

Victory Beyond Superiority: How the Allies won the World War II in Europe

Victoria por encima de la superioridad: Cómo los aliados ganaron la Segunda Guerra Mundial en Europa

Abstract: Current state of international affairs shows the rebirth of near-peer competition. This unveils the likelihood of a conventional conflict between great powers. In the absence of recent clashes of that character, the World War II's (WWII) dynamics can still provide valuable insights on how a new conflict might unfold. To find a useful angle to examine this past-century global war, we formulated the question whether the superiority of the Allies, in terms of manpower and economy, turned their victory practically inevitable in the European theater. It seems an enduring question for today because states usually compete within a security dilemma framework by which they work to enhance defense capacity by increasing numbers of personnel and assets. This paper aimed to respond the question with the support of Michael Handel's theory that states that protracted wars have been won by those who, besides superiority of men, assets and economy, show better leadership, put together a working alliance, and apply geography wisely. Our study concluded that, although superiority was indeed important in the WWII, it was actually only the visible portion of a strategy envisioned and implemented by an experienced leadership who took into account features of geography and established a strong alliance.

Keywords: WWII; Strategic leadership; Alliances; Indirect approach.

Resumen: Las relaciones internacionales actuales muestran el renacimiento de la competencia entre Estados, lo que revela la posibilidad de un conflicto convencional entre grandes potencias. En ausencia de enfrentamientos recientes de este tipo, la dinámica de la Segunda Guerra Mundial (IIGM) sigue siendo una fuente útil de comprensión sobre cómo podría desarrollarse un nuevo conflicto. Para examinar la guerra mundial de este último siglo, nos preguntamos si la superioridad de los Aliados, en términos económicos y personales, hizo que su victoria fuera prácticamente inevitable en el escenario europeo. Es una pregunta todavía válida hoy en día, ya que los estados continúan compitiendo bajo el paraguas del dilema de seguridad según el cual se entiende que la capacidad de defensa significa un número creciente de "soldados" y medios. Este artículo tuvo como objetivo responder a la pregunta con el apoyo de la teoría de Michael Handel, que afirma que las guerras prolongadas fueron ganadas por aquellos que, además de la superioridad económica y el número de "soldados" y otros medios, muestran un mejor liderazgo, forman una alianza fructífera y observan la geografía sabiamente. Nuestro estudio concluyó que, si bien la superioridad era realmente relevante en IIGM, en realidad era solo la parte visible de una estrategia pensada y realizada por un liderazgo experimentado que tomó en cuenta las características de la geografía y estableció un sólido sistema de alianzas.

Palabras clave: IIGM. Liderazgo estratégico; Alianzas; Enfoque indirecto.

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1 Introduction

It was just recently that the United States of America (US) formally stated that the country has joined a competition scheme towards other states, namely Russia and China. According to the country's National Security Strategy (NSS-2017)¹, "China and Russia challenge American power, influence, and interests, attempting to erode American security and prosperity" (THE WHITE HOUSE, 2017, p. 2). The very same document considers both challengers as near-peers, which implies – at least as a means of internal propaganda perhaps – that China's and Russia's sum of national power sources are *quasi*-equivalent to the one of the US. The reality, though, is that the balance of power, at the minimum in terms of military materiel and economy, is still in favor of the North Americans. Just keeping the comparison with China in the maritime realm, the US Navy is reportedly superior to the People Liberation Army-Navy (PLAN). Even with ostensive demonstrations that China is running fast to close the gap, the US still holds relevant alignments with Asian regional powers that are likely to provide extra means to the American side.

"Competition does not always mean hostility, nor does it inevitably lead to conflict" (THE WHITE HOUSE, 2017, p. 3). Although this is true to the point to be written even on the NSS-2017, one cannot deny that theories abound in the sense that, once the competition starts, it is hardly controllable. The Thucydides Trap, according to which war is the likely result when one great power threatens to overcome another (ALLISON, 2017), is certainly an emblematic example of those theories². The Security Dilemma, inextricably intertwined to Thucydides' theory, seems the most suitable to explain the formulation of the ancient Greek writer. In short, an ascending great power will need to take measures, mainly in the military realm, to allow its defensive system develop hand in hand with its economic enlargement and political new assertion. In so doing, "any steps [the new great power] takes to bolster its own defense will be interpreted by an adversary as offensive or provocative, or both" (BIDDLE, 2020, p. 108).

