

boxes in the top row. The letters A through Z are in boxes in the left-hand column. These two columns are the set lines. The other boxes in the matrix are filled with letters, numbers, and various words commonly used during communications. (See accompanying figure.)

To encrypt a word, first locate it in one of the matrix boxes. From that box, follow the row to the left to get a letter from one set line, and then follow the column up to get a number from the other set line. The combination of the letter and number is the encrypted word. In this matrix, for example, the word *enemy* is encoded as P3.

To encrypt an entire message, simply follow the same steps for each word, letter, and number in the transmission. For example, the message "One BMP moving north at NAI 8" is encrypted as "A1, Z1, I7, Q7, S1, K7, C2." If a word is not on the matrix, spell it out. For example, *fire* is encrypted "A8, B3, C4, A7." A unit can add any combination of words to the matrix to suit its individual needs. For instance, if your unit expects to encounter T-72 tanks, add the nomenclature to the Brevity Matrix.

For security, scramble the set lines periodically. Change the code for the same word or location by changing the set lines. If the letters and numbers in the set lines are left in the same sequence but each set line starts off at a new point (say at M instead of A), the enemy will have to try 260 different combinations to decode a message, even if the matrix is compromised. The number of possible combinations can be increased astro-

nomically if the set line letters and numbers are completely scrambled. Furthermore, it is easy to make up several other matrices to keep on hand for use if a particular matrix is compromised. Too, if you do not have a spare matrix on hand and you must have another one quickly, it is relatively easy to make a complete new one in a short period of time.

The Brevity Matrix is an excellent communication aid for use between OPs, scouts, and the S-2 section, and its flexibility allows for other uses as well. For example, a matrix can be

designed for use on an administration and logistics net. The Brevity Matrix is a quick and easy tool to help a unit maintain clear and secure communications.

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# Mistakes: The Key to Learning

**MAJOR NOYES B. LIVINGSTON III**

Being allowed to make mistakes is a key element of learning new skills or sustaining old ones. A critical factor in

military training is how far superiors should let their subordinates go in making mistakes. The answer is: As far

as it takes to build a non-threatening and non-judgmental leadership and training climate in which subordinates

are willing to try to learn their boss's job as well as their own.

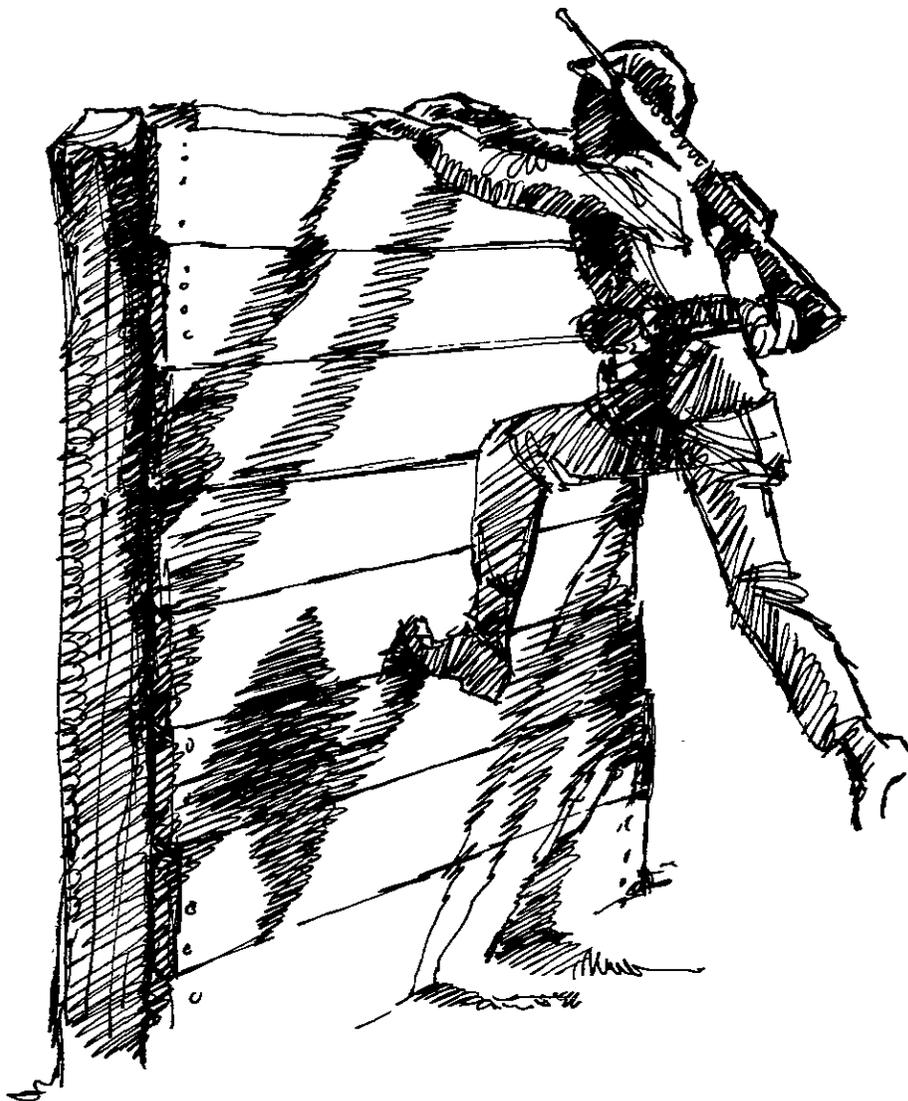
Eagerness to learn from mistakes will not last long in a unit where the leaders throw tantrums and fling helmets and are unwilling to accept mistakes as a price for that quality. If leaders do not want to guide errors in positive directions, soldiers will not attempt any task that produces less than zero defects, which eventually means zero effort, zero achievement, and zero learning.

Learning is gaining abilities over a period of time through observation or experience; it is nothing more than watching and doing. Most learning, like riding a bicycle, comes through imperfect practice. In bicycling, for example, a child's falls lead to wobbles, which lead to short stretches of coasting, until he is pedaling on his own. A wise parent picks a sidewalk through a grassy lawn instead of the street, but he does not try to prevent the falls.

If a task could be done correctly to begin with there would be no need to train on it. It is important for a trainer to understand that learning results from making mistakes, with the knowledge that mistakes will occur and that they are an important requirement for learning. If a young cyclist is yelled at for falling, he will not rejoice in the thrill of wobbling. The parent can run behind with words of encouragement, but he can't push or pull for the child. Only the child can feel the feedback through the handlebars and improve from the consequences of his actions.

One crucial enabling element in learning is often overlooked: learning to learn. It involves wanting to learn by taking risks, making good faith mistakes, and being determined enough to get it right eventually. It also involves being enthusiastically rewarded in the process. Just as a five-year-old's coasting deserves a pat on the back, so does a private's halting radio procedures when he could have safely ignored a message instead. The pat should be applied high and soft, not low and hard. Some leaders don't recognize the difference.

In a supportive atmosphere, using the appropriate reinforcement, a trainer can encourage a soldier to experiment, use



his initiative, exercise his mental agility, practice teamwork, and make mistakes. In the same manner, if a leader productively directs the learning process and accepts mistakes gracefully, the leader, the soldier, and the unit benefit from the multiplying effect of learning opportunities that are acted upon at every level in the unit.

A negative adversarial environment can cause the subordinate to avoid his superior, both to avoid displeasing his superior and to protect himself. In the best of poor circumstances, subordinates collectively develop a committee mentality to avoid having to make independent decisions and be put on the spot individually.

In worse cases, a subordinate may

develop a mild personality disorder as a defense or escape mechanism. This mechanism temporarily protects him from having to confront his superior and also from having to acknowledge his own suppressed hostility.

The soldier will continue to act agreeable, supportive, and aggressive, but it is a self-serving and ultimately self-defeating sham that conceals his unconscious fear of making mistakes. As a result, the didactic superior becomes more isolated in his self-imposed ivory tower prison, surrounded by anxious yes-men, because he kills the messengers who are first willing to make mistakes and then to admit them.

