Casualty Avoidance and Force Protection: The Need for Protective Equipment in Peacekeeping. A Peacekeeper Needs More Than a Blue Helmet

ABSTRACT

Peacekeeping is not without risk and danger for the soldiers charged with those responsibilities. United Nations Peacekeepers are and will continue to be engaged around the world carrying out mandates for peacekeeping and peace enforcement. When a soldier is detailed by his country to such service and puts on the "Blue Helmet," both the Troop Contributing Country and the United Nations need to plan and ensure his or her personal safety and the force's protection. There is a moral and legal obligation to ensure that all troops are adequately equipped and afforded personal protection to minimize and avoid risk to their lives and safety. This is embodied in the phrase "casualty avoidance" and now morphing into "casualty aversion." This thesis proposes that there are minimum levels of force protection and equipment for the individual soldiers that must be met by the United Nations: individual body armor, protective eyeglasses, and ballistic blankets for vehicle installation to reduce land mine injuries. These recommendations will meet a legal and moral obligation to ensure a soldiers safety in a multi-national peace keeping brigade and the concomitant enhancement of the effectiveness and success of the peacekeeping operations. There is but a minimal expense at the front end of the operation. When compared to the subsequent potential for loss of life, medical care of wounded, and a potentially unsatisfactory field result the cost benefits mandate this minimal equipment requirement. To minimize casualties, ensure a nation's political commitment to United Nations efforts, and offer force protection to the soldiers assigned to peace keeping, we need to equip them with more than just a "Blue Helmet."

Introduction

> At the close of 2002, the United Nations maintained 15 peacekeeping missions, and 13 political and peace-building missions, with 44,000 military and civilian police deployed from 90 U.N. member states. (Less than two percent were US personnel). Yet, 52 of those personnel lost their lives while engaged in the U.N. peace operations. (UN Press Release December 31, 2002)

Peacekeeping is not without risk and danger for the soldiers charged with those responsibilities. United Nations Peacekeepers are, and will continue to be, engaged around the world carrying out mandates for peacekeeping and peace enforcement. When a soldier is detailed by his country to such service and puts on the "Blue Helmet," both the Troop Contributing Country (TCC) and the United Nations need to plan and ensure his or her personal safety and the overall force's protection. There is a moral and legal obligation to ensure that all troops are adequately equipped and afforded personal protection to minimize and avoid risk to their lives and safety.

Until recently, force protection for peacekeeping was presumed to be grounded in the United Nations mandate. That is the peacekeeping forces were inserted with the consent of the former fighting factions and would be viewed as a neutral and disinterested party. As such, they would not be targeted or attacked. However, recent experience has shown cloaking the troops with only a moral mandate is insufficient to dissuade, deter, or stop what have come to be regularly occurring attacks on peacekeepers using snipers, mines, or improvised explosive devices by individuals or groups refusing to accede to a cease-fire. In fact, as evidenced in the many peacekeeping missions conducted over the past ten years, attacks on peacekeepers serving in the new multi-dimensional peacekeeping operations are now the norm.

With the dramatically increased risk to peacekeepers from attack, this thesis proposes that there should be minimum levels of force protection materiel and personal protection equipment provided to peacekeepers and all peacekeeping missions by the United Nations. While "wrapping" peacekeepers in the moral cloak of impartiality and neutrality remains important, they must also be cloaked and outfitted with state of the art protective gear. As a minimum this should include providing individual body armor and protective eyeglasses for protection against small arms fire and shrapnel, and ballistic blankets for vehicle installation to reduce injuries from land mine and improvised explosive device's (IEDs) blasts.

Improving the safety and security of peacekeepers is in itself sufficient reason to pursue providing specific force protection materiel resources. But more than that, enhanced force protection for peacekeepers may also make UN Member States more willing to contribute forces to UN peacekeeping operations in which the risk of casualties has grown dramatically.

Background: Cobbling Together Peace Keeping Forces

The United Nations, by design, lacks a standing military force. Since the stand-by forces envisioned in Article 43 of the United Nations Charter have never been implemented, the U.N. is forced to "cobble together" forces, units, capabilities, and equipment "on the fly" for peacekeeping. Many argue this is neither an organized nor an efficient source of forces and other resources needed to conduct military operations in a complex peacekeeping environment. (Sherwood-Randall 244). The problems with a "cobbled force," in both training and length of commitment, was reflected on by retired U.S. Admiral Jonathan Howe, who served as the United Nations Secretary General's Special Representative (SRSG) for the UNOSOM II Peace Operation in Somalia in 1993:

> The UN has all the disadvantages of a volunteer organization. Troop contributors rotate units at short intervals and withdraw them altogether with little notice. Nations want to dictate where their contingents will serve and what duties they

> will perform. The UN does not have the authority to hold individual nations to a fixed contract. The result in Somalia was a significant loss of time due to constant reassignment and readjustment of the forces. (Howe 54)

The dilemma faced by the United Nations in peacekeeping is that it is expected to field a credible military force in a short period of time, but it has no standing military force military force to call upon. The UN's ability to field any peacekeeping forces is constrained by what the member states offer to provide. And ever present are the national interests of the TCC's whose commitment to the mission may change over time, and especially if the security situation in the peacekeeping area of operations becomes more difficult for the peacekeepers. This was evidenced by the tragedy in Rwanda. In a September 1994 address to the U.N. General Assembly on Rwanda, the Dutch Minister of Foreign Affairs Hans van Mierlo stated:

> If the deployment of a brigade could have prevented the indiscriminate slaughter of many hundreds of thousands, what then prevented us from doing so? Let us face it: the reason was that under the circumstances no government was prepared to risk the lives of its citizens ... If member states are not in a position to provide the necessary personnel, will it then not become unavoidable for us to consider the establishment of a full-time, professional, at all times available and rapidly deployable UN Brigade for this purpose: a UN Legion at the disposal of the Security Council?" (Concetta and Knight 20)

Lacking any consensus of its Member States for establishing a standing UN military force, the UN will continue to have to rely on forces contributed by member states on an ad hoc basis for each new peacekeeping mission authorized by the Security Council. Training and equipment status of each of these national contingents can vary widely.