Altogether, formal state of competition amongst some of the most prominent nations of the world, along with the fact that one nation is, in some extent, superior to the others, raise the question whether economic superiority – and more "shining" material, as a result – is a condition for succeeding in the case the current state of affairs evolves to a war. Even though contemporary wars are more likely to unwind in a not clearly defined grey zone, which means it will spend a great deal of its introductory phase as a sort of hybrid warfare, a careful contender may consider looking to the past in search of answers on how a conventional war would unfold. In this regard, the example of the Second World War (WWII, 1939-45), especially in its European theater, seems a valuable example. It was, indeed, the last physical, conventional, clash between two powerful blocs. In the

1 We shall acknowledge that, along with the ascension of US' new government, a new security policy was put in place by means of the Interim National Security Strategic Guidance, March 2021, available at: <https://www.whitehouse.gov/wp-content/uploads/2021/03/NSC-1v2.pdf>. Access on: Nov 26, 2021.

2 For an opposing view to Allison's Thucydides Trap, see Sullivan (2018).

instance of this past-century war, it shall be mentioned, however, that once the US has joined it, numbers (personnel, warlike and war supporting material production, and the economy as a whole) became way superior in the side of the Allies. This said, examining whether it is true, or not, that the victory of the Allies was practically inevitable given their economic and manpower superiority is, indeed, a valid exercise that will likely apply to the world of nowadays.

Professor Michael Handel (2001, p. 9) offers a sound theory to respond, albeit not directly, the question above. He states that protracted wars have been won by a conjunction of factors that go beyond economic and manpower superiorities³. This seems fit as a lesson to the US in a new century again characterized by ostensive competition between states, being one of them – China – a product of the Maoist view on the efficacy of protracted war and, then, an eventual user of this strategy again. Handel's assertion is undoubtedly applicable to the result of the WWII in Europe, where the victory of the Allies reflects a more holistic application of their national powers. Our thesis, thus, is that, besides the strengths in terms of manpower and economy, the Allies' better use of diplomacy and information contributed to a successful "whole of a government" effort. This approach in waging war is translated into three other aspects Handel sets as elements to victory: **a) more effective leadership, b) better cooperation among allies and, c) a wise usage of geography.**

Each of them will be further developed as the arguments to sustain the thesis. This will be carried out – along sections 2, 3 and 4 – by confronting Handel's theory with the reality of the WWII's European theater to examine how well those three aspects were observed by the Allies, ultimately leading to their overall triumph, and how poorly the Axis managed them. Before going on with the arguments, it is worth acknowledging the complexity of the historical events leading to and surrounding the WWII. Coutau-Bégarie (2010) stresses that the historical method to study strategy has, as one of its disadvantages, the likelihood of authors' partial selection of facts to confirm a theory. Trying to overcome this bias of confirmation, we will offer, in section 6, plausible counterarguments to the thesis. As for now, we kick off with the arguments, being the first one related to an effective leadership.

2 Experience against Ideology

One of the most famous sayings in Strategy comes from Carl von Clausewitz, as it is translated by Howard and Paret "war is merely the continuation of policy by other means" (CLAUSEWITZ, 1989, p. 87). This sentence immediately calls our attention that Leadership, at national and strategic levels, is fundamental in waging war. It makes easier the alignment between military, strategic and political objectives, making room, then, for success. Another powerful statement belonging to the Prussian classic emphasizes the importance of a sound Leadership in providing proper flow of assessments and reassessments during [and before] the campaign. Directly quoting Clausewitz,

³ "[...] prolonged wars have been won by **more effective leadership, better cooperation among allies**, greater actual or potential economic strength, and **favourable [sic] topographical and geographical conditions**" (HANDEL, 2001, p. 9, emphasis added).

[...] first, the supreme, the most far-reaching, act of judgment that the statesman and commander have to make is to establish [...] the kind of war on which they are embarking; neither mistaking it for, nor trying to turn it into, something that is alien to its nature. This is the first of all strategic questions and the most comprehensive. [...] the cardinal point of view from which war and theory of war have to be examined (CLAUSEWITZ, 1989, p. 88-89).

