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LESSONS FROM THE FALKLANDS
AN OPERATOR'S VIEW

Lecciones aprendidas que se deben tener en cuenta según un operador de la Coventry durante el conflicto de Malvinas, por D. Hart Dyke.

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Lessons from the Falklands

— An Operator's View

THE Falklands War focused my mind very sharply on what I wanted from my ship and its weapon systems to combat the threat. I now recall some of my thoughts and experiences which will always influence my actions at sea in the future, and which I hope may be of interest to others.

First of all I must mention people. Military technology is only one aspect of an overall fighting capability. In war it is the quality, training and skill of those who take part that is crucial. Furthermore, it is high morale which makes men endure and show courage in times of fatigue and danger. It is this quality, not so much an advantage in numbers of men and weapons that counts. Indeed, we were far outnumbered both in the air and on the ground. High morale cannot be achieved if men are not well trained and if they do not have confidence in their equipment and weapons.

Men must be well trained and maintain high levels of practice. To help achieve this, On Board training equipment needs to be an integral part of our systems to give operators practice, measure their performance and assess how well command teams are fighting their high technology ships. Practice makes us confident which in turn raises morale. In the Falklands we did have confidence, but we could have had more.

Now a word about the conditions in which we fight. The environment in which the sailor fights is a harsh one but if we make a proper study of men at sea in their working environment we can make life a great deal better for them — such that they can fight much better. In other words the job must fit the sailor; that means the equipment — and how and where he has to operate it — must fit the sailor too. Ergonomics is the word.

After a few days of war my key operators in the Ops Room began suffering from conjunctivitis. This was entirely due to the

poor colour and the small size of the lettering on the Video Displays and Totes. Add this problem to the fear and tension, the cramped space, and the desperate struggle to manipulate the ponderous technology of the computer system, then you can understand how difficult it was to get a missile in the air to intercept 'pop up' targets that appeared at high speed from behind the hills. This was, of course, thoroughly demoralising. I shall always remember those pale and strained faces with streaming eyes trying to detect the enemy in the air and to get the system to react speedily against it.

Designers should remember that most men will always be just average people, though they will always be trying their hardest. You will not be able to have an Operations Room full of geniuses. Simplicity is the key. Systems and weapons that are quick and easy to use are the ones that count in the heat of battle. The ergonomics must be right.

Now I come on to weaponry. Ships must have both offensive and defensive weapon systems. If a warship is to be credible it has got to have the ability to hit hard in at least one dimension, and, above all, to have the ability to defend itself and survive in order to hit hard again.

I believe in almost any situation, enemy missiles or aircraft are bound to get through the outer layers of air defence. Ships must therefore have reliable, simple, and effective Close Range weapons that can be properly directed and controlled from a Central Direction Platform on the Upper Deck. It is difficult to understand why we ever removed such guns and control arrangements from ships. A ship's company that knows its ship has good Close Range weapons will assuredly have high morale and a fighting spirit almost regardless of the odds against them. In my last desperate fight I had Sailors on the

Upper Deck with machine guns and rifles to try and fight off the Skyhawks and Mirages. They felt better doing that than nothing.

It is vital to have Close Range Weapons Systems for our ships and it is vital that this inner layer of defence is 100% reliable. There is lots of scope for invention and development here, whether it is hard kill weapons such as missiles or guns, or decoy or distraction devices. Again simplicity is essential. Over-sophistication would be dangerous. That brings me to reliability.

The harsh environment of the sea demands robust equipment. The Sea Harrier epitomised this in the Falklands. It was the *reliability* both of the aircraft and the Sidewinder missile, not sophistication, that won the air battle. Furthermore, that simple but brilliant invention of the ski-jump, which considerably eases the wind restrictions on aircraft compared with the conventional Carrier, ensured a rapid turn round and an astonishingly high availability of aircraft in the air. Another weapon that impressed me was the helicopter launched Sea Skua missile. I took a few on board just before the war started, sent my helicopter crew over to the supporting auxiliary ship for a quick course on how to use it, and a few days later the missile went into action. We totally destroyed a patrol ship with 2 direct hits with missiles. That's my sort of weapon; no time for maintenance or testing — just press the button when you want it, and it works! Reliability to me does not mean a percentage figure; it means that any weapon system will work *the moment I want it*. There were times when mine did not.