Acknowledging this reality of "no change to the UN Charter" regarding standing military forces, the Brahimi Report (a report mandated by the UN Secretary General in 1999 to provide a "comprehensive review of peacekeeping operations in all their aspects" after a series of highly publicized peacekeeping failures) recommended some significant reforms in UN organizational structure for managing peacekeeping at the UN headquarters level including

command and control and support of fielded missions. While the Brahimi Report findings were comprehensive in detailing required improvements, in reality the report offered little that had not been previously discussed in terms of needed reforms for UN peacekeeping. To date, some of the Brahimi Report's recommendations have been adopted while others remain mired in bureaucratic discussion and debate. There were however no recommendations in the Brahimi Report about existing shortcomings in equipping individual soldiers in the national forces provided to the UN for peacekeeping missions for force protection. This remains a problem which seems to get little attention.

Too often force protection is dealt with only in terms of security directives and policies applying to the conduct of operations and in securing installations. The problem of force protection must also be viewed from "bottom-up" (the individual soldier in a peacekeeping mission) as well as the traditional "top-down" (command policies and directives) approach. This can be done immediately by ensuring that all peacekeepers are equipped with proven personal protective gear. Furthermore, while implementing specific security policies can often be politically sensitive, providing peacekeepers with improved personal protection equipment may help to sustain broad public support for a peacekeeping operation.

Some argue that focusing on protection equipment is only dabbling at the margin of peacekeeping operation improvements and, in any case, this should be the responsibility of each TCC. In fact, in addition to having a moral responsibility for ensuring that forces sent to peacekeeping are equipped to minimize injury or loss of personnel, reduced casualties from better protective gear will reassure and solidify public and political commitments of troops. A recurrent theme and problem in American and European political debates about peacekeeping is the public call for the withdrawal of forces when casualties occur or began to increase. (Record; Van der Meulen)

The Growing Concern About Casualties and Casualty Avoidance

The objective of all military commanders is to successfully accomplish the mission with minimal loss of personnel, equipment, and supplies. But in the politically charged climate of peacekeeping, it is the safety, health, and lives of the soldiers that often become the paramount concern. For some armed forces, what began as force protection, devolved to risk avoidance and has now advanced to casualty avoidance. Such concepts and concerns are now, de facto, the determining criteria for the commitment, engagement, and use of their military forces in peace keeping. One commentator has criticized the United State's position in this regard as follows:

> We have grown ever more sensitive about casualties--our own military casualties, opponent and neutral civilian casualties, and even enemy military casualties--and we seek to avoid them." Two events in particular may have contributed to the reluctance to enter into risky military operations, the killings of 241 American marines in Lebanon in 1983, and 19 Americans in Somalia in 1993 in hapless circumstances, both in military interventions in civil conflicts. (Sapolsky 124)

Some authoritative military scholars find that casualty aversion in the U.S. military, in fact, goes back much farther than the failed peacekeeping effort in Somalia in 1993. That it has both deep historical and philosophical underpinnings. Jeffery Record, in a seminal article on casualty aversion and casualty phobia wrote:

> A strong aversion to casualties is rooted in American history and culture. Americans value the individual much more than they do the state, and they have always sought—and with considerable success, it might be added—to substitute technology for blood in battle. But only recently has aversion become, at least in the minds of those making war and peace decisions, a phobia—i.e., an aversion so strong as to elevate the safety of American troops above the missions they are assigned to accomplish. Casualty aversion is healthy; casualty phobia is not. (Record 10-11)

America's long standing policy in evaluating potential military operations against the possible cost of lives of its soldiers was clearly evidenced over 60 years ago by then U.S. Army Chief of Staff, General George C. Marshall, who responded at the end of World War II to the

calls by British Prime Minister Winston Churchill for American forces to beat the Soviet Army to Prague by saying he was:

> "…loathe to hazard lives for purely political purposes." (Ehrman 161)

There is no doubt that the U.S. Army understands the evaluation and acceptance of risk in its military operations. But some argue that especially in the use and engagement of its forces in Military Operations Other Than War (MOOTW), the United States military has crossed the line from prudent risk management to a militarily problematic area of risk aversion. The U.S. Army Manual for Risk Management (Field Manual 100-14), defines risk as "the probability and severity of a potential loss that may result from hazards due to the presence of an enemy, an adversary, or some other hazardous condition." The reality seems to be that American commitment to peacekeeping is no longer governed by a prudent risk assessment but on insuring "low or no casualties."

> Policing missions frequently involve low strategic stakes for the United States. These missions are usually intended to promote American values rather than protect America's strategic interests. As a result, American leaders and the U.S. public are unwilling to sustain many casualties on policing operations. Success in these missions is possible, however, because America's low casualty tolerance is offset by the low risks that these missions tend to pose to U.S. forces. (Press 6)

Impact of Casualty Avoidance on Peace Keeping Coalition Military Operations

If casualty aversion is a primary consideration for American political leaders in making decisions for the commitment of U.S. forces to peacekeeping, should these risky operations be ignored or passed off to America's allies and friends? What will their perceptions and feelings be, if America, the world's recognized military superpower, dodges or passes off these missions as being potentially too dangerous?

> Why should our allies commit themselves to operations that we are not willing to undertake alongside them?…Over the long term, therefore, continued adherence

> to the quick, costless war presumption could well become the United States Achilles' heel. (Erdman 70)

However, when the United States does commit it's well equipped forces to a multi-national UN peace keeping force they generally bring with them advanced self-protection equipment such as body armor, protective glasses, and ballistic blankets. This being the case, can the United Nations, morally or politically, afford to have any other national contingents under its command that have less personal protection troops than that which is afforded to U.S. soldiers or other nation's better equipped troops?

