strategy. Rugged landscapes are *integral systems* in which performance results from

interdependencies and nonlinearities that exist between components in the system. This means you cannot change one variable in a patterned search without changing other variables at the same time.

A great painting is an example of an integral system. Each component of the painting only has meaning in reference to all the other components: A tree alone in a desert conveys a different meaning than a tree alongside many others in a forest. Likewise, our eyes draw contrasts between the both adjacent and non-adjacent colors, so the impact of any color on the overall impression depends on what other colors are present. At a grander level, we recognize that the taste and experience of the viewer will greatly shape the impression that is made, so much so that the painter cannot predict exactly how a viewer will react. So unlike the bicycle, a great painting is *not* just a matter of selecting the best colors, then painting the best tree, then painting the best background, and so on. Everything has to be optimized jointly.

THE CURRENT VIEW: A SIMPLE LANDSCAPE

How we view the landscape of strategic communication is crucial because the shape of the landscape has definite implications for how to best conduct the search for the right message. The modular system of a simple landscape emphasizes incremental improvement through exploitation of existing knowledge. The most efficient way to the top of the peak is to gain experience about what works and what does not, and then fine-tune the solution until there is no more improvement to be had. Once the optimal solution is found, a modular system demands tight control, so one does not stray from the optimal design.

The current national strategy conceives of communication as a simple landscape

While it does not say so explicitly, the NSPDSC conceives of the search in these terms. The very idea that they can use a control-based strategy probably signals communicators' belief that they have already found an optimal message. At the very least it indicates a belief that they can restrict the *K* value of the landscape through their actions, insuring a simple search. The assumption is that if everyone is "on message" and transmits the message reliably, it will not be altered by the receivers, eliminating a possible source of interdependence. The performance of a message today will be the same as it was yesterday and the same tomorrow, insuring that we can get consistent results and make rational adjustments by using a single message (or small number) targeted at the average listener.

The NSPDSC also views the communicator, medium and message as independent components that can be optimized individually. For example, it states a general need to have optimal spokespersons delivering the U.S. message, whatever it is: "United States Ambassadors should be the 'voice' of America as well as its official representative and should make regular appearances on major foreign media, explaining U.S.

policies, values and views." (p. 6). There is a similar view of channels, with an admonishment that "all agencies and embassies must also increase use of new technologies" (p. 6), independent of the message being delivered or the audience that is targeted.

Proposed evaluation procedures similarly imply that if we listen to the average audience response to a message, we can use simple feedback to fine-tune the message to an optimal state. Thus, "participants in our exchange and education programs can and should be interviewed to find out what aspects were most effective; speakers should be evaluated for quality and effectiveness in presenting American values and beliefs." (p. 33). And "evaluation should measure progress toward the achievement of goals, allowing managers to adjust methods and means, and make informed decisions about resources," (p. 33). In other words, if the message is not getting through, the problem is with the delivery methods rather than the strategy or the overall package of communication practices.

Table 1: Some Interdependencies in U.S. Strategic Communication

	Source	Message	Channel	Audience
Source	Multiple agencies have responsibility for strategic communication			
Message	Sources have differential credibility with respect to messages	Different messages contradict or reinforce one another		
Channel	Sources are differentially engaged/skilled with particular media	Messages are differentially suited for different media	Mass media is being subsumed in "new" media	
Audience	Sources have differential access to different audiences	Messages intended for one audience "leak" to others	Different age groups & regions consume different media	Public opinion in U.S. influences audiences abroad

THE CORRECT VIEW: A RUGGED LANDSCAPE

The primary cause of ruggedness in a landscape is interdependence between system components. Do significant interdependencies exist in U.S. strategic communication? If we do even a crude breakdown of system elements in terms of source, message, channel, and audience, then it is simple to identify interdependences between every pair of components. Table 1 lists some examples, but there are many more examples than are listed. For instance, messages and audiences are interdependent not just because messages leak, but also because messages are targeted at particular audience segments. Audiences are

interdependent not just because U.S. opinions affect audiences abroad, but also because audience segments themselves are interdependent: "Girls," one of the NSPDSC target audiences, are also "youth," another of its target audiences. Furthermore, Table 1 only considers simple two-way interdependencies, whereas more complex relationships in fact exist. For example, a key problem for the United States is countering ideological messages being delivered via the Internet to a particular audience of Muslim youth in Europe.