Finally, the author's focus on Leadership is also identifiable in his proposed trinity of war (CLAUSEWITZ, 1989, p. 89) and in how it translates into an ideal triangle⁴. The Government, one of the vertexes, although fully exposed to passionate claims coming from its people (another vertex) and affected by the natural uncertainty of military (last vertex) results, shall keep the necessary reason to manage the war machine.

Altogether, and analyzing how the *Clausewitzian* trinity/triangle has operated in the side of the Allies, this section will seek to explain that roles of each vertex (government, military, and people) of the allied triangle were well respected and the interactions between the sides were kept harmonic. Governments (even the Soviet one, just considering the period during the war) were successful in being a reasonable conductor of the general effort. Military planners were meticulous and less vulnerable to the play of chance and showed great adaptability ("creative spirit") during the war. The passionate people turned hatred into power will and permitted itself to be converted into fighting forces and means for large-scale production. Hybrid staffs (civil-military interaction) allowed better flow of orders and assessments, causing political objectives to be compatible with the available means – and attentive to their second- and third-order effects – and military objectives to be tied to the political goals. Through a judicious and constant public communication, the population was kept prone to contribute with the war machine and shielded against eventual opposition.

This was possible thanks to an experienced leadership formed by statesmen with background in occupying high positions in previous wars. Eliot Cohen (2002) is a good reference on how Sir Winston Churchill's (1874-1965) previous experiences, mainly the British failure in "opening" the Dardanelles to reach Turkey, molded his character, leadership, and preparedness for future improved civil-military relations. As for the other two, Franklin Roosevelt (1882-1945) was the Assistant Secretary of the US Navy during the First World War (WWI – here considered its full European period: 1914-18) and Josef Stalin (1878-1953) played a crucial function during the Soviet invasion to Georgia, in 1923, and was of noteworthy political skill in emerging as the Soviet leader after Lenin's passing.

Benito Mussolini (1883-1945) and Adolf Hitler (1889-1945), on the other hand, were enlisted during WWI. As they two ascended from the tactical level of war directly to the political one, without stepping on operational and strategic levels, it is reasonable to infer that, by the beginning of the WWII, they were still very influenced by characteristics pertaining more to the people than to the Government; particularly, passion and hatred.

⁴ The paradoxical trinity of war is further explained in what scholars call the *Clausewitzian* triangle: people-military-government.

Bringing the discussion back to the successful side of the war, Churchill took the office after several years of failed appeasement policy, being promptly faced with the retreat campaign from Dunkirk, France (May-June 1940). By managing the withdrawal of roughly 350 thousand troops, he set the tone of a new approach towards Germany – an indirect one (MATLOFF, 1986), buying time although ceding space. Not indifferent to the outcry of the people, the Prime Minister acknowledged that “wars are not won by evacuations” (CHURCHILL, 1940), but was firm in avoiding direct confrontation with Germany until a stronger alliance could be forged.

Years later, when the allied triad was formally established, his indirect approach still prevailed. Even with all complaints coming from Stalin, Churchill avoided landing in France first place, choosing the North African (Operation Torch) campaign as a peripheral first amphibious offensive against the Germans in November 1942. Surely, Churchill’s experience during the WWI showed that an attrition trench war tends to impact the national morale much more than an apparent inaction, as an indirect campaign can be perceived. “Certainly the [WWI] dominated British thinking about acceptable levels of casualties in major military operations on the Continent” (COHEN, 2002, p. 110). All this in mind, Churchill was skillful in, at the same time, putting an end in the appeasement policy and avoiding direct engagement with the enemy.

Meanwhile, at the other side of the Atlantic, Matloff (1986) points that, inside the US, Roosevelt’s independent voice in strategic matters was bold in postulating Germany as the American prior foe, regardless the will of the people who were looking to Japan as an obvious first choice in response to the attack on Pearl Harbor (December 7, 1941). Roosevelt’s resolve was also related to his unconditional support to Churchill. George Baer (1993) shows that this turned flagrant in 1942 when, against the advice of his military high staff, he chose to support Churchill’s Torch Plan rather than the direct attack over Europe, through the Bolero Plan. The author states it was the right decision. Indeed, jumping over Europe, the war’s mainland, with inexperienced American soldiers, could have caused a dangerous setback or, at the minimum, a possibility for a prolonged stalemate. With the US joining the Allies, the operational factor time was now their side, at least on the Western front. That gave sense to the indirect approach while provided a positive impact in the national morale – with less attritional victories over enemy’s more vