17

TOPIC OUTLINE

1. Purpose
2. General
3. Background
4. Considerations affecting nonacceptance of biologicals
   a. National policy
   b. World opinion
   c. Technical capabilities
   d. Effectiveness
5. Considerations supporting acceptance of biologicals
   a. Legality and authority
   b. Military capability and achievable results
6. Practical applications
   a. Situation, (Lethal Agent)
   b. Situation, (Incapacitating Agent)
   c. Discussion
7. Summary
8. Conclusions
9. Recommendations

EPILOGUE

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1. PURPOSE. The purpose of this study is to examine a proposal to utilize biological weapons systems in present day military situations. The study is developed around the question: Why not employ biological weapons systems, now?

2. GENERAL. Four suppositions are selected as having the most applicability to current policies concerning biological weapons and military acceptance of the systems. These suppositions are examined in detail, first as current understanding of them affects nonacceptance of biological systems, and secondly, as a better understanding of them would affect acceptance of biological systems. Authoritative authors and official publications in the field have been utilized to support both examinations of the chosen suppositions. Near the end of the study, two hypothetical tactical examples are presented of how biological weapons systems might be used, and the advantages that could accrue from their usage. A summary is presented, conclusions are derived and certain recommendations are made for consideration.

3. BACKGROUND.

> "* * * soldiers have rarely won wars. They more often mop up after the barrage of epidemics. * * * plaque, cholera, typhoid, dysentery, - has decided more campaigns than Caesar, Hannibal, Napoleon, and all the inspector generals of history. The epidemics get the blame for defeat, the generals the credit for victory." (19: p. 113.)
>
> "The lesson of history is clear. Although the great plaques are gone, the military

campaigns of tomorrow could falter or fail if our troops are weakened or demoralized by disease." (12: p. 83.)

"Moreover, the Viet Cong or Communist guerrillas are currently using the crudest form of biological warfare. A primary means of protecting their defensive positions is the panji. These are camouflaged pits with needle-sharp bamboo stalks imbedded in their bottoms. The traps are mined with hand grenades, and the defenders 'usually urinate or defecate on the tips of the panji's slivers in hopes of inducing fatal infection or tetanus in victims'." (as quoted in 13: p. 6.)

"When enemy guerrilla forces are operating in areas occupied by friendly civilians, incapacitating biological agents are used. Guerrilla forces normally do not have sufficient protective means, access to treatment facilities, or sufficient personnel to treat large numbers of casualties." (3: p. 102.)

The above quotes have been selected to emphasize an irreconcilable fact, which is the basis for the thesis proposed by this study. Biological agents are an effective and world-widely accepted factor in military operations. (19: chap. VIII.)(12: p. 71.)

A proposal to employ biological weapons systems now is made with the understanding that there are certain

widely held restrictive suppositions to be considered. They are: National Policy, World Opinion, Technical Capability and Effectiveness. A discussion of these restrictive elements is first necessary to understand the conditions which must be overcome if biological weapons systems are to be employed. Only by understanding them can the military mind be free to reach an unbiased conclusion as to the efficacy of employing biological weapons systems now.

4. CONSIDERATIONS AFFECTING NONACCEPTANCE OF BIOLOGICALS.

a. National Policy. Available unclassified source material reveals that the United States will not employ biological weapons systems offensively without authority from the President. (7: para. 3.) The present policy is that such authority will be given only in retaliation to a biological attack by a hostile nation. (1: p. 73.)

The above is taught in subject M-1350/2 at the U. S. Army Command and General Staff College. FM 3-5, Chemical, Biological and Radiological (CBR) Operations, further states: "Authority to initiate tactical employment of * * * biological agents * * * does not rest with the local commander. The local commander will receive guidance and authority * * * through command channels." (3: p. 5.) Thus, the average tactician and military planner does not consider biological weapons systems in his planning regardless of the military advantage they may give him in accomplishing his mission. He disregards these systems because he inherently believes, and has been taught, that his Nation will not, nor would not, use them because of national policy.

b. World Opinion. Many politicians and senior military policy makers adhere to the national policy stated above because of their firm belief that world opinion is opposed to biological warfare. A perusal of the world press would lead the casual reader to this conclusion.

Marguerite Higgins, in a dateline from DA NANG, Vietnam, wrote the following: "The cause of hypocrisy, of course, is the image-psychosis in some circles in Washington. In its most acute stage, this image psychosis decrees that the largely imaginary monster known as 'world opinion' must be appeased whether it be right or wrong." (8: para. 2.) Dr. Clifford F. Rassweiler, in a Speaking Out article in the Saturday Evening Post made the observation: "Our Army experts * * * are kept on an inadequate budget by legislators who fear that major support for chemical and biological war would bring a wave of emotional public disapproval. Moreover, the experts must work in fear of public opinion. * * * one chemical warfare official conceded that 'We can't educate the public, and we are regarded as monsters'. Another official has been quoted as saying, 'Every time we open our mouths, we get clobbered'. * * * Our legislators and military men fear the unreasoning emotional reaction of the public." (14: pp. 12-13.) The fear of the general public results not only from its dread of the insidious and invisible, but partly also from the many exaggerations of the effects of biological warfare in newspapers and magazine articles, written in a sensational vein.

The affect of world opinion normally should not be disregarded. Therefore, as a restrictive supposition, its affect upon the mind of the military man is basically detrimental to the employment of biological weapons. Where the world has accepted bombs, machine guns and flamethrowers, the soldier will employ them with little regard for his subsequent rejection by society for having done so. He will be reluctant to use a weapon for which he will later be criticized.

c. Technical Capability. One of the limitations against the employment of biological weapons systems, imposed upon the military tactician is the technical capability presented to him by Field Manuals and U. S. Army instruction.

RB 3-1, Reference Book, Chemical and Biological Weapon Employment, U. S. Army Command and General Staff College, lists only three hypothetical delivery systems, from which only three hypothetical static area coverages are presented. These are 100 km^2, 200 km^2, and 1000 km^2. (15: p. 16.) These coverages are quite large compared to other weapons systems, and in the mind of the student seriously limit the use of biological systems. Such hypothetical systems and area coverages do take advantage of a biological capability that other weapons do not have, i.e., large area coverage. The objection is that these hypothetical systems do not teach the full range of biological weapons systems capabilities.

FM 3-10, Chemical and Biological Weapons Employment, informs the military reader that: "the outstanding

military characteristic of biological weapons systems is the capability of providing low cost attrition of enemy manpower over large areas." [underlining by author] (4: p. 55.) Once again, the implication to the military student is that biological weapons systems are only large area coverage weapons of limited immediate tactical significance.

d. Effectiveness. The relatively slow onset of effects of biological weapons systems and their agents, is a major psychological obstacle to the acceptance of this system by the military.

The hypothetical family of biological agents, as taught at the U. S. Army Command and General Staff College out of RB 3-1, lists the following times to reach casualty levels: Lugo fatigue, 2-5 days; September fever, 1-3 days; and Toledo fever, 1-3 days. (15: p. 16.) FM 100-5, Field Service Regulations, Operations, states: "Biological weapons are characterized by delayed casualty effects." (6: p. 62.)

From the beginning of conflicts between men, the military tactician has preferred weapons which produce immediate effects. The strategist learns to think in terms of delayed effects. He employs not only weapons systems, but geopolitical and economic factors. But before he was a strategist, he was a tactician and therefore still thinks of battlefield weapons in terms of immediate effects. So regardless of what level, or on what scale he plans, the military mind accepts tactical weapons on the basis of their capability to immediately effect the battlefield situation, and strategic weapons in terms of their long-range effect on

the eventual outcome of the war. His learned and conceptual knowledge of biological weapons systems predisposes him to think of them as strategic weapons only, not useful in a tactical role.

There is also the factor of "visual evidence". During his career, the average military man will either feel, operate, or observe every weapons system that he is expected to employ on the battlefield. These include two other seldom used weapons systems, nuclear and chemical. What officer has not been saturated with films, instruction and simulated blasts of nuclear weapons? What officer has not seen or otherwise been exposed to mustard, nerve agents, flame, smoke and tear gas in the chemical family of weapons? But how many officers have ever seen, or otherwise been exposed to an offensive biological weapons systems? This lack of knowledge is exemplified in a speech before Congress by Congressman Robert Sikes. "Unfortunately too few people, some even in the Armed Forces, know the facts about CBR." (17: para. 12.) Field commanders today have little comprehension of what constitutes a biological weapons system. Neither did field commanders of World War I know what a chemical weapon was. As reported by Kleber and Birdsell, this lack of knowledge has deleterious effects on acceptance of a new weapon. "But if by 1918, gas had become commonplace, field commanders never had been completely sold on its use, and few had learned how to employ it effectively. There were examples of American Expeditionary Force generals eschewing gas in fear of German retaliation, despite the fact the Germans were employing it anyway." (10: p. 55.)

With the exception of historical examples of the effects of disease on armies, our field commanders today have no visual evidence of the effectiveness of an offensive biological weapons systems in a controlled tactical usage.

5. CONSIDERATIONS SUPPORTING ACCEPTANCE OF BIOLOGICALS. There is a basic premise which will be further expanded. None of the restrictive suppositions discussed before should be considered as irreversible denials to the employment of biological systems by the United States. This is particularly applicable to the restriction imposed by national policy. As mentioned in the background statement, the restrictions are valid only in so far as they adversely influence the mind when considering the most advantageous weapons system to employ. Although this proposal will henceforth be directed more specifically toward the current Vietnam conflict, the principles are applicable in any current or future military situation.

a. Legality and Authority. There is no unclassified publication which forbids the United States from employing biological weapons systems. (13: p. 44.) FM 27-10, The Law of Land Warfare, states: "The foregoing rule does not prohibit measures being taken * * * to destroy, through chemical or bacterial agents harmless to men, crops intended solely for consumption by the armed forces". (5: para. 37.) "The United States is not a party to any treaty, now in force, that prohibits or restricts the use in warfare * * * of bacteriological warfare." (5: para. 38.) The restriction imposed upon the commander in FM 3-5 and FM 101-40 is subject to analysis. It may be clear that the local commander will

receive guidance and authority to use biological systems, and that the decision rests with the President, but nowhere, is the field commander restricted from planning for, and requesting authority to employ them.

There are several examples in Vietnam of actions taken which many thought would never be approved by our national leaders, nor accepted by our allies and world opinion. Yet, in each case, approval has been given, and world opinion has not been overwhelmingly in dissent. These actions were the bombing of North Vietnam, the use of defoliants and the tactical use of tear gas. The tactical use of tear gas was not authorized during the Korean War. J. H. Rothschild, in his book "Tomorrow's Weapons", reports the following concerning the Korean War. "The Command had been prohibited from using toxic agents, even to control prisoners of war. [By "toxic agents", Rothschild here was referring to tear gas - author.] * * * I make strong recommendations to General Mark Clark, Commander of the United States Forces, that we use chemical agents. General Clark pressured the Department of Army for this permission and it was finally granted." (16: p. 63.) This example exemplifies the premise that a request, supported by a requirement, is all that is required, if authority is to be granted. In her report on the first tactical use of tear gas in South Vietnam, Marguerite Higgins reports: "Col Utter should have been given a medal for superb judgment and humanitarianism." (8: para. 4.)

"But in the battle against hypocrisy, the decision to permit the selective use of tear gas is only the

beginning of a long struggle. How long, for example, will it take to loosen the impossibly tight restrictions imposed by Washington on use of defoliation sprays * * *." (8: para. 14.) "Many people feel that the only way to win in South Vietnam is to make a direct bombing attack on North Vietnam. The objection is that this would start retaliatory bombing." (14: p. 13.) These last two quotes amplify the issue that an imposed restriction can be overcome, as both of these actions have been authorized and are now being conducted in Vietnam. A national policy nor feared adverse world opinion should not be over-riding factors in the decision to plan for and request the permission to employ, biological weapons systems.

b. Military Capability and Achievable Results. Contrary to the above implications concerning the limitations of biological weapons systems, they can be employed effectively, tactically, in small areas, and with relatively rapid effects. "CBR is adaptable to almost any condition in limited or general warfare, a fact which is not generally true of other weapons. * * * Significantly, biologicals may be used to produce disability, but few casualties, against civilians. * * * We must understand its true place in warfare - - - the fact that it can save lives instead of killing and crippling - - - the fact that it could spare needless destruction of property and resources." (17: para. 9, 10, and 17.) Rothschild lists seven diseases of possible biological warfare interest with incubation periods of one day or less. (16: app. D.) Although FM 3-10 does not name any agent or

delivery system specifically, it does present in Chapter 11, offensive target analysis procedures with charts, tables and nomograms. There is also a classified edition, FM 3-10A, which provides more specific information concerning existing agent/weapons systems. FM 3-5 states that small areas can be the object of a biological attack, and that enemy targets near the FEBA can be attacked when a delay in casualty production is acceptable. (3: Chap. 6.) Yet, these features are not stressed in training, nor exploited in war gaming and field exercises.

If the United States is to employ this weapon, it should not fail to fully exploit the systems capabilities. An example of the failure to exploit the capabilities of a new weapon was the Germans in 1915. "5000 cylinders of chlorine gas was released at Ypres, Belgium on 22 April 1915. * * * Although the deadly chlorine gas cut a six-kilometer swath in the Allied lines, the Germans failed to follow through - - - * * *. The incident remains a classic example of an army's failure to capitalize on the successful introduction of a new weapon." (10: p. 55)

Vietnam represents an ideal place for employment of a new weapon by the United States. We are fighting a country where the distinction between friend and foe is virtually impossible to insure. We are engaged against an enemy which is difficult to pinpoint, elusive and many times, ill equipped. Every condition which favors the tactical use of an incapacitating biological weapons system exists in the Vietnam environment. (11: p. 74.)

Without violating restrictions imposed by national security, it can be safely stated that it is within the technical capability of the U. S. Army today to employ biological weapons systems throughout a whole spectrum of tactically achievable results. (2: p. 48.)(16: pp. 77-89.)

(1) Areas as small as 100 square meters or less, or as large as a continent, can be equally attacked. (4: Chap. 9-13.)

(2) Agents of choice are available that can incapacitate within hours, with effects lasting up to three days, to agents that are lethal within one day. (18: Chap. 6.)

(3) Agents can be chosen that are noncontagious and nonpersistent (in that they do not remain viable and infective in the zone of employment), to contagious and relatively persistent. (18: Chap. 6.)(16: app. D.)

(4) These systems are search and seek weapons, with man as their ultimate target. As such, it is not necessary to know exactly where the enemy is located. (3: Chap. 6.)

(5) It is of no significance if the enemy is in a tunnel, in a tree, in a building, lying down, standing up or in the open. The agent still reaches him. (3: Chap. 6.)

(6) There is little, if no, damage to materiel. Villages and hamlets can be effectively attacked without the destruction and havoc caused by currently used munitions. (3: Chap. 6.)

(7) Agents can be chosen, against which friendly troops can be immunized. Agents can be employed for which there is no immunization if friendly troops are warned and adequately protected. (18: Chap. 6.)(3: para. 112.)

(8) The use of an incapacitating biological agent will allow the humane attack of areas occupied jointly by enemy and friendly indigeneous noncombatants. (3: para. 111.)

(9) The Vietnam enemy is often ill equipped for defense against offensive aerosol type weapons systems. (11: p. 74.)

The factors enumerated above have particular significance when viewed in the light of present day political, economic and military situations. Two examples of the application of a biological weapons system in Vietnam are outlined briefly below.

6. PRACTICAL APPLICATIONS.

a. Situation, (Lethal Agent). There is a Viet Cong staging area, 30 km southeast of Quanq Ngai. This area is about 90 sq. km. (9 km by 10 km), located in a valley, well protected by hills and jungle. There are few (if none known) friendly civilian noncombatants in the area. It is desired to eliminate this staging area.

Probable Current Method: Helicopter lifted assault forces supported by tactical air. Blocking positions tediously placed around the area. Many troops involved, possibly a Brigade or more. Several days to weeks of heavy

fighting occurs with loss of aircraft - expenditures of huge quantities of logistical support (fuel and ammunition) and casualties to U. S. and Allied troops. Few Viet Cong will actually be seen. Most will escape, to regroup and fight another day. The area cannot be maintained. The assault forces will withdraw and the Viet Cong will be free to move back in.

Use of Biological Weapons Systems: Entire area attacked with aircraft spray or bomblets. A noncontagious, lethal agent with a three day incubation period is used. Sixty percent of the Viet Cong are infected. It does not make any difference where they go or what they do for the next three days, because in three to five days, 90-100 percent of those infected will either be dead or too sick to fight. On the fourth day, the U. S. assault forces can move into the area for mop up with very little difficulty. If the Viet Cong later re-occupy the area, another biological attack can be made. logistically cheap and without the loss of U. S. lives.

b. Situation, (Incapacitating Agent). A highway is being cleared south out of An Khe. A small Viet Cong force has been encountered in the village of Piang Kotu. Clearance of the village is vital. The area is small, possibly ten square kilometers or less.

Probable Current Method: Leaflets are dropped in the village warning friendly noncombatants to leave. Some do, some do not. An attack is made anyway. Some villagers are killed. The Viet Cong has taken and killed some

villagers as threat or reprisal. The village is cleared, but not without ill feeling. The Commander must bear the burden of the unfortunate deaths of noncombatants.

Use of Biological Weapons Systems: Small disseminators are placed upwind of the village and agent released in late evening or early morning. The disseminators contain a noncontagious incapacitant which is effective in 3-12 hours. Seventy percent of all occupants become ill. Peak incapacitation occurs at noon following the attack. The Viet Cong do not realize that they have been under attack. At noon, U. S. Forces move quickly into the village with medical teams. Incapacitated Viet Cong are separated from noncombatants and disarmed. Immediate medical aid is given to the noncombatants with particular attention to the elderly and very young. U. S. casualties will vary from none to light. Infected persons will recover completely in one to three days with no after effects. Captured Viet Cong will be a valuable source of intelligence and re-indoctrination.

If the above two examples sound so simple as to be absurd, it is because they are simple, and it is absurd that this country has not given more consideration to this method of warfare. Both examples are within the current state of the art. The times and casualty rates were randomly selected to avoid comparison with actual existing capabilities.

c. Discussion. The choices selected represent to some degree, two extremes for the tactical use of a biological system. The principals of the objective, the offensive, economy of force and surprise are evident.

Two advantages the Viet Cong have enjoyed has been their ability, as basically a guerrilla force, to avoid being isolated and forced into an identifiable combat sector; and to mingle with noncombatants. The use of incapacitating and area search weapons such as biological weapons systems, tends to negate these advantages.

In the first example, exact Viet Cong location is irrelevant. He can avoid and protect himself from artillery and bombing, but unless he is adequately equipped and trained against aerosal attack, (which he is not) (11: p. 74.) he cannot effectively protect himself from a biological aerosol attack.

In the second example, a weapons systems can be employed against the heterogeneous village group with the confidence that lethality to noncombatants will not be a responsibility of U. S. Forces.

In both examples, the agent cloud is invisible, and the Viet Cong is not aware that he is under biological attack. The spray and bomblet attacks can be concealed by a simultaneous attack with conventional air and artillery.

7. SUMMARY. If contained to the immediate area of conflict, the threat of escalation or reprisal with biological warfare is no greater than that present with the bombing of North Vietnam, the use of tear gas or the use of large conventional army forces. The threat of propaganda charges by the Communists does exist. A Germ Warfare charge was made by the Communists during the Korean War which did not cause a major upheaval of adverse world opinion. (13: p. 5.)

The choice of agent munitions systems, an analysis of the target, and the achievement of desired results, is a determination that can easily be made by the CBR Element and Fire Support Element of any Tactical Operations Center. (4: Chap. 11.)

It is incumbent upon the military school system, to instill in the military mind, the true capabilities and limitations of the biological weapons systems. Biological effects have been with armies as long as there has been disease, but biologicals as an effective offensive weapons system, have a shorter history than the nuclear bomb. (16: Chap. 2.) An increased knowledge of the tactical scope of biological weapons is mandatory if the military tactician is to consider biologicals in his allocation of firepower as readily as he now does his units, nuclear weapons, artillery and air support.

8. CONCLUSIONS.

-- It has been shown that a requirement can be established, based upon the current situation.

-- The capability exists.

-- The desired effectiveness is achievable.

-- Biological weapons systems are not now completely understood nor accepted.

-- Those limitations considered can be, and many already have been, overcome.

9. RECOMMENDATIONS.

-- That the scope of instruction for the employment of biological weapons systems be broadened at service schools

to include all the capabilities and effective parameters of potential biological weapons systems.

-- That the U. S. Continental Army Command provide for more instruction and training on the concepts and employment of incapacitants within units and at service schools.

-- That the U. S. Army Materiel Command provide inert biological weapons systems to service schools and the field, for demonstration, training, and more "visibility".

-- That The Chief of Information provide a new set of guidelines for the release of favorable information to news media concerning biological warfare.

-- That the Department of Defense reconsider national policy concerning the employment of biological weapons systems, particularly, incapacitants.

EPILOGUE

The President of the United States stated, concerning our Nation's goals in Vietnam: "We will strive to limit conflict, for we wish neither increased destruction nor increased danger. But we will give our fighting men what they must have: * * * and every decision --- whatever the cost and whatever the challenge." (9: para. 9-10.) [underlining by author] The underlined portions of the President's speech amplify those elements applicable to the treatment of biological warfare in this treatise.

-- Biologicals will limit conflict, in that overt man to man conflict will be lessened.

-- Biologicals will obviate increased destruction, in that they only attack man.

-- Biologicals will give the fighting man a tool ideally suited against the Vietnam enemy in the Vietnam environment.

-- The President has indicated he is willing to make whatever decision, whatever the challenge, and to give the fighting men what they must have.

-- The challenge would be world opinion and fear of reprisal from those Communist nations also possessing biological weapons systems.

-- The challenge is bold leadership in the initial utilization of an effective but controversial weapons system. It was done in August 1945,

WHY NOT NOW?

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