

# AIRPOWER STRATEGY IN THE COLD WAR: HOW CENTRAL WAS VALUE TARGETING AND CITY 'BUSTING' TO NATO AND SOVIET CONVENTIONAL AND NUCLEAR AIRPOWER STRATEGY?

P A T R I C K T A U B E

## ABSTRACT

After the invention of the aeroplane, it did not take long for militaries around the world to discuss the potential it would have on the battlefield. With the advent of the atomic bomb, the threat from the air was magnified even further. During the Cold War, scholars, generals and politicians conceptualised airpower strategies, heavily influencing North Atlantic Treaty Organisation (NATO) and Warsaw Treaty Organisation (WTO) conventional and nuclear airpower strategy. This paper will start off by introducing the reader to the strategic theory of airpower, touching on the four schools of airpower targeting. Grounded in the analysis of NATO documents and secondary literature, this paper sets out to analyse the role that targeting of high value targets and the destruction of entire cities had in NATO and WTO airpower strategy, be it conventional or nuclear. The findings suggest that both entities refrained from deliberately targeting the enemy's population centres in their strategies. Nevertheless, the bombing of entire cities was an option for both sides, albeit as an ultima ratio, even being cut out of the NATO strategy from 1968 onwards. However, both strategies prioritised the targeting of the enemy's military capabilities, especially their respective nuclear arsenals.

**Key words:** airpower, military strategy, Cold War, nuclear strategy, strategic theory, massive retaliation

## INTRODUCTION

Three years after motorised traffic entered the third dimension with zeppelins, the brothers Wilbur and Orville Wright successfully conducted four brief flights with the first invented aeroplane in world

history (Smithsonian National Air and Space Museum). From thereon, it did not take long for the technology and its implications for warfare to be discovered by the military, which used aeroplanes and zeppelins to conduct air raids on cities and their industrial hubs during the First World War (Fegan, 2012: 13f.). While airpower came into use in the First World War, writers of military strategy only began to elaborate on airpower strategy in the interwar period. The Italian officer Giulio Douhet (1869-1930) pioneered the research on the role of airpower, putting his ideas to print by publishing his *Command of the Air* in 1921 (Meilinger, 2000: 471).

While there was consensus among airpower theorists that operating behind the front lines and against the enemy's vital centres would bring the greatest results, opinions on which targets to strike differed. This resulted in the establishment of four schools of airpower strategy (Meilinger, 2003: 170). The definition of centres of gravity or vital centres, as coined by Douhet, varies from one strategic thinker to another. However, the definition usually encompasses key industries, political and military command structures and civilian morale of the enemy. Alongside military targets, those centres of gravity became the primary targets of the four airpower schools. The advent of the atomic bomb brought the targeting debate to the forefront, since it would primarily be delivered by air. Given the amplified damage of a nuclear explosion compared to conventional explosives, certain target selections would have shaped the Cold War dynamics in their own way, with an all-out nuclear war being the worst of them. Therefore, this essay will examine the role of value targeting and city "busting" in conventional and nuclear airpower strategy during the Cold War. This will be done by analysing the strategies employed by both the WTO and NATO, before

tracing them back to the four airpower schools and the Cold War's most influential air power strategists.

## SCHOOLS OF AIR POWER STRATEGY

The four schools of airpower strategy differ in the roles they assign to airpower both in the pursuit of strategic objectives and target selection. Before presenting the different schools of airpower strategy, it is essential to first define the concept of military strategy applied in this paper, which remains subject to scholarly debate. Following Heuser (2010),

*"Strategy is a comprehensive way to try to pursue political ends, including the threat or actual use of force, in a dialectic of wills – there have to be at least two sides to a conflict. These sides interact, and thus Strategy will rarely be successful if it shows no adaptability."*(Heuser, 2010: 27f.)

The first school is the strategic or city bombing school, which originates from the pioneer of airpower theory, Giulio Douhet. Drawing on his experiences from World War I, Douhet believed that by attacking the vital centres of the enemy, air power alone could decide the outcomes of wars. Notably, he considered the psychological effect of air raids as more pronounced than the physical effects (Meilinger, 2000: 472). Thus, the primary targets suggested by Douhet were the enemy's major cities. As they were home to many civilians, in Douhet's reasoning, their shelling would unravel the social basis of resistance, diminishing the support for the war and thus rendering the enemy state powerless to continue the war effort. This was the first coercive strategy to be put into practice in the two world wars and culminated with the use of the atomic bomb in the city 'busting' of Hiroshima and Nagasaki (Pape, 1996: 59f.; Meilinger, 2000: 472; Heuser, 2010: 317).

In the United Kingdom, which experienced air raids on the civilian population and the subsequent panic first-hand, Douhet's concept of breaking the morale of the enemy's population resonated (Meilinger, 2000: 481). In contrast to the Italians, Hugh Trenchard, the father of the Royal Air Force (RAF),

rejected population targeting. Instead, following the British naval tradition of economic warfare, his school of thought aimed at targeting other vital centres of the enemy, namely key industries and lines of transport and communication (Meilinger, 1996: 244). The rationale behind this target selection corresponds to Douhet's definition:

*"[D]irect air attack on the centres of production, transportation and communications must succeed in paralysing the life and effort of the community and therefore in winning the war."* (Public Record Office, 1928: 2)

However, Trenchard's idea of a high precision attack on industrial targets was far from technologically possible at the time. Precision-guided ammunition did not enter the scene until the 1970s. Thus, Trenchard's and Douhet's targeting philosophies, while different on paper, would have had a similar outcome when implemented.

On the other side of the Atlantic, the deputy director of the US Air Service, Billy Mitchell, was influenced by Trenchard's target selection (Brent, 2010: 10). Having occasionally worked alongside Trenchard in World War I, Mitchell became an advocate of the so-called military targets school, often termed the denial school and shaped United States (US) air strategy accordingly. However, in contrast to British air strategy and Douhet, Mitchell did not aim to break the enemy's will but rather a country's war-fighting capabilities, employing the same means as the RAF (Overy, 1992: 85; Meilinger, 2003: 175). Regardless of the strategic objectives, the military targets school seeks to thwart the enemy's capabilities through the destruction of their arms manufacturing industries and interdicting their supply chain to the battlefield or disrupting movement and communication in theatre (Pape, 1996: 69).

With the advent of precision-guided munitions, a subcategory of the military targets school flourished late in the 20th century. The so-called decapitation school targeted the enemy leadership, intending to paralyse decision-making and executive abilities (Heuser, 2010: 343). While the decapitation strategy was not essentially new, having been adopted by the

US in both world wars, the new precision of bombs made the strategy technologically feasible and led to the adoption of the strategy in the first Gulf War, although this proved to be somewhat disappointing in its effectiveness (Pape, 2004: 116f; Olsen, 2007: 148).

Finally, the Cold War brought about the fourth school of airpower strategy. The political signalling school is rooted in game theory and economic analytical thinking. It stems from economists who worked with the US Strategic Air Command (SAC) and later the government-funded RAND Corporation think tank, which offers research and analysis to the US Armed Forces since its founding in 1948. Considering the destructive potential of nuclear war, this school aimed to limit warfare both geographically and in its intensity by signalling self-restraint – such as deliberately sparing cities and the civilian population from air raids – in the hopes that the other would make similar concessions (Heuser, 2010: 345). If no concession is made, the employment of military force by the signalling side gradually escalates to encourage the adversary to modify their behaviour. If unsuccessful, they would signal a willingness to escalate further, targeting vital centres or using different weaponry (Meilinger, 2000: 492).

## THE EVOLUTION OF NATO'S AIR POWER STRATEGY

As the elaborations on the four targeting schools have shown, questions of targeting are central to any serious discussion of air strategy (Ball, 1983: 1). With both the WTO and NATO having possessed nuclear warheads early in the Cold War, targeting entered the nuclear domain of warfare. While conventional airstrikes remained in the repertoires of airpower strategies on both sides, nuclear strikes and target selection shaped air strategy in the years following World War II until the dissolution of the Soviet Union.

Although Hiroshima and Nagasaki changed airpower strategy in the second half of the 21st century, the first armed conflict involving a victorious power of

World War II, the Korean War from 1950 to 1953, showed a remarkable continuity in airpower strategy to the pre-1939 period (Heuser, 2010: 355f.). Throughout the war, the SAC and the US Far East Air Force (FEAF) targeted industries, communication lines, and supply shelters of military value. However, as with most value target campaigns in World War II, the lack of precision in unguided bombs at the time resulted in heavy civilian casualties, which led to some scholars arguing that the SAC actually employed a strategic bombing campaign (Kim, 2012: 474). Speaking in favour of this argument is the fact that the US air pressure strategy aimed at compelling the North Korean government to surrender rather than weaken its military capabilities. Hydroelectric power stations, reservoirs, and cities were targeted and destroyed. Those strikes had little military value but disrupted the energy supply, hindering the ability of North Koreans to produce rice in the hope of breaking morale. Those attacks were justified by assigning military value to each of these targets (Kim, 2012: 487). Moreover, the FEAF used napalm in several airstrikes, deliberately hazarding the consequences of its airstrikes on value targets that were mainly in or near major cities such as Pyongyang (Pape, 1996: 161). To summarise, the SAC defined the concept of military value broadly, which led to the bombardment of targets that would otherwise be regarded as strategic rather than military targets.

Before the outbreak of the Korean War, the Soviet Union (USSR) had completed its first successful test of the atomic bomb, initiating the age of nuclear deterrence (Goncharov and Ryabev, 2001: 91). In 1949, NATO formulated its first strategic concept for the defence of its member states (D.C. 6/1). In this document, the North Atlantic Council states that to implement the defence concept, NATO must “[i]nsure the ability to carry out strategic bombing promptly by all means possible with all types of weapons, without exception.”(North Atlantic Council, 1949: §7a).

As the D.C. 6/1 and the subsequent NATO strategy documents display, strategic bombing entered the

nuclear domain due to the city-busting capability of the atomic bomb (Brodie, 1954: 227). All NATO strategies assumed an initial attack by the WTO. In view of the WTO's conventional superiority in Europe, NATO strategies in the 1950s counted on nuclear weapons to deter any Soviet offensive in the first place, and in case of a Soviet attack, to defeat the Soviet Union as early into the war as possible (North Atlantic Council, 1950: §§6, 7). The allied objectives were to be attained through a strategic nuclear counterattack on industrial and military targets of the USSR (Heuser, 1998: 314). In NATO parlance, the term "strategic attack" is not associated with the strategic bombing school but refers instead to the use of nuclear weapons. As the strategic document 48 of the NATO Military Committee (M.C.) from 1954 points out, the targets envisioned by the North Atlantic Council were the Soviet nuclear facilities and their delivery systems in order to reduce the threat of a Soviet nuclear attack, which was expected from the outbreak of a conflict (North Atlantic Council, 1954: §5). This strategy of an immediate nuclear counterattack on Soviet military targets came to be known as 'massive retaliation'. Although early NATO strategy relied on nuclear use at the outbreak of a conflict against the USSR, it distanced itself from strategic bombing in the sense of city busting. Nevertheless, as the civilian nuclear strategist Bernard Brodie emphasised, 'massive retaliation' risked escalating a local conflict into a large-scale war (Booth, 1991: 29). Aware of the limited success of strategic bombing in World War II, Brodie regarded city busting as pure terrorist destruction and as suicidal given the presence of the nuclear threat.

Alongside Brodie, other civilian strategists developed different targeting and nuclear concepts based on economic models and game theories in the 1950s and 1960s. Schelling, Kahn, and Wohlstetter are just three of the strategists who criticised 'massive retaliation' for its lack of alternatives, suggesting it should be replaced with gradually escalating models of deterrence, from which the targeting school of political signalling originates. Their arguments that

nuclear weapons must be considered instruments of risk bargaining rather than military weapons, that capability without credibility would not coerce the Soviet leadership, and that the destruction of Soviet cities would inevitably lead to a counter-attack on US cities resonated in the Kennedy administration (Wohlstetter, 1959: 12; Schelling, 1962: 4; Rosecrance, 1991: 58). This led to a paradigm shift in nuclear strategy and thus airpower targeting, communicated to the public by the speech of the Secretary of Defence McNamara in 1962 to abandon strategic bombing on cities completely, continuing to focus on military targets instead (McNamara, 1962).

In combination with the increasing influence of the RAND scholars' deterrence concepts, the change of administration in the US impacted NATO strategy. Therefore, M.C. 14/2 recognised that nuclear strikes on NATO territory would probably paralyse morale and leadership, which might pose obstacles to the war's conclusion (Heuser, 1998: 317). M.C. 14/2 thus delivered possible scenarios of limited warfare in which NATO would not resort to nuclear airstrikes to limit the conflict geographically. However, the Military Committee also noted in the report to M.C. 14/2 that there is no NATO concept of limited wars with the Soviets and that NATO would exploit its nuclear capability even in the case of a conventional attack by the WTO (North Atlantic Council, 1957: §§14, 19).