Interdependencies in the system mean the communication landscape is actually rugged

The integral system of a complex landscape demands exploration for creating new knowledge. The most efficient way to find the highest peak is to have multiple, concurrent experiments, each exploring very different solutions. Once a good solution is found, an integral system demands continual adaptation, acknowledging that still-better solutions, radically different from the current design, may exist. Integral systems often demand many solutions, each customized for its own unique niche.

If a rugged landscape is treated as simple—as we believe is the case with the current U.S. approach—then suboptimal performance is virtually assured. Communicators will use a common search strategy in place of the varied, experimental, evolutionary approach that is needed. Once they find a somewhat good solution they will stick with it because of an assumption that downhill movement is always bad. They will tune individual components of a solution, but this will also change other interdependent components and have unintended (and often unexplainable) impacts on performance.

RECOMMENDATIONS: ADAPTING TO A RUGGED LANDSCAPE

Abandoning a control-based simple landscape orientation would bring U.S. strategic communication efforts more closely into line with the realities of its situation. But doing this requires a new set of principles for conducting the search for the best message. Here we explain four of the most important of these.

Leap before you Look

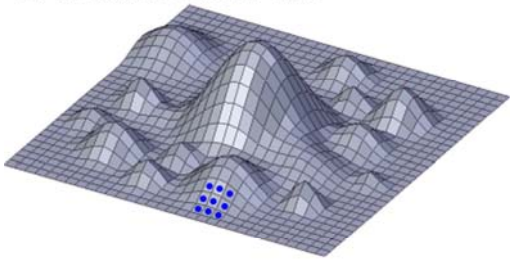
On simple landscapes, the search for the right message is a systematic process of looking for the uphill slope and following it. One variable can be optimized at a time in a trial-and-error fashion using feedback to make small adjustments in course. Over time, plodding progress leads to an optimal solution.

But on a complex landscape this strategy fails. A systematic search based on small incremental changes does not cover very much territory. It is as likely to lead downhill as uphill, and even in the ascending case it may lead to a local peak that is not the optimum. Searches on a rugged landscape need to cover large amounts of territory to locate the high peaks, and this requires large leaps.

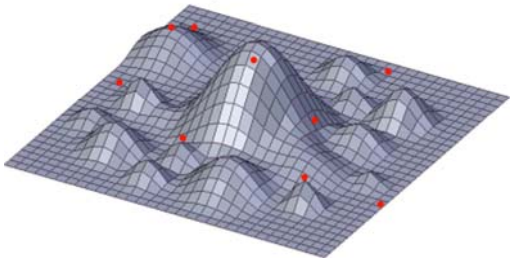
The situation is illustrated in Figure 2. The blue dots in Figure 2A show nine trials using a systematic grid search that starts from a center point on a minor hill. The search remains on this one hillside and five of the trials represent either a decrease in performance or no change.

Figure 2

A. Systematic Search, 9 Trials



B. Random Search, 9 Trials



The red dots in Figure 2B show nine trials whose positions on the grid were determined by a random number generator. While three points occur on the floor, two of them actually land on the optimal peak, one very near the top. Another one lands atop the second highest peak. The average performance of all nine trials is much higher than in Figure 2A.

On a rugged landscape searches need to cover large amounts of territory to locate the high peaks, and this requires large leaps

What would substitute for the random number generator in the real-life situation? On a rugged landscape it is impossible to change one thing at a time because of interdependencies in the system. So making the leaps of Figure 2B requires a multi-variable optimization approach of changing many elements of the solutions at the same time in a fashion similar to random variations in an evolutionary process. In our strategic communication example, this would mean creative configurations of source, message, channel, audience, timing, and so on.