The answer should be obvious. The United Nations must observe and conclude that other nations too are risk averse and casualty sensitive and the "best personal protection available" must be the standard for all troops and contingents serving in a UN peacekeeping mission:

> It is unlikely that this perspective is unique to the United States. After Spanish troops had suffered some 17 deaths in the Bosnian war, their government indicated that this was enough for them, and they withdrew from further confrontation, something that greatly encouraged the Croat gangs they had been dealing with. Similarly, Belgium abruptly withdrew from Rwanda--and, to save face, urged others to do so as well--when ten of its policing troops were very deliberately massacred and mutilated early in the genocide. It seems clear that policing efforts will be politically tolerable only as long as the costs in lives for the policing forces remain extremely low--and perhaps not even then. (Mueller 11)

The cohesion of the multi-national peacekeeping force and the force's eventual success could be detrimentally affected by an inequality in the available force protection equipment of the various national contingents.

Professor Record observes an overall degradation and detrimental effect of casualty avoidance as constraining resolve and military strategy.

> But the worst strategic consequence of casualty phobia is encouragement of politically inconclusive uses of force. Casualty phobia invites half-baked uses of force. It promoted a refusal to take advantage of the opportunity of war to use the force necessary to topple the regimes of Saddam Hussein and Slobodan Milosevic, both of whom senior American policymakers publicly compared to Adolf Hitler. (Record 2)

The effect it has on the soldiers accomplishing tasks and missions can be culturally tracked and observed. Military behavior and policy is thus distinguishable between the United States and a British manner of employment of troops, career considerations, and risk management:

> LTC Alistair J. Deas, a British exchange officer instructing at CGSC {the U.S. Army's Command and General Staff College at Fort Leavenworth, Kansas}, shed some light on the topic: "I had never heard of risk-aversion until I came to the United States. The British military and society see risk as part of a soldier `doing his duty.' It may well include dying in battle, and this is accepted as the mere nature of the business. British soldiers are trained and operate as infantrymen first, and conduct autonomous mission estimates and risk management from corporal to captain to major. We never change our mission due to risk, and we accept risk in realistic and dangerous training and operations. If we take casualties, we regret them certainly but don't dwell on them with lengthy investigations or witch-hunts. (Mueller Fn 27)

Addressing the multi-national debate on risk and the employment of forces in Bosnia in Operation Joint Endeavor U.S. Army Major Granger writes:

> Because of different perceptions of risk to soldiers, force-protection measures differed among participating armies. French and British commanders relaxed their force-protection posture to berets and soft caps with no body armor, while U.S. commanders put their forces in "full battle-rattle." (U.S. General) Clark, at that time the director of strategic plans and policy for the Joint Staff, attributed the U.S. decision to several factors: the Vietnam war; the extremely low casualties taken in the Gulf; and the failed raid in Mogadishu, Somalia. He found it interesting that "the same pressures were not operative on our European Allies. France, and to a lesser extent the United Kingdom, suffered loss after loss in peace keeping operations in the Balkans and elsewhere. Those risks, while regrettable, were considered part of the duty." (Granger 43)

The multi-national forces clash and cultural perceptions is an overlay to the risk decisions, and can engender disharmony and create confusion. A nation's acceptance of risk of casualties and risk of the acceptance of casualties, are the contrasts between these military decisions and political decisions. In that calculus of risk and loss, the higher the decision maker is in the process, the greater the concern of the effect of losses and political considerations.

How then should our commanders and peacekeeping forces confront, address, minimize and handle these risks? A recent journal article entitled "Risk Management and Homeland

Security" by Bin Jiang analyzed military risk and how to evaluate and deal with the concerns. It defines risk as "a potential future problem that has not yet occurred that prevents or limits the achievement of your objectives as defined at the outset of the project." (Jiang 33) The management strategies and techniques that involve decisions on risk response are:

1. To *prevent* a risk means eliminating the cause before it is an issue.
2. To *accept* a risk means letting it occur and taking no action.
3. To *avoid* a risk is to take action to not confront a risk.
4. To *adop*t a risk means living with a risk and dealing with it by "working around it."
5. To *transfer* a risk means shifting a risk over to someone or something else.
6. To *migrate* a risk means reducing the probability that this risk will occur.

This thesis proposal prevents risk, adopts risk, transfers risk and migrates risk. The proposal confronts the need to merely accept the risk or avoid the risk. The clearest warning and advice on risk and casualty avoidance is our failure to address, manage or appropriately consider the issues. It is not risk itself that we need to be concerned with, but the "Failure to effectively manage risk may make an operation too costly-politically, economically, and in terms of combat power (soldiers lives and equipment). (FM 100-14, 1-1).

A further problem confronting peace keeping with a multinational force is a commander's lack of understanding or expectation regarding the equipping, quality and training of different military contingents until they are in the field. (Beattie 214)

How then should those credible peacekeeping forces be equipped and trained? Michael E. O'Hanlon bespeaks of the need for the high tech military powers to reach out and support the lesser powers, in an active role to become trained, proficient and suitably equipped with modern arms, armor, and combat gear.

> What about non-Western countries? Expensive hardware such as airlift capabilities, helicopters, and fighter aircraft, especially in large numbers, will generally be beyond their means. It is more realistic to ask these countries to develop well-trained soldiers, proficient in basic combat and peacekeeping skills, and equipped with serviceable small arms, body armor, vehicles for transport, and logistics and communications support for sustained operations abroad. Even if such countries cannot be expected to lead forcible interventions, they can provide

> valuable combat forces that enable peacekeeping missions to uphold ceasefires and peace accords under challenge. (O'Hanlon 37)

The inability or failure to integrate and utilize the multinational forces or deal with the under equipped troops committed, causes significant problems and precludes effective operations.