I would now like to discuss maintenance and how I saw it last year. One essential to grasp very early on in war is that you are on your own. It is no use worrying the Flagship with your problems or expecting a spare part to appear out of the sky to overcome your defects. If there is not a spare on board you have to fix things yourself. Besides, any stores organisation dependent on helicopter transfers to ships several thousand miles away from its depots is

bound to have some shortcomings. I had been trying for several days to get a spare part for a vital bit of equipment, which was life or death to me. Eventually a helicopter arrived and instead of the spare part it delivered a brand new fridge! We had to exercise every form of craft skill, innovation and ingenuity to keep on top line, and I do not see that this will change in any war. We somehow fixed our long range radar in the middle of an air raid by using the elements of a toaster from the sailors' dining room. We used the steel legs of swivel chairs bolted to the floor of the helicopter to provide revolving machine gun mountings. Miracles were achieved by the Engineers in overcoming serious defects which normally merited a return to harbour for assistance. The doctor had to be a dentist as well. I needed every one of my ship's company and, not least, the most junior operators and mechanics.

Ships need comprehensive ready-use stores but we also need to encourage the use of craft skills to effect repairs and solve unforeseen problems. Having said that, our two control radars for the missile system needed too high a degree of skill and a prodigious amount of hard work from the maintainers to keep them going. These essential systems have got to be more reliable and less dependent on such high calibre people. Furthermore, Built-in Test Equipment to fault find accurately should be part of the system and ready-use spares must be available in a cabinet close by with an easy identification and retrieval system. This will avoid time-consuming searches in the ship's central store rooms just when you need your radars back on line as fast as possible. This system, which the USN has perfected in their latest ships, must be an integral part of the design of any important weapon system or equipment.

The combined experience of the Argentinians and ourselves showed that a modern electronic weapon system will only perform to expectations in combat if proper investment has been put into it all through its life. Buying a weapon system is only a beginning; it has to be supported by

rigorous and realistic training, exercise expenditure of weapons and first class maintenance, spares and servicing. The Harriers illustrated the right end of this spectrum, and the Argentinian submarines the wrong end.

Now, I will make a brief comment on the threat, which I believe is just as relevant in the future as last year. The things that frightened me most, not surprisingly, were the submarine launched torpedo and the sea skimming missile. I would like to see all industrialists and all our scientists turning their minds to defeating these threats. What's more, since both these weapons explode and make holes in the ship near or under the water line I would prefer to serve in a ship where the Ops Room is near the bridge and well above the waterline. No amount of ergonomics will overcome that inevitable marked drop in morale when sitting in a Type 42 Ops Room right on the waterline during an Exocet or submarine attack! Why cannot all our ships be designed with an Ops Room higher up in the ship? Why put the whole command team — those that fight the ship — more at risk than anyone else?

Despite the ploys of manoeuvring and firing chaff to decoy the sea skimmer, some missiles are bound to get through because you only have a few seconds in which to react and if you get the drills even slightly wrong you are just as likely to help the missile find you or your friend. On top of this are the problems of spurious radar contacts and, worse, the potential interference that chaff may cause to your own sensors and missiles. A lot of trials, tactical thought and invention are needed to develop sound reactions and proper defence against sea skimming

missiles that get through the outer layers of defence.

I will end my Falklands observations by saying that advances in solid state micro-electronics which give us much less bulky processing equipment, combined with vertical launched missile systems, should give us the space we need to enable warships to have sufficient weapons to meet the threat and to defend themselves. If we make these reasonably simple, easy to use and totally reliable then you can be assured our men will fight even better than they have in the past. It may be the men at the front who win wars but it is the Designers back home who make it possible. Therefore, equipment and weapons must be tailored for the man and they must work in a rugged environment *the moment he wants them*.

These are some of my views borne out of my experiences in HMS *Coventry* in 1982, which added to many others from many sources have contributed to a new look at our weapons, and our designs and procurement for the future. The Falklands experience gave us an invaluable measure of our fighting effectiveness and we have been able to identify our weaknesses. But we must be careful to apply our weapon improvements and development of tactics to the broader scenario of the North Atlantic and to keep our eyes on our traditional potential enemy. Above all, we must not forget the wider operational lesson which is that the war re-emphasised the need to maintain versatile and balanced maritime forces to defend our national interests, to deploy them in the appropriate areas of interest and to keep them *proficient and ready*. That must remain our prime objective.

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