The Impact of the Changing Strategic Environment on the Delivery of Air Power

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Emboldened by the apparent war winning use of air power throughout 1990's conflicts, the US believed its hegemonic status granted it the power to transform warfare, utilising vastly superior military technology. Poorly equipped non-State actors of the newly recognised global village begged to differ. This paper examines factors which influence the strategic environment, in order to determine how air power must evolve in order to ensure continued utility; not just in terms of physical effect but also the need to win the information battle. It examines the maturity of air power doctrine as an independent military arm. The paper concludes that air power is not yet fully mature but with careful communication of the political aim and public perception of proportionate use of modern weapon and surveillance systems it can be decisive in all types of conflict.

Introduction

'It used to be the custom to settle strategy in the capital, and not in the field – a practice that is acceptable only if the government stays so close to the army as to function as general headquarters.'[1]

This paper defines the strategic environment in which the military, and in particular deliverers of air power, play a role. It examines the changing nature of the strategic environment and discusses the probable catalysts of such change; particularly, strategic culture, globalisation, military transformation, the transformation of war and the profound effect of the irregular adversary. The examination will aim to isolate the chief driver in recent times, and the challenge this poses to the delivery of air power. Having examined the historical aspects of change, the paper goes on to consider whether we can validly expect recent changes to the environment to be constant sufficiently far into the future for us to plan our recruitment, training and equipment procurement programmes as a regular military force or whether we need to make urgent changes to our structure and methods to ensure maximum flexibility and agility against all possible adversaries. The role played by air power through an evolution of less than 100 years is scrutinized in order to question if it is still sufficiently young that it simply has not been exposed to all manner of warfare as a technologically advanced military arm, to be capable of reliably achieving the political aim.

The clear answer to this must be that it is still an immature arm which has yet to develop fully the doctrine required unfettered by land-centric history and strategy. Such an approach allows us to understand the best use of air power in various situations; particularly, those that sit below general war and employ such doctrine as part of a comprehensive approach to operations. The paper explores the perceived imbalance between what proponents of air power believe it can achieve in terms of strategic effect and what is considered right and proper by liberal democratic nations when fighting lesser equipped adversaries. An analysis will thus be made of the dynamic of war's paradoxical trinity; violence, probability and subordination to policy, that Clausewitz spoke of[2] and whether this has value for purveyors of air power in the modern military operating environment. While the precise location of space as part of air power is a subject for debate, recent analysis suggests that "one cannot build space power theory and doctrine in general upon air power theory and doctrine."[3] Whilst the air component will undoubtedly assist development of space power doctrine, as land and maritime doctrine helped air in its early days, space power requires fundamental, distinct doctrine, being as different from air as air was from land and maritime. Therefore, for the purposes of this paper, a line is drawn between them, analysis limited to the changing strategic environment to the delivery of air power alone.

What is the strategic environment and how does it change?

There are many accepted definitions of the terms strategy and environment, and it is therefore, useful to define exactly what it

is that we are referring to in this analysis. Clausewitz's view of strategy is 'use of the engagement for the purpose of war'.[4] An 'active' environment, as this must be if we are to conduct strategic aims within it, is 'the surroundings, conditions and circumstances as affected by human activity'.[5] Therefore, the strategic environment could be 'the surroundings, conditions and circumstances that influence or affect the military engagement'. However, given inter-relationships in the international system it must also be recognized that security goals are shaped by a complex combination of geo-strategic factors, which include geo-spatial, resource, social, political, science and technology, in addition to military aspects.[6] Furthermore, there is constant security environment horizon-scanning taking place within the MOD with the aim of identifying possible future strategic shocks to the system of international collaboration and collective security of which the UK is a part.[7] From this it is clear that that there are many more facets to the strategic environment than purely military and, therefore, for this paper, the working definition is 'a composite of the conditions, circumstances and influences that describe the geo-strategic situation, which affect the employment of military forces and the decisions of the chain of command.

It is acknowledged that the strategic environment changes over time, owing to uneven rates of growth and variations in technology, demography and resources.[8] Moreover, it can be postulated that in an era of globalisation the balance of power can also be affected by non-state actors including international organisations, multi-national corporations, non-governmental organisations, religious institutions, and politically motivated terrorist groups; all of whom are able to affect one or more decisive levers in the strategic environment. Following the cessation of the Cold War the global strategic environment has become complex, uncertain and unpredictable.[9]

By the end of the 20th Century, the British government claimed that Britons were 'an internationalist people', and from this postulated that Britain's role in the world should be as a 'force for good.'[10] While this was undoubtedly intended as an altruistic statement of foreign policy, it could be seen as a direct threat by other actors and thus, risked a reaction which, ironically, endangered national security and international order more generally.[11] Britain fought as part of a broad UN coalition under United Nations Security Council Resolution (UNSCR) 678, removing Iraq from Kuwait in 1991, and maintained the Iraqi no-fly zones using the justification of UNSCR 688. However, from other perspectives it is estimated that since 1991, anywhere from 80 to 210 million people [globally] had lost their hopes, their property, and their lives. Such political alienation, reinforced by economic and social deprivation, tended to direct this 'underclass' toward conflict and despair terrorism.

This disillusionment and resort to violence and terrorist strategies showed in Afghanistan, Sierra Leone, and Rwanda, USS Cole, Khobar Towers, the Pentagon, and the World Trade Center.[12] In essence, whilst the state actors in the international system were seemingly predictable

and 'under control'; it was the sub-state actors that mobilised to influence the strategic environment.

Is strategic culture the main influence on the strategic environment?

Given the virtual hegemonic status of the USA since the decline of the USSR, it could be said that the United States is also the major controlling influence within the strategic environment. It is able to wield power through the international system and bring pressure to bear, as it sees fit. Snyder theorised that 'strategic culture' was, in essence, 'the sum of ideas, conditioned emotional responses, and patterns of habitual behaviour that members of a strategic community share.'[13] If we accept the theory that 'defence related decision making is not an abstract construct based purely in the present moment, but is steeped in the beliefs, biases, traditions and cultural identity of the individual country; feeding its strategic culture'[14] and that this culture is generated through crisis periods overlaid on past experience, we might speculate that the strategic environment is primarily influenced by the strategic culture of the most powerful actors in the system; in this case the hegemonic power.[15] It would appear that the former US Secretary of Defense, Donald Rumsfeld, adhered to this viewpoint if his association between military power and politics, and its manifestation at the grand strategic level is considered. The US administration demonstrated a capacity not only to co-opt support for military intervention, but also to shape the context in which force could legitimately be used.[16]

Admiral Cebrowski, Rumsfeld's chosen architect of change, wanted to transform US military power in order to transform warfare and promoted network centric capability as key to this.[17] There appeared to be a belief that overwhelming superiority in cutting edge technology and network-centric warfare would transform the strategic environment, making the US military supreme in terms of technology, efficiency and intelligently precise firepower, in order to deter any challenge. Ensuing operations proved the assertion that there is a great difference between military transformation and the transformation of war.[18] While Rumsfeld believed he was transforming the future nature of war, it is now clear he was merely transforming the US military. In essence, a hegemonic nation's strategic culture does not shape the strategic environment in the manner it would like. An intelligent enemy, particularly a non-state actor with global reach, is able to analyse a nation's strategic culture and formulate its tactics to exploit the weakness it finds and in so doing, shapes the strategic environment relevant to its political and military aims. In this case, the U.S. Military's apparent inability to deal with guerrilla or terrorist tactics led to an increase in the use of those tactics. There is a limit to how much 'smart weapons' can achieve against a shadowy foe.[19] As the United States learned in Iraq, defeating insurgents requires an effective counter-insurgency force that also engages in nation building. Yet it is precisely those areas in which the US remained weakest under Rumsfeld.[20] Moreover, in the modern strategic environment it is incredibly difficult to efficiently configure military

components to better an adversary that has an unknown or unidentifiable strategic culture.

How has globalisation affected the strategic environment?

It is clear that the major difference between the strategic environment of 1991 and today is the increasing complexity of the international system. Whilst globalisation can be defined in many ways, possibly the most pertinent to this paper is 'the intensification of worldwide social relations which link distant localities in such a way that local happenings are shaped by events occurring many miles away.'[21] Although non-military, it accurately reflects the importance of the information operation in modern conflict. While we find ourselves in a new environment that involves the economic integration of free markets, technologies, and countries, it is also an environment of fragile peace and disarray caused by those who de-stabilise nation-states and frequently, espouse an ethos that rejects modernity, yet derive much of their power from the global information highway.[22] It is this ability that empowers terrorist networks and connects them with the empathetic ear of a distant supporter or soon-to-be-supporter, in accord with the chosen definition. The preparations for the September 11 terrorist attacks in 2001 spanned several continents, and so did the effects: the World Bank estimated the reduction of global GDP at almost 1%.[23]

Military operations since 9/11 have also seen the rise of pre-emptive action, in which air power has played a central role, as a desperate response to the perceived asymmetric threat.[24] A prime example of this usage followed from the human intelligence led US targeting of Saddam Hussein and his sons.

On 19 March 2003, American agents believed they had located Saddam, but it was swiftly realised that an attack with cruise missiles would be ineffective against the bunker Saddam was believed to be using. Instead, US Air Force F-117s, armed with 2,000lb EGBU-27 bombs capable of penetrating the bunker, were re-routed to carry out the attack.[25] In a pre-globalised age it would have been impossible to transmit real time intelligence between CIA informants and their handlers in Iraq, hundreds of miles apart, to Washington DC and then to Operational Commanders in theatre to enable a high tempo attack of this type.

Nye and Owens clearly assumed that it was this technological advantage which would see the USA hold the upper hand in any future conflict.[26] However, pre-emption is ultimately a means, not an end, and a doctrine of this sort which suits the US could be equally attractive to countries and non-state actors with different motives. In an era where winning the global information war may matter more than winning the battle, it becomes apparent that those who would adopt pre-emption need to be clear about the limits of such doctrine and their aims.[27] Lessons learned show that pre-emption would actually require better intelligence and co-operation with other intelligence services to be effective, either in the information campaign or the battle.[28] Thus, whilst the past decade has demonstrated the military's capability to turn intelligence into targeting action at a previously

unseen speed, utilising the modern global communications environment; the same medium is frequently used to disproportionate effect by the irregular enemy, not only in the battle winning ways of 9/11 but also in winning the information campaign.[29]

Can we foresee the future or are we destined to assume the recent path will continue?

Where the enemy is a non-state actor or a (technologically) poor state that cannot match the military power of his adversary, he will be forced to rapidly adapt to effectively fight. The enemy's readiness and ability to adapt could be an impediment to us correctly forecasting the equipment and training requirement for his chosen style of warfare. With a procurement cycle measured in decades and an opponent that has the ability to quickly transform, it seems clear that the regular force is unlikely to be correctly equipped to fight. An array of programmes, often involving the most sophisticated military platforms (the F-22 and Typhoon, or the US Army's RAH-66 Commanche helicopter taking the air environment as just one example) seem to be subject to delays which mean that they enter service in circumstances rather different from those under which the project began. This can be held to illustrate the potential folly of embarking upon lengthy programmes which may succumb to the vagaries of change in the nature of future warfare.

However, if military strategists are correct, we know a great deal *for certain* about future warfare. What changes about war is overmatched by the eternal features of war's nature.[30] The RAF, for example, maintains a stance that is capable of high end warfighting and therefore, lesser equipped adversaries will be forced to adopt an indirect or irregular way. The underlying premise of this type of assault is that the outcome will be determined by the relative ability of the attacker and the target to win the support of the people or global society in their respective favour.[31] In fact, the inability of the opponent to match the military capability held by the UK makes the future easier to forecast, only leaving the question of whether to specifically equip as well as train to fight irregularly, or accept that by equipping as it has, the enemy is predictable. Key to this decision is analysis of the air component's performance against the enemy, equipped and trained as it is, supplemented by urgent operational requirements.

If viewed through the 'air power lens', two opposing viewpoints become apparent. One would point to the purchase of originally leased C17 aircraft, and the increase in fleet size, as an example of not correctly equipping for the fight the UK is in. However, the core programme would actually have seen A400M entering service had Airbus met the stipulated requirement[32] which would have negated the requirement to purchase C17. Moreover, the present procured forces have been adequate to succeed in the modern strategic environment without failure, with the possible exception of ISTAR and persistent armed reconnaissance. Here, a minimal UOR purchase of 3 MQ-9 Reapers filled the perceived gap.[33] In short, there are issues with the procurement process, but the policy of continuing legacy Cold War programmes has seen the RAF

succeed in irregular operations, with minimal UOR gap-filling. Vitally, there is significantly less danger to the integrity of the state, maintaining a policy of equipping for high end warfare than might be posed if it equipped purely for asymmetric warfare, thereby becoming incapable of fighting inter-state war.

What role has airpower historically played in the strategic environment?

During the Great War air power was utilised in a support role for the two senior arms and the roles of close air support, transport, reconnaissance, communications, interdiction, artillery spotting, re-supply, rescue and special forces insertion, anti-submarine warfare, convoy escort, search and rescue, maritime attack and minefield survey missions, albeit in a primitive form, contributed to the campaign.[34] Only a minority of people had experienced military aviation, but it fired the imagination of the masses. With this rapid build-up of essential war winning roles, expectation for power from the air built and there was much debate over what it could achieve as it gained maturity.[35] After the Great War theorists such as Douhet, and others that had experienced the horror of trench warfare, expounded theories of strategic bombing of enemy centres of civilian population, with the aim of causing mass hysteria and public influence on the enemy government, forcing surrender.[36] The result of this was a rapid build up and development of aircraft between the wars, by those countries with military ambition, to ensure that when battle commenced they had a war winning capability. The RAF's experience of colonial air-policing, whilst leaving it less than ideally trained, at least gave some operational pedigree that was an important baseline from which to start the fight.[37] Germany's most used lever of power in the inter-war strategic environment was military, and airpower as the cutting edge of technology, was used to its fullest effect, with the introduction of primitive ballistic missiles (V1 and V2), in addition to manned aircraft.[38] During the Cold War, the strategic role of air power was subject to periods of 'long operational stagnation', especially after the strategic nuclear deterrent role passed to the RN, but in every other respect air power was extremely busy.

Is air power still sufficiently immature that it is being shaped by events, finding its feet outside major conflict and writing a new doctrinal chapter?

Given the excitement generated by projection of power from the air in the immediate aftermath of the Great War, politicians and the civilian population almost certainly favoured strategic effect generated in this manner. It appears to carry less risk to friendly forces and thus, typically enjoys low casualty rates as demonstrated by the Gulf War's of 1991 and 2003, yet appears to promise decisive victory. Yet, critics categorically state that air power has failed to deliver true strategic effect on every occasion attempted; whether in World War 2, Vietnam, Kosovo, or the Gulf Conflicts. On each occasion, there was a requirement for 'boots on the ground' to achieve the political aim. As Gray comments,

"the ghosts of Trenchard et al will have approved of Hallion's judgment that air power execution caught up with air power

theory, as evidenced by the conduct and results of the 1991 Gulf war, and yet the point, is that classical air power theory often, though not invariably, postulated the wrong requirement of the air weapon—that it be capable of winning wars on its own."[40]

Moreover, these critics of air power would point to the immensely dynamic period of air role expansion during the Great War and question what new roles have been found? To some degree this is fair and despite popular perception, the RAF no longer advocates air power as a feasible independent war winner, but always as a part of a joint campaign – and has done so for some time.[41] However, whilst the list of air power roles does not grow at the same rate it once did there are 2 key elements that must be considered before judging air power in the modern strategic environment.

The first is that until 1956 the RAF was commanded by men that had started their careers as RN or Army officers whose staff were also 'in-comers'. Therefore, there is a strong possibility that developing air power doctrine came from a skewed air-surface influence. One factor that could be particularly relevant was that whilst these great leaders believed in air power, they had no real reason to measure effect in a different way from the Land or Maritime components. Under this construct, 'winning' means decisive victory and control of the surface, a 'neat' end to conflict which is most unlikely to be encountered in many of the complex conflict environments likely to be encountered in the 21st Century. If this is pertinent and had stifled truly independent development of air doctrine, then development should have become apparent after 1956. However, by then the strategic environment was dictated by the Cold War and inflexible doctrine, for all 3 components, was the order of the day. Thus, it was not until 1990 that the RAF was able to begin a truly independent doctrinal journey.

The second related element is that only in the past three decades has technology appeared to catch up with the 'blue-sky thinking' of early theorists and technical boundaries now seem limitless. All-weather day/night precision-guided weapons accurate to within a metre, the ability to penetrate hardened bunkers or limit effect to one area of a building, delivery from manned or unmanned platforms, stealthy armed reconnaissance over a target for 10 hours or more; all of these capabilities are what Douhet *et al* envisaged for the strategic application of air power, yet were impossible without today's technology. It seems reasonable, therefore, to theorise that development of independent air power doctrine is actually in its infancy. Thanks to a series of conflicts in the intervening period, exploration of its strategic effect in battle and how its use affects the wider strategic environment has again accelerated.

Is there an imbalance between what air power can achieve and the perceptions and will of the public, other military components, and the international community?

Air power clearly delivers devastating effect if unleashed on the enemy as on the Basra highway in 1991 and in Gaza in Jan 2009, but public perception is of heavy handedness when such power is let loose against

an ill-equipped adversary.[42] First raised by Thucydides, social divisions represent a potential barrier to military effectiveness, especially in longer wars and this is especially true for societies with ethnic or religious divisions.[43] In the modern strategic environment, using the UK as an example of a multi-cultural society, with some unrest and division between cultures,[44] a widening gap between the civil and military classes,[45] and engaged in unpopular wars of political choice, we find 3 military forces engaged in an internecine battle for relevance in an age where there is a limited defence budget available and every military system is increasingly expensive.[46] It is no longer a case of winning the information war alongside the battle, but also winning the 'argument' with the other military components, gaining the support of politicians and public, if air power is to continue its doctrinal quest for strategic effect. The problem faced by those to be convinced is that whilst land forces are probably seen as more equitable when fighting ill-equipped adversaries, and the UK Land component clearly enjoys this perception (winning relevance and an upper hand in the 'domestic' information war) there can be little doubt that Land is less efficient at containing an enemy and also more costly in human terms.[47] The air component must therefore, become better at applying elements of its developing doctrine in the irregular fight, in order not to be seen as 'a sledgehammer cracking a walnut'. This would clearly ease the task in winning support at home and abroad, but will not be easy whilst we procure systems such as MQ-9 Reaper that allow RAF operators to enjoy complete personal safety whilst directly engaged in killing the enemy through the high tech mediums of space coupled to unmanned air systems which provide persistent intelligence feeds and armament.

Can air power ever play its full role in expected future operations, or is it too expensive and distasteful to use fully in asymmetric warfare?

The air component has played a controversial role in the use of pre-emptive action during the war against terror.[48] A glaring example must be the Israeli use of air power in Gaza in January 2009. Recognition that winning the information war was key to being militarily effective, led to a 'lockdown' of the media. This was not an attempt to win the information war but to limit the Palestinian ability to win popular support in the international community; which arguably failed with the length of conflict and the global capability of modern communications.[49] Disproportionate uses of air power do not assist its future development and moral damage is not limited to the offending user. If the dilemma of whether it is fair to fight a lesser adversary with all conventional means at our disposal is not solved, it is unlikely that air power's full utility will be unlocked in the complete range of warfare. Moreover, if air power users get this wrong, they will empower another generation of extremists to find new ways to fight.[50] If a new way can be found, air can conceivably achieve the strategic effect early theorists believed existed.[51] However, the nature of air's strategic effect is likely to be different, at least in the immediate

future, than Douhet et al envisaged. They envisaged such effect to be as Land promises, decisive victory and direct imposition of your will on the enemy population.[52] To clarify, strategic effect must be to 'achieve the effect your strategy intends' and if the containment of Iraq is taken as an example, through the imposition of UN sanctions and the utilisation of coalition air power, strategic effect was achieved between 1991 and 2002.