> There were a number of incidents where troops from Third World countries showed up for a mission lacking the most basic equipment such as uniforms, winter clothing, personal weapons, communication equipment and /or armoured personal carriers. This resulted in severe criticism about their effectiveness. As these troops were quickly marginalized, there was a muted criticism by some existing contributors that some developing countries had been often too willing to deploy troops abroad under UN auspices, as a source of training and hard currency. As such, there was and there still is an argument that unevenly trained personnel coupled with the unavailability of basic operating equipment will preclude effective operations. (Plante 2)

Avoiding Having to Putting a Name to a Casualty

While casualty avoidance begins with the acknowledgement and acceptance of casualties as part of military planning, eventually, it crosses over from planning to reality, when we put names to actual losses. If properly planned, addressed and reviewed, casualties and death are not in and of themselves indicators of mission failure.

The force planning must consider these questions: What will we be confronted with and what do we have to protect against? How will body armor, protective glasses and ballistic blankets prevent, adopt, transfer and migrate the risk of casualties and enhance force protection?

> One potential role …in a peacemaking scenario would be the ability to defeat the "iron sight." …(W)e have not developed a technique to defeat a lone sniper with a rifle, or a RPG or other optically guided weapon. Small numbers of snipers can wreak havoc on an entire city as they did in Sarajevo. They can also bring down helicopters as they did in Mogadishu, and they can also destroy the morale of a normally effective combat force. (Cook 16)

The effect of snipers and the "silver bullet" randomly fired at peacekeeping troops can cause serious injuries and medical consequences, which could be mitigated by the use of body

armor. As reported in a recent Los Angeles Times article, today's body armor can stop rounds "…from a Kalashnikov rifle, a 9-millimeter handgun, or fragments from a grenade." (Schrader)

An international military medical study reviewed historical data and wound information, with recommendation for methods to design body armor and ensure even greater personal protection for the soldier.

> In this study we present a new approach to the design of the military personal armour system (MPAS). This approach is based on a computerized analysis of the exact anatomical location of 405 penetrating war injuries (290 shrapnel and 115 bullet injuries) in 164 soldiers killed in the Lebanon war. All the penetrating injuries (hits) were plotted on a computerized image of the human body. About 90 per cent of all hits were to the front of the body; 55 per cent of all hits were to the left side. About 45 per cent of all hits were to the torso, which is slightly more than the torso's proportion of total body-surface area (36 per cent). Of all hits to the torso, 64 per cent of the shrapnel hits and 73.3 per cent of the bullet hits were limited to the front mid torso (T4 to T9). The head at the level of the helmet received 9 per cent of all hits, most of which were over the frontal bones (72.4 per cent). The body part with the greatest density of penetrating injuries was the face, with 22.2 per cent of all penetrating wounds, and in particular the mid face, from the level of the lips to the level of the zygomatic bones, was especially vulnerable, sustaining 10 per cent of all the penetrating wounds. These findings suggest several possible modifications in the standard MPAS: an additional protective device over the front mid torso may be incorporated; the face may be protected by a transparent and lightweight face-shield; a horizontal margin added to the standard helmet may protect the upper face from missiles from above; a chin cover may protect the lower face. (Gofrit et al 578)

These recommendations were considered by the U.S. Army in the design and development of the new Interceptor Body Armor. Following the U.S. Army Ranger Operation in Somalia, a medical team analysis of casualties and the effectiveness of ceramic plates in body armor concluded:

> No missiles penetrated the solid armor plate protecting the combatants' anterior chests and upper abdomens. Most fatal penetrating injuries were caused by missiles entering through areas not protected by body armor, such as the face, neck, pelvis, and groin. Three patients with penetrating abdominal wounds died from exsanguination, and two of these three died after damage-control procedures. Conclusion: The incidence of fatal head wounds was similar to that in Vietnam in spite of modern Kevlar helmets. Body armor reduced the number of fatal penetrating chest injuries. Penetrating wounds to the unprotected face, groin, and pelvis caused significant mortality. These data may be used to design improved body armor anterior. (Mabry)

What resulted with the use of this new body armor, was the casualty and wound minimization protection afforded by the U.S. Army's new Interceptor Body Armor. It was field tested in the hills of Afghanistan during Operation Anaconda in the Spring of 2002. Commenting on the casualties and wounds suffered and the effectiveness of the new body armor, a surgical team member Dr. (Maj.) Brian Burlingame said:

> There were fewer significant wounds than we expected. The protection the front plate gives a soldier's chest makes a big difference in the wounding pattern. A guy comes in with shrapnel wounds to his arms, and his vest has a dent where a round went in right over his mid-chest. (Naylor 1)

During 2003 in the Iraq War the same body armor, but more widely distributed and used, has contributed to wounded soldier survival rates and significantly enhanced overall force protection. A recent report quoted U.S. Officials:

> 'Body armor and helmets have been the very big winner on the battlefield this last go-round,' said Robert Kinney, who heads the individual protection division at the US Army Soldier Systems Center in Natick, Mass. He added the Iraq war marks the first time the military used ceramic body armor -- lightweight plates inserted into the front and back of a soldier's combat vest -- on a mass scale. That protection has translated into fewer immediately fatal injuries. "We are seeing very few chest wounds and very few head wounds," said Colonel David W. Polly, chief of the Department of Orthopedic Surgery and Rehabilitation at the Walter Reed Army Medical Center in Washington. (Schlesinger 1)

There is clear proof that body armor saves and that there are far fewer casualties arriving at military hospitals with abdomen or chest wounds. Anecdotally, U.S.Air Force Maj. Mark Ervins, a surgeon at the Landstuhl Regional Medical Center in Germany, stated: "That's kind of remarkable... Patients with shrapnel wounds from mines or other explosives often come with wounds along their extremities that stop 'like a sunburn lines' right where the body armor starts." (Stern) Beyond proven ability to save lives, the design efforts are to enhance body armor to field a "…self-adjusting vest (that) will position the protective plates about two inches from the torso,

…to reduce chest injuries or bruising in the event that the wearer takes a hit." (Miles) These studies will possibly offer a greater medical and bio-mechanical understanding of:

> …(W)hat happens "behind the armor" …as they perform their biomechanical evaluation of chest armor and its part in combat survivability of Marines and soldiers. The study, which looks at the effects of blunt trauma to the chest, or "behind body armor" effects, has provided significant findings on lethality, injury thresholds, and injury patterns associated with nonpenetrating ballistic impact to armor-protected thoracic sites. (Ham and Wagner)

The statistical proofs, the field results and the medical reports demonstrate the success of the body armor and its propensity and promise to reduce casualties.