The fitness of the trials must be assessed in absolute terms, not in terms of incremental improvement over previous trials. Solutions with high fitness are retained and re-combined with features of other high-fitness trials in new experiments. It is also very important to institutionalize this variation and selection process, continually probing for new and better solutions even when a high-fitness solution has been found. Otherwise competency traps[13] can occur. These happen when organizations learn that particular behaviors lead to success, so they focus on and amplify these skills. Meanwhile they become less adaptive and competitors learn how to counter their success. This is a particular danger with rugged landscapes because it is never clear when the optimal peak has been hit, and the components of the landscape and their interdependencies can change. Continual improvement is an important goal.

Use the Force

Current simple landscape strategies resist complexity by limiting the number of messages to a small number that can be tightly controlled. But on a complex landscape this is exactly the wrong thing to do. The optimal peak can only be found through testing multiple messages in an evolutionary, experimental approach.

Of course this risks an encounter with the Dark Side of interaction between messages, which control-oriented strategies seek to avoid at all costs. Here again, a better impulse is to embrace the complexity and seek to use it to advantage. As an earlier CSC white paper concluded:

> You can't control the message; get over it. The more we try to treat communication as a simple, straightforward task with outcomes we can control, the less we are likely to succeed. …Communicators should accept this reality and try to work with it, just as Wall Street traders accept the chaos of the market and try to "go with the flow." Once we let go of the idea of a well-ordered system that is under our control, we can start to think of what *is possible* in situations of uncertainty.[14]

The optimal peak can only be found through testing multiple messages in an evolutionary, experimental approach

This logic turns the idea of message control on its head. Current control-oriented strategies attempt to eliminate potential interaction between messages. But suppose we accept the idea that messages will interact no matter what we do. Then we can begin thinking about how this interaction might be managed to our advantage.

For instance, messages could be formulated more in terms of general ideas and less in terms of specific details. As Goodall, Trethewey and McDonald point out,[15] such *strategic ambiguity* can be very functional. It creates the possibility of *unified diversity*[16] in which communicators can agree on general, abstract features of a message while preserving differential understandings of the implied details.

As another example, one message might be created to form an unstated premise when it interacts with a subsequent message, leading to some desirable conclusion. This argument technique, known as *enthymeme,* is attributed to Aristotle. It is thought to be a particularly effective persuasive technique[17] because the unstated premise is in effect supplied by the listener, leading him or her to the "natural" implied conclusion. If we accept the idea that messages will interact, then new possibilities for action such as these are opened-up.

Simplify Structure

A landscape is made rugged by interdependencies between the elements of the system. Indeed the U.S. strategic communication system is so complex that it may approach the topography of a *jagged landscape,*[18] where there are so many interdependencies that movement is

nearly impossible. Since control is impossible, it is unlikely that the landscape could ever be made simple. However, a systematic effort could be undertaken to make structural changes that *are* possible, reducing interdependencies in the system.

One significant opportunity for such change lies in reducing unnecessary legal constraints on U.S. strategic communication. Today, those fighting the "war of ideas" must tread carefully to avoid running afoul of the U.S. Information and Educational Exchange Act of 1948, which has become known as the Smith-Mundt Act (after the bill's sponsors in the House and Senate). The Act was designed to regulate U.S. propaganda efforts in foreign countries. It places a premium on telling the truth (in contrast to the "lies" propagated by the communists). It also prohibits the government from deploying propaganda domestically to influence its citizens, as Hitler did with sinister effect in Germany.

If this law was sensible in the 1940s, today it seems naïve. Sounding a main theme of this paper, Armstrong points out that

> Simple communications models of the 1940's have been replaced by global networks of formal and informal media. Perception overcomes fact as deliberation by both the consumers and producers of news shrinks to almost nothing. Too often, by the time the truth comes out, the audience and media have moved on.[19]

Though it is outdated, the law's effects are still in force, and it adds yet another layer of interdependencies to the strategic communication landscape. So even though the truth "ain't what it once was," our communicators consult panels of lawyers to insure that their messages somehow convey it. Today a message delivered anywhere in the world can make its way anywhere else in the world in a matter of seconds via the Internet. Thus our communicators wring their hands when they deliver a message in Afghanistan, worrying about whether they might influence the U.S. public in violation of the law.