It took several years for NATO to shift from 'massive retaliation' to a flexible response strategy. M.C. 14/3 was a compromise agreement between the European member states and the US adopted in 1968. Whilst cries for gradual escalation and a flexible response were loud in the US, the European members demanded a nuclear deterrent to prevent a war against the WTO. If war were to break out, it made little difference in their mind whether conventional or nuclear airstrikes would destroy their territories. On the other side, the US primarily feared a nuclear strike on their population centres. Thus, they preferred to rely more on limited and conventional strategies to prevent such a strike (Heuser, 1998: 318). This compromise led to France leaving the integrated military command in 1966

since it did not want to deviate from the 'massive retaliation' doctrine, fearing that any flexible strategy would decrease the threshold of a conventional war in Europe. The compromise in M.C. 14/3 comprises a variety of counter-attack options, ranging from covert operations to all-out nuclear war. This strategy defined three pillars of credible deterrence, which can be traced back to the thoughts of Wohlstetter, Schelling and Kahn. The three pillars can be illustrated as an escalation ladder, encompassing on the first level the credible capability to defend against lesser aggressions and limited conflicts; on the second level the capability to fend off more ambitious conventional attacks; and on the third level the credible capability to conduct a nuclear response (North Atlantic Council, 1968: §33). While the gradual deterrence ladder stems from Schelling and Kahn, the flexible response that allows for the credibility of each deterrent can be traced back to Wohlstetter, who emphasised the importance of the credibility of use for effective deterrence (Rosecrance, 1991: 58).

Although NATO strategy did not evolve any further in the Cold War, the war in Vietnam saw the RAND scholars' strategy of gradual escalation being implemented in a conventional conflict. Constrained by domestic and global public opinion, as well as the fear of a third World War, US President Lyndon B. Johnson aimed to coerce Hanoi to stop supporting the insurgency in the South, allowing North and South to enter serious peace negotiations (Pape, 1996: 174). In the first three years of the war, the US conducted the bombing campaign Rolling Thunder to dissuade the North from sending supplies and troops to the South and forcing Hanoi to enter peace negotiations. The targets changed over time, escalating according to Schelling's gradual escalation pattern. The US Air Force (USAF) bombed selected military targets in the first phase, slowly expanding to targeting selected isolated industrial compounds (Pape, 1996: 182). Climbing the escalation ladder, the USAF focused on interdiction of any troop and supply movement to the South in the second phase. With success nowhere in sight, Johnson adopted a Douhetian model in the third phase of the campaign,

targeting industrial hubs on the outskirts of major cities such as electric power plants, railroads and bridges while still abstaining from deliberately bombing cities and the civilian population (Pape, 1996: 184). To signal the political intent of the bombardment, the US paused the shelling in the hope that the pause would bring about the start of peace negotiations and an armistice. Instead, the North used the pauses to resupply and regain strength (Heuser, 2010: 347).

Following the North Vietnamese invasion into the South, the US strategy changed in 1972, now aiming at a controlled withdrawal of its forces and a halt of the North's offensive. President Richard Nixon consequently adopted a denial strategy to interdict the offensive campaign of the North. The campaign *Linebacker I* targeted military objectives in the North and South, mainly logistical hubs, transportation arteries and ports near and within cities, which successfully thwarted the North's easter offensive in 1972 (Pape, 1996, p.199). In the fall of 1972, *Linebacker II* was launched, which was a repetition of the previous campaign at a higher intensity to hamper the North's rebuilding attempts. The *Linebacker* operations successfully coerced the North to sit at the negotiating table (Pape, 1996, p.204).

## EMPIRICAL FINDINGS OF SOVIET AIRPOWER STRATEGY

In contrast to NATO strategic documents, there is little access to archives that would provide a definitive answer regarding the WTO strategy. Beatrice Heuser is one of the few scholars who was granted access to the archives of the Nationale Volksarmee, the armed forces of the German Democratic Republic shortly following the Soviet Union's implosion. Based on the reports and plans of military exercises, she was able to deduct some assumptions about the Soviet air power doctrine. While NATO's airpower strategy and its war aims evolved throughout the Cold War, the Soviet military leadership remained committed to the cult of the battle of annihilation, aiming at an absolute victory for Socialism (Heuser, 1998: 323). However, the

Soviet Union's primary objective was to avoid war, spreading the ideology through peaceful means instead (Heuser, 1993: 438). If war was to break out, Soviet doctrine assumed it to be started by NATO which would swiftly cross the nuclear threshold. To survive nuclear war, the Soviet strategy focused on preemptively destroying the enemy's nuclear arsenal, which contradicts the assumption of a NATO-initiated war (Heuser, 1993: 438). There is no indication of a differentiated (signalling) nuclear use on the Soviet side. Instead, WTO's nuclear strategy was largely independent of Western action except for the preemptive launch-on-warning use, in which pre planned launches would be executed (Heuser, 2010: 370, 377). Moreover, Soviet authorities rejected any limited or tactical use of nuclear weapons and a purely conventional phase in a war against NATO (Garthoff, 1958: 107). However, in an analysis of Soviet military exercise plans, Heuser found that the WTO was indeed preparing for selective nuclear use. In the Soviet mind, any war against NATO would be a global, all-out nuclear war, which requires combined nuclear and conventional airstrikes from the outbreak of the war. The primary targets of such strikes were NATO's strategic nuclear capabilities, followed by other military targets (MacFarlane, 1991: 186ff.). Although the WTO did regard nuclear weapons as more than just a deterrent, thus not believing in the power of mutually assured destruction, its nuclear strike plans found in WTO military exercises never included the direct targeting of cities. Nevertheless, the collateral damage to population centres as a consequence of the bombardment of military targets would have been lethal to the population since the USSR refuted the limitation of the conflict to a zone of combat and the sharp distinction between military targets and civilian populations (Garthoff, 1958: 109; Heuser, 1993: 438; 2010: 371). As there is limited evidence of Soviet strategy, it is difficult to trace the air strategy back to strategic theorists. One of the few known strategists was General Vasily Sokolovski, who published his *Military Strategy* in 1962 and provided rare insights into the WTO strategy presented above.

## CONCLUSION

This paper aimed to assess the centrality of value targeting and city 'busting' in conventional and nuclear airpower strategy in the Cold War. A commonality of the airpower strategies examined in this paper is their restraint in deliberately targeting population centres. None of the strategies implemented by NATO or the Soviet Union aimed to break the enemy's morale by deliberately targeting population centres. Instead, both nuclear and conventional strategies targeted military capabilities, with the term being broadly defined by the US campaign in Korea and narrowly defined in the nuclear strategies of NATO and WTO, in which the enemy's nuclear capabilities were the primary targets.

Although NATO strategy did allow for the use of the atomic bomb's city-busting capability to ensure the credibility of nuclear deterrence at the political level, the documents of NATO's Military Committee indicate that it was never considered to be applied in practice. Conventional wars fought by the US support this thesis: Cities were not deliberately targeted in conventional airstrikes, neither in Korea nor in Vietnam. Given that precision-guided munition had not been invented until the last decade of the Cold War, the air power strategies of both NATO and the Soviet Union were at least willing to risk the collateral damage inflicted in strikes on targets of military value, with the exception being the NATO strategy from 1968 onwards, which aimed at limiting a potential war by abstaining from any targeting which could escalate the conflict.

To conclude, value targeting was central to conventional and nuclear airpower strategy during the Cold War. However, the definition of military value was occasionally defined somewhat liberally, entering the strategic bombing sphere. In contrast, city 'busting' served mainly as a deterrent to avoid nuclear war. However, given that the strategies throughout the Cold War were primarily focused on destroying the enemy's war-fighting capabilities, and not the morale, city 'busting', as envisioned by

Douhet, did not play as central a role in airpower as it did in deterrence strategy.

Recently, the threat of a potential nuclear strike by the Russian Federation has risen in view of the ongoing war between Russia and Ukraine. Although President Vladimir Putin's rhetoric has de-escalated in that regard, this war constitutes the first symmetric armed conflict involving a nuclear superpower. Therefore, one cannot fall back on former instances to predict Russian behaviour in the nuclear sphere. Regarding the conventional dimension, technology would now allow any Air Force to strike its target with almost absolute precision, thus reducing the collateral damage inflicted upon the civilian population in a conventional air strike. However, Russian air power strategy throughout the war has not implied that it would refrain from harming civilians. In fact, Russia has done quite the opposite in deliberately targeting civilian infrastructure and population centres, aiming to break the Ukrainian people's will to continue the fight (Restle, 2022). Douhet's strategic bombing school has thus reemerged in Ukraine. It remains to be seen if the Russian targeting strategy initiates a global trend or not.

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