Risk Reduction and Force Protection Body Armor

A recent Wall Street Journal article tracing the development of ceramic armor for military use noted the broad adoption and use of material through out the armed services.

> The current materials have more in common with china dishes than with the metal plates used since medieval times to form protective suits. Elite American units such as the Delta Force have been wearing ceramic armor-about half as heavy as the metal variety-since the mid-1990's. Now more U.S. ground forces will get it. such lightweight protection is likely to be crucial in close-up combat, such as in cities, and in battles facing metal-piercing bullets. (Squeo B1)

The physical protective function of body armor is heightened by an apparent psychological boast for personal survival afforded by its use and wear.

> Body armor was widely used for the first time during the Korean War, providing not only protection but also a much-needed morale boost for soldiers. "Its use was so closely interwoven with the defensive psychology of static warfare as to make it almost a symbol of the new GI, who, lacking in the enthusiasm and clear objectives of World War II, calculated his own victory in terms of personal survival," according to U.S. Army Uniforms of the Korean War, a book by Shelby Stanton. Body armor is credited with reducing chest and stomach wounds by 60 percent during the war, according to Stanton's book. (Kirk)

The quandary of the silver bullet and the sniper's rifles maybe overcome by the use and wear of body armor. Finally, improvements in force-protection technologies may reduce the

number and severity of casualties, making all types of operations less costly. Strong, flexible, lightweight body armor may reduce the exposure of infantry to small arms fire. (Press 5)

The U.S. Army body armor has moved from flak jackets that were heavy and offered minimal protection as compared to the newest and light weight and rifle bullet stopping "Interceptor" personal body armor."

> It's natural for service members entering a combat area to want protection. Up until now, so-called "bulletproof vests" have been heavy and not all that bulletproof. This has changed with the introduction of Interceptor Body Armor. An Army and Marine Corps team has produced body armor that provides protection and trimmed about 10 pounds off its predecessor -- the personal armor systems, ground troops vest. Army project director Kyle Hassler said the total system weighs in at about 16 pounds. The body armor can be tailored to fit the mission. "The vest alone will protect soldiers against 9mm rounds," she said. "If a soldier is on a peacekeeping patrol and they don't expect to face a lot of opposition, the vest alone will work. "If the mission is more serious, then the soldier can add plates to the vest," she continued. "The plates and vest combination will stop multiple hits from 7.62 mm rounds." The Army and Marine Corps realize not all service members are equal and the plates come in five sizes and go in the front and back of the vest. "The vest also has a quick release feature," Hassler said. "If you need to drop the plates, one tug and they're gone." The vest comes with neck and crotch protection attachments. It will work with all current and anticipated load carrying equipment. With the fasteners along the right side, the vest still protects the front of the body even when open. (Garamone 1)

The major improvements of being lighter and with more stopping power than previous systems, answers soldier's calls for lightening combat loads (thereby enhancing maneuverability) while increasing protection (survivability).

> The Interceptor's inter-changeable components give troops the ability to dress to the level of a particular threat. Applications include combat operations, peace-keeping missions and field-training exercises. Regardless of the situation, Interceptor Body Armor functions as an effective defense against mines, grenades, mortar shells, artillery fire and rifle projectiles. (Bulletproof)

With constant review and refinement, the U.S. Army is making it user friendly and user protective. The Interceptor Body Armor as fielded in Afghanistan was not without field problems and concerns as noted here from an Army review of needs for improvement and lessons learned. Yet these forces reported that they wore the Interceptor armor and commanders stated "…that he

had no difficulty keeping his soldiers in their IBAs". The study found the need for improvements since:

> Soldiers complained that the inflexible nature of the back plate hindered their mobility. 43% of soldiers stated that the IBA hindered their mobility, especially in assuming and operating in the prone firing position. Rear SAPI plate caused interference with the PASGT helmet when in prone position and with the ALICE rucksack frame. Proper sizing was an issue. One soldier was killed when he was shot through the side and the bullet passed between the front and rear armor by the sizing straps. Soldiers complained that the arms holes are too small and that they lose circulation in their arms, especially when wearing their rucksacks. (Lessons Learned)

The U.S. Army has reported that the Interceptor's effectiveness has increased and the "cost" in terms of weight to an individual soldier from the vest and ceramic plates has been reduced.

> The current Interceptor Body Armor vest can stop fragments and more. Because of the work of this team and the success of this ManTech project, two highly effective, lightweight ceramic armor materials vastly enhance the Interceptor's capabilities. Siliconized silicon carbide and boron carbide plates that provide greater protection, impossible with this vest in the past, are now available to insert in the vest's pockets. The new armor plates weigh about half as much as the traditional 8-pound plates, and average cost per plate has dropped from $850 to $350. (Nattick)

The call of the United Nations Security Council in Resolution 1315 (Woman Peace and Security October 2000) supports gender mainstreaming in planning, sustaining and staffing peace support operations and peacekeeping measures and "…gender equality must permeate the entire mission…ensuring the participation of women and men as equal partners and beneficiaries in all aspects of the peace process." (Windhoek 2) This assignment of female soldiers becomes an important consideration in risk management and equipping the forces.