First, there was widespread international support, publicly and politically, for the removal of Iraqi forces from Kuwait. There was insufficient political will to extend the UN mandate to force regime change in Iraq.[53] In the immediate aftermath of the first Gulf War but Saddam Hussein remained a 'bona-fide villain' in the international system, with his brutal put downs of Shia and Kurdish uprisings as evidence of his evil nature. Politically, there remained worry about Saddam Hussein and his regime but there was also recognition that he counterbalanced an Iranian threat; in essence a steady triangle of regional power was shared between Saudi Arabia, Iraq and Iran.[54] This balance was important and Saddam's behaviour to his own population provided the way for this un-stated political aim to be acceptable. Thus, air power was used to deliver a decisive 'steady-state' in the Gulf utilising no-fly zones and limited bombing campaigns which allowed the Iraqi civilian population to go about its business without foreign intrusion. At the end of 2002 Iraq was stable, presented no threat to its neighbours with a vastly weakened military and no remaining WMD, there had been no friendly loss of life and minimal enemy loss of life; all at a cost of £80 million per year[55] for the UK. In essence, aerial coercion had been successfully used in a non-war situation at no cost to our forces and relatively low cost to the Treasury. It was successful on all levels, as external to military effect, the international community and most importantly, the UK public understood (or thought they did) why air was being used and it was seen as proportionate despite Iraq's lack of credible opposition. By contrast, the use of air power for strategic effect will have to be explained more carefully to the public in the future, than it has been since 2003.[56]

Conclusion

In a strategic environment as complex as that delivered by the post-Cold War globalised world, sub-state actors are no longer constrained by a bi-polar world order that threatens nuclear cataclysm as an escalation of local conflict and enjoy the technical benefits of globalisation, drawing supporters to their cause from the global village. An intelligent non-state actor empowered by global reach, is able to analyse a nation's strategic culture and formulate the requisite tactics to exploit the weakness it finds. Recently, this has had an even greater effect on the strategic environment than that wielded by the sole remaining superpower. Furthermore, it is a difficult task efficiently configuring military forces to better an adversary that has an unidentifiable or non-existent strategic culture. Pre-emption, often using air power, was an early response in the war against terror but has frequently been seen by the international community as indiscriminate and heavy-handed

and gifted victory in the information war to opponents. Looking to the future, if the public accepts the requirement to conduct counter-terrorist operations as far from their homes as possible; this paper has put forward that it is preferable for the air component to have an enemy that is more regular than irregular. As such, it could be argued that it might have been better to contain Al Qaeda within Afghanistan than force them to disperse. This would have allowed the use of airpower to strike as required over a long period, as it did over the Iraqi no-fly zones. In this way it would have worked to the RAF's strength and exposed Al Qaeda's weakness. On a 'regular to regular' basis, it would probably have been seen as a proportionate use of air power, and would have utilised assets held in numbers - fast jet and 'legacy' ISTAR - rather than having to rely on capabilities less robust in terms of numbers, such as support helicopters and air transport.

Technology is starting to address some of the weaknesses historically levelled against airpower such as lack of persistence and failure to achieve strategic effect. Importantly, air power users must educate politicians, the public and even the other Services regarding use of the air component, how to employ it and ultimately, how success should be measured when it is used as your primary lever of coercion. Possibly, the UK left Iraq in 2009 with the region less stable and more vulnerable than it was to 'undue influence' between 1991 and 2003. If so, it can only be hoped that in the lessons learned from Operation TELIC, the Chiefs of Service, PJHQ and DCDC contrast the stability delivered by coalition air power between 1991 and 2002 and analyse the delta between the two.

This paper, therefore, proposes that in the changing strategic environment, air should finally put aside all thoughts of seeking decisive victory and recognise that such language and approach outside major war is unhelpful and unrealistic, at least in the traditionally-assumed sense of what 'decisive victory' looks like. Air power has still not fully matured and is learning how to apply itself in asymmetric warfare, which it has previously seen but not since its infancy. Equipped with new technology, air power practitioners must learn to finesse their options according to the situation and communicate what effect is being achieved, and how. It is, though, probable that air power better suits stabilisation through containment, which can in itself be 'decisive' when measured against the desired end-state; using Iraq as an example, air forces maintained the will of the international community, without the complications caused by the antagonistic presence of land forces and their associated political liability, while achieving the (un-stated) aim of safeguarding the regional power balance. It is perhaps fitting to conclude with the cautionary words of Professor Michael Clarke – in which he sees the prospect of air power at the forefront of thinking about war, but with the associated hazards of the nature of conflict being an ever-present complication:

'If airpower captures the public imagination of war in the 21st Century to the degree that it captured it in the 20th Century, airmen and airwomen will find themselves again at the forefront

of the image. That may not be such a comfortable prospect when there is so much still unclear about the nature of conflict in our new century.' [57]

Notes

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