Reducing legal and structural constraints would reduce the ruggedness of the landscape

To be clear, we do not advocate an "anything goes" approach to strategic communication. There are very good reasons to constrain government agencies from operating on the domestic public. But Smith-Mundt—itself born of the outdated thinking that underlies the message influence model—introduces incredible legal complexity into the already complex process of fighting savvy and agile terrorist groups. Significantly amending or replacing the Act is a prime example of a structural change that could reduce the ruggedness of the strategic communication landscape. As Pilon concludes

> We are fighting a war of ideas, and we should fight it as we would fight any real war. It cannot be done with hands tied behind our backs, with self-imposed constraints that make no technological and even less strategic sense.[20]

Though we are not privy to all the internal rules within the agencies that conduct strategic communication, this seems like yet another

place to look for structural simplification. Any rule that links the activity of one part of an organization with another part creates interdependence, and potentially makes the landscape more rugged. Strict hierarchies—a hallmark of military and government agencies—are prime examples of this. They place constraints on their members that are well known to make organizations less creative and responsive.[21] So *flattening* the organizations responsible for strategic communication could also have beneficial simplifying effects on the landscape.

Accept Downside Risk

In the course of searching for the optimal solution it is important to tolerate downhill movement, i.e. a movement toward lower fitness. This is because, first, with the experimental variation proposed above we can expect a certain number of solutions to be unfit. Second, to move from a position on a suboptimal peak to a higher position on a more optimal peak it is necessary to first move downhill. This is why Kauffman argues that a certain amount of "going the wrong way" or "foolish adaptation" can be healthy.[22]

Moving from a position on a suboptimal peak to a higher position on a more optimal peak requires first going downhill

However this is easier said than done. The idea of tolerating suboptimal outcomes goes strongly against the grain of any system that strives for success and answers to the public. U.S. strategic communication is conducted by organizations that have always been control oriented, are focused on results and success (especially the military organizations in this sphere), have a recent record of failure, and operate with extremely high stakes. It will be very difficult for these organizational cultures to acknowledge that results are not always straightforwardly linked to planning and effort.

But acknowledge this they must. In large part, it is simply a matter of acknowledging the reality of a complex system. The control that these organizations have strived for is illusory. As Corman, Trethewey and Goodall point out, participants in a communication system are not independent but are "locked in a system of *simultaneous, mutual interdependence*."[23] In such a system it is impossible to predict the effects of a message in advance. "This means that, especially in terms of the 'big picture,' it is difficult to be strategic in the sense of setting a desired future state of affairs and mapping a set of logical steps that are likely to bring it about."[24] Likewise, on a rugged landscape of communication it is impossible to be strategic in the sense that moving in just one direction or another will necessarily lead to the optimal message.

The U.S. government, particularly its military component, has a long history of attempting to learn from mistakes in the form of after action reports and lessons learned.[25] To date, however, these efforts have primarily been used to learn *between* campaigns. Strategic communicators

need to adopt a culture whereby the after action report becomes a staple of continuous improvement *within* a given message campaign.

CONCLUSION

Just as U.S. strategic communicators have relied on an outdated notion that the delivery of messages can be controlled, they have relied on an outdated idea that a controlled search for the right message is possible. It would indeed be possible if the sources, messages, media, and audience were independent, like the parts of a bicycle. But they are in fact *interdependent*, like the parts of a great painting. Sources influence the effectiveness of messages. Different audiences prefer different media, and so on.

The resulting rugged landscape demands experimentation and exploration. In short it requires a new approach. Organizational changes that *are* within the control of the U.S. government can reduce the complexity of the landscape somewhat. But beyond that, communicators must accept that control is impossible, stop resisting complexity, and learn to work with it. They must adopt searches based on experimentation and random variation. And they must come to grips with the idea that not all experiments will work, that failure is a normal part of the path to success. This approach would transform U.S. strategic communication into a more modern, realistic, and ultimately more successful enterprise.

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