> Incorporating females into male-based systems may impose proportionate protective a functional sacrifices on females. … Future body armor design options depending upon fit test outcomes include calculating pattern alterations to male armor systems to accommodate females by modifying areas of poor fit and function; developing an exclusive female-specific design and sizing system. The ultimate objective for this program is to develop a framework for designing next-generation body armor systems that provide equal protection and function for males and females. (Body Armor)

Since most United Nations Peacekeeping forces will include women, accommodation of female body shapes and variations of male and female soldiers in soft vest and plate body armor systems presents a unique set of design problems. That is neither an insurmountable design problem nor a presently unmet logistics problem.

The now heralded success of body armor mandates its use for force protection for United Nations force commitments and peacekeepers.

Seeing Force Protection: Protective Glasses

Following body wounds, the second most prevalent injury and debilitating situation are eye injuries. Whether from fragments, ricochets, or laser injuries a minor expenditure for protective eyeglasses will ensure large returns and great protection for soldiers and peacekeepers. A recent announcement of a newly developed and soon to be field eye protection system would serve the purpose:

> A mixed assortment of protective eyewear is on its way to being replaced by the streamlined Military Eye Protection System (MEPS) developed at the U.S. Army Soldier Center (Natick). The Army and Marine Corps have used a combination of the Ballistic/Laser Protective Spectacles (BLPS), Special Protective Eyewear, Cylindrical System (SPECS) and Sun, Wind and Dust Goggles (SWDG) since the mid-1990s to shield troops from eye injury. With the new eye protective gear, the number of lenses is cut in half and the level of protection is increased. An estimated 10 percent of battlefield casualties are from eye injuries, a figure that has steadily increased since the Civil War, according to Harold Moody, project engineer. Explosive fragments, tree branches, blowing sand and rocks, and lasers are major battlefield hazards. A soldier's eye is easily damaged by fragmentation from a nearby blast," Markey said. "Even small particles such as sand can injure the eye. These injuries are also east to protect against using polycarbonate. Our eye protection is designed to stop a .15 caliber, 5.7-grain fragment simulating a projectile traveling at 640-660 feet per second. (Advanced Eyewear 6)

The minimal cost for this acquisition and the maximum protection afforded to eyesight and reducing vision casualties, protects the force, gives them a sense of security, and satisfies the moral and legal mandates for force protection.

Body armor and protective glasses will afford unparalleled individual protection to peacekeepers.

Covering Damage from Mines: Ballistic Protection Blankets

The threat of land mines (and now increasingly from improvised explosive devices, IEDs) and their destructive effect is ever present throughout the world and confronts all peacekeeping missions. "With main roads often unpassable, the only recourse is to travel by the inevitable potholed dirt roads that are often strewn with landmines forming a threat to aid workers trying to create a better environment for the local population. …Eighty percent if the millions of mines that have been laid in the world's most contested hotspots are anti-personnel devices. The potential for fatalities means that good ballistic protection is essential." (Klang)

The lethal effects of shrapnel to the commercial or unarmored vehicle's occupants can be reduced. The installation or retrofitting of ballistic protection blankets to military and civilians vehicles adopted for peacekeeping is possible and practicable. The ubiquitous Toyota Land Cruisers used by many peacekeeping forces are routinely enhanced with these measures, at minimal costs and quickly. Many Toyota dealers install such after market protection and publicly advertise their services. (TGS Today)

A report on the U.S. Army's "Task Force Ranger" in Somalia, reviewed the need for technological improvements to advance force effectiveness and noted the need for a light armored vehicle for urban combat. "After Somalia the U.S. Army made significant investments in developing strap-on armor panels for the HUMMV…", but "An armored, light, wheeled tactical vehicle is required for effective fighting in urban environments." (Akers 22)

Following the death of over seven soldiers in Bosnia from mine accidents and vehicles, in 1996 the U.S. Army ordered and delivered to Bosnia 3,000 Kevlar Ballistic Blankets for installation in the deployed vehicles for protection from mines. (Kozaryn 2) The "ballistic blankets were "…tailored to fit vehicle floorboards, cargo beds and sides. The blankets will serve

as additional protection against injury by mine fragments." (Hasenauer 3) "The blankets are designed to fit on HMMWVs, 2 1/2-ton and 5-ton trucks and HEMTTs that will not be getting new armor kits, said Timothy Dunn of Dimensions International, a private firm contracted to field force-modernization measures. The kits, which weigh more than 300 pounds, come in four, 6-foot long pieces that wrap from the top of each seat down onto the floorboard.

> Velcro strips glued to the floorboard keep the covers from slipping, while web straps secure to seat backs. The covers were designed to withstand a 12-cubic centimeter blast, Stollberg said. "When the blast hits, it goes up," he said. "It will probably lift the vehicle and turn it over, but it (the covers) will keep all your body parts intact. Generally, it'll save your life." (Roache 1-2)

The design and function of ballistic blankets is to "…protect against anti-personnel fragmentations devices (i.e. hand grenades and antipersonnel mines…" and "were developed to reduce the effectiveness of threat ballistic fragmentation producing ordinance." (Department of the Army)

A survivor from a mine explosion that destroyed his vehicle and was saved by the Kevlar Ballistic Blankets said:

> Spc. Coey L. Deshazo will never again complain about how uncomfortable sitting on a Kevlar blanket is. It's the one thing that probably saved him from serious injury-or even possible losing his life-when the HMMWV he was driving ran over an antitank mine recently. Six weeks ago when the blankets came in I did not want to install them…everyone know how uncomfortable they were going to be. (Wright 3)

The range of non-descript vehicles that will be fielded with the forces requires that they all be brought to some level of improvement to afford protection from mine blasts. Whether retro fitted to the vehicles before deployment, a field expedient improvement to existing vehicle systems, fitting vehicles that arrive in the theater or are acquired for use locally, the use of these ballistic protective blankets is a cost effective enhancement that affords protection to the occupants.