An overbearing leader expects perfect performance and good news, and both

are in short supply in training and combat. His meager reward will be a unit that demonstrates little cooperation, volunteerism, or accomplishment and subordinates who build a Potemkin Village facade in his presence to hide feelings of inadequacy and incompetence.

Many authoritarian trainers believe they can turn appropriate participative leadership styles on in the field and back off in garrison. Unfortunately, it does

not work that way. Even if the superior were capable of the transformation, his subordinates would not be. They would continue to misread the signals and suffer from role confusion.

The road to mission accomplishment and to high standards of performance is paved by the active contributions and occasional mistakes of every member of the unit. As Major General Elmer Stephens (a former commander of the 49th Armored Division) once said,

“Good training does not trickle down; it bubbles up.” The superior’s attitude toward mistakes determines the direction of the flow.

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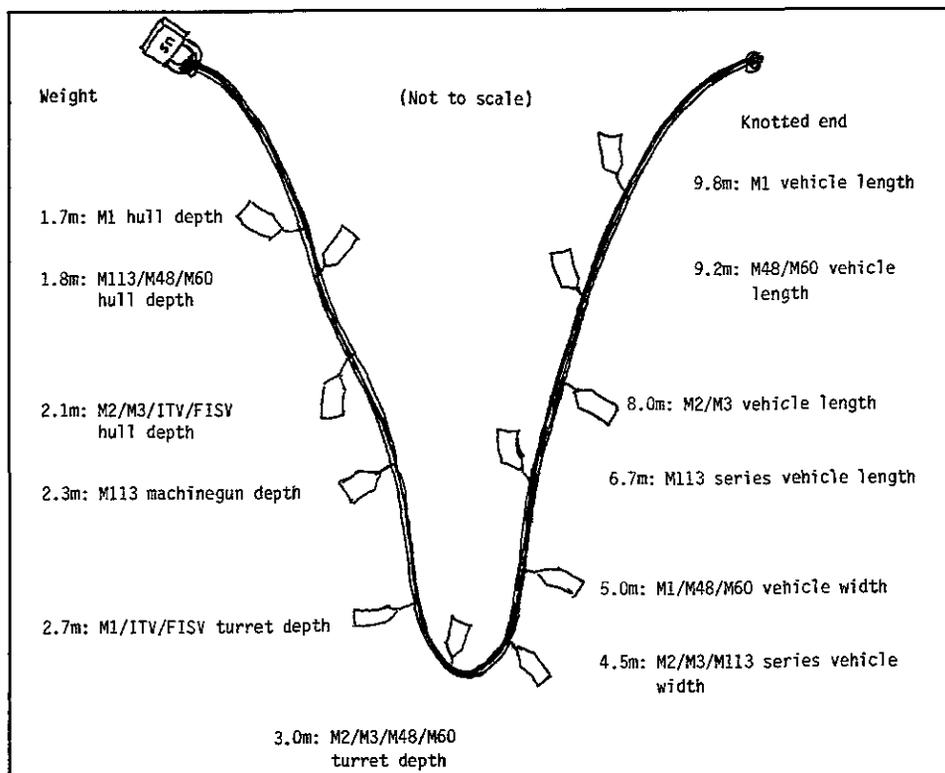
# SWAP SHOP

## TANKER'S ROPE

Suppose you're an infantry company team commander and you need to dig fighting positions for an attached platoon of tanks, but the tanks aren't there yet for you to measure. You can take a guess. Or you can make sure you have a tanker's rope available.

A tanker's rope is the fastest, most accurate, and most reliable way to measure and mark vehicle positions for digging. It is quick and easy to make.

Get about ten meters of 550 cord, a weight of some kind, and some ID or marking tags. Attach the weight to one end and tie it off. Mark the tags and tie them in at measured intervals according to the diagram below, and it's done! The model we show here is good for just about any type of tracked vehicle an infantry team may use, and you'll never be caught short again.



(Contributed by Lieutenant Daniel A. Guy, Support Platoon Trainer at the National Training Center.)