Ballistic protection blankets are a versatile and cost effective solution to the use, acquisition, or armoring standardized vehicle. This field improvement accommodates either what the forces bring with them or that is acquired locally.

Summary

Calling and committing peace-keepers to duty for world wide service, requires more than asking them to don the 'Blue Helmet". There is an obligation to ensure a minimal level of equipment for protection of the soldiers and the over all protection of the force. Assuming that equipment will not be loaned or donated, the expenditures per soldier for a vest and glasses not exceed $890 (US) per soldiers. Vehicle protection with ballistic protection blankets if field in stalled by local personal will not exceed $1500 (US) per vehicle. A six hundred-soldier unit would cost out at $534,000.00 for equipping the soldiers and $150,000 for outfitting 100 vehicles. This results in a total cost of only $684,000.00 (US), a meager sum when considering the enormous potential cost of medical expenses for injured soldiers and the incalculable cost of human suffering of lifelong injuries to soldiers and other peace keeping personnel from missing limbs.

These relatively nominal expenditures and recommendations will meet a legal and moral obligation to ensure a soldiers safety in a multi-national peace keeping brigade and the concomitant enhancement of the effectiveness and success of the peacekeeping operations. There is but a minimal expense at the front end of the operation, and when compared to the subsequent potential for loss of life, medical care of wounded, and a potentially unsatisfactory field result, the cost benefits mandate this minimal equipment requirement.

Fielding the force for a United Nations Peacekeeping Operation is not merely a task of marrying third world brigades to modern equipment. It is ensuring that first the soldier is protected, which affords a greater degree of force protection, ensures a level of proficiency and professionalism for the peacekeepers, and removes personnel risks that would inhibit mission

success. Enhanced force protection could quickly, economically, and broadly be evidenced and provided for all who wear the "Blue helmet."

Whatever the genesis, there are multi-national concerns on how we address the issue, that will permeate the desire and ability of member nations to commit to United Nations peace keeping commitments. This proposal for a minimum equipping of individuals soldiers with body armor, protective glasses and vehicles with ballistic blankets for mine protection would deal with the risks attendant to these operations and casualty avoidance.

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Appendix A: U.S. Army Product Manager Fact Sheet: Interceptor Body Armor

The Interceptor Body Armor is a joint service item designed and developed to incorporate the requirements of the Army and Marines. This system was designed to replace the ISAPO and the Personal Armor System Ground Troops (PASGT) vests.

Description:

Interceptor is the model name for modular, multiple-threat body armor. The Interceptor has 5 sizes with front and back ergonomically designed plates. The Outer Tactical Vest (OTV) without plates weighs 8.4 lbs. (size medium) and protects against fragmentation and 9mm rounds. The Small Arms Protective Insert (SAPI) plates can withstand multiple small arms hits. The total system weight is 16.4 lbs, (size medium) which weighs 10 lbs. less than the PASGT/ISAPO combination. There are attachable throat and groin protectors for increased protection and webbing attachment loops on the front of the vest, which accommodate the same pockets from the Modular Lightweight Load-Carrying Equipment (MOLLE). These features allow each individual soldier to tailor loads to meet mission needs.

Component Materials:

OTV: Cordura and Kevlar (KM 2-706 W/R) 600 denier or future upgrades.
SAPI: Composite ceramic plate (B4C ceramic tile) coated boron-carbon and Silicon Carbide tiles.
Color: Four-color woodland camouflage pattern
Weight: System 16.4 lbs. (size medium) OTV: 8.4 lbs. SAPI 8.0 lbs. per pair (size medium)
Size: X-Small, Small, Medium, Large, and X-Large
Basis of Issue: For the OTV: One (1) per ground Soldier, SAPI: One set for every three OTVs.
Price: OTV: $530.00 SAPI: $974.00 per pair (Medium) (*N.B. now reduced to $350.00 per pair*)

Source:
<http://www.pmsoldiersystems.army.mil/public/FactSheets/factsheet.asp?id=38>

Appendix B: Protective Glasses – U.S. Army Military Eye Protection System

The Eyes Have It: New Battlefield Armor - Special to the American Forces Press Service

NATICK, Mass., Jan. 22, 2002 -- The new, streamlined Military Eye Protection System developed at the Army Soldier Systems Center here is about to replace a grab bag of current protective eyewear. The Army and Marine Corps have used a combination of the Ballistic/Laser Protective Spectacles; Special Protective Eyewear, Cylindrical System; and Sun, Wind and Dust Goggles since the mid-1990s to shield troops from eye injury. The new gear increases protection and works with half the number of interchangeable lenses needed by today's lineup. Soon, troops will have a system in sleek goggles or spectacles and a one set of interchangeable lenses that can fit both. “Soldier acceptability is tough," said Michelle Markey, project officer at Product Manager-Soldier Equipment. "It is difficult to get soldiers to wear eye protection, especially those who are not used to wearing glasses. They are more likely to wear their eye protection if it is something they look good in, and I think these goggles and spectacles will be well-accepted."

Of course, there's more than good looks and fashion at stake. An estimated 10 percent of all battlefield injuries are to the eye, and that rate has climbed steadily since the Civil War, according to project engineer Harold Moody. Explosive fragments, tree branches, blowing sand and rocks, and lasers present the major battlefield hazards to the eyes. "These injuries are also easy to protect against using polycarbonate (plastic)," Markey said. "Our eye protection is designed to stop a .15 caliber, 5.7 grain fragment simulating a projectile traveling at 640-660 feet per second." The new protection system carries over the lightweight, tough polycarbonate used in current protective eyewear that passed tests for ballistic resistance. But now the new spectacles expand wearers' peripheral protection. Like SPECS and BLPS, they also meet the American National Standards Institute requirements for occupational eye and face protection.

Another military requirement is protection from laser range finders and target designators. BLPS, SPECS and SWDG each use four lenses for four purposes: clear, sunglass, three-line laser protection and two-line laser protection. When lasers are not a hazard, soldiers can use the clear lens to protect against ballistic and ultraviolet rays day or night, or use a sunglass lens during the day that adds sun glare protection. When lasers are a danger, soldiers currently switch to a green lens that blocks two wavelengths for use in dim light or a dark lens that shields three wavelengths for use in daylight. Special coloring and coatings absorb the laser to eliminate or minimize injuries. "The problem with (the daytime lens) is that it's dye-based and very dark. It is not suitable for use at night, which is why there is a separate two-wavelength lens, which has better transmission properties for nighttime use," Markey said. "The third wavelength wouldn't likely be used at night anyway, because it would be visible." The new system uses two types of laser-reflective technology sandwiched between two layers of polycarbonate for durability, and it covers a wider band of near-infrared wavelength energy than the current systems. Separate day and night lenses are gone. "We're looking at blocking broad bands of laser while minimizing the impact on color vision," Markey said. "This is critical in order to maintain the soldiers' ability to read maps and use devices such as image intensifiers. We also wanted better light transmission than the current systems and ultimately would like to have tunable laser protection that adjusts to the hazard." Other improvements are in fit, comfort and logistical efficiency. Ballistic/Laser Protective Spectacles were designed for prescription eyeglass wearers. They were one-size-fits-all and hard to fit users properly. Special Protective Eyewear, Cylindrical System, come in two sizes for better fit, but they can be worn only by those with normal vision. Military-issued eyeglasses fit inside Sun, Wind and Dust Goggles, but often with just enough room. The new system can be worn by anyone and comes in two spectacle sizes for an improved fit while retaining just one size of goggles. A prescription lens carrier snaps into the goggles and spectacles frames if needed. Clear, sunglass and laser lenses, all with ballistic protection, are interchangeable between the large

spectacles and goggles for simpler supply and storage. Spectacles or goggles, along with two extra lenses, are stored and carried in a rigid foam case with a green cloth cover.

The Military Eye Protection System was tested with more than 26 pieces of equipment to ensure optical and structural compatibility, Moody said. Markey demonstrated how easily the goggles tighten and loosen for fall-to-the-chest capability, a feature important to a gunner looking through his tank or infantry vehicle's internal sights. Currently used goggles have a simple elastic strap and are stowed on the helmet, which interferes with the proper use of the tank sights, said Moody. Goggles are undergoing user evaluation at the Marine Corps Air- Ground Combat Center at Twenty-nine Palms, Calif., and both goggle and spectacle prototypes are being evaluated at Fort Campbell, Ky. Fielding is expected to begin in 2005. For more information about the Army Soldier and Biological Chemical Command or the Soldier Systems Center (Natick), visit the command's Web site at http://www.sbccom.army.mil.

Source

<*http://www.defenselink.mil/news/Jan2002/n01222002_200201221.html*>

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http://www.calguard.ca.gov/40div/Files/BPB.txt

3RF BALLISTIC PROTECTIVE BLANKETS - WARNING MESSAGE

G-3/5/7 READING FILE
PTAUZYUW RUEADWD1609 3232212-UUUU-RUEASRA.
ZNR UUUUU ZYW ZOC ZEO T ALLL ARMY REPS AND ACTIVITIES
P R 192024Z NOV 03
FM DA WASHINGTON DC//DAMO-AOC-CAT//
TO ALARACT
INFO RUEADWD/DA WASHINGTON DC//DAMO-AOC-CAT/DALO-LOC//

BT
UNCLAS ALARACT 140/2003
SUBJ: BALLISTIC PROTECTIVE BLANKETS - WARNING MESSAGE
1. THIS MESSAGE IS INTENDED TO ADVISE COMMANDERS OF THE VARIOUS BALLISTIC PROTECTIVE BLANKET CAPABILITIES AND LIMITATIONS.

2. THE BPB, AS PRODUCED BY "PROTECTIVE MATERIALS COMPANY" (PART # VA710) AS WELL AS OTHER SIMILAR BALLISTIC BLANKET SOLUTIONS PRODUCED BY "PROTECH ARMOR SOLUTIONS" AND "POINTBLANK BODY ARMOR" WERE DESIGNED TO PROTECT AGAINST SMALL ANTI-PERSONNEL FRAGMENTATION DEVICES (I.E. HAND GRENADES AND ANTIPERSONNEL MINES), WHICH IS NOT REPRESENTATIVE OF THE PRESENT THREAT IN IRAQ.

3. THE PROTECTIVE BLANKETS WERE NOT DESIGNED TO PROTECT AGAINST CURRENT OIF THREAT CAPABILITY SUCH AS 7.62MM AND IEDS (IMPROVISED EXPLOSIVE DEVICES); RATHER THEY WERE DEVELOPED TO REDUCE THE EFFECTIVENESS OF THREAT BALLISTIC FRAGMENTATION PRODUCING ORDNANCE. TESTING TO DATE OF THESE VARIOUS SOLUTIONS WHEN USED AS INTENDED (SINGLE LAYER) HAS SHOWN THAT THEY PROVIDE NO PROTECTION AGAINST THE SMALL ARMS THREATS CURRENTLY EMPLOYED IN OIF AND MINIMAL PROTECTION AGAINST THE CURRENT IED THREATS.

4. AN INCREASED LEVEL OF PROTECTION AGAINST THE IED THREAT IS ATTAINABLE BY USING AT LEAST FOUR LAYERS OF THE MATERIAL OR PUTTING THEM OVER ARMOR PROTECTION ALREADY INSTALLED.

5. EXPIRATION DATE OF THIS MESSAGE IS TBD.

6. POC MAJ VOIGT (703) 604-7251. EXPERATION DATE CANNOT BE DETERMINED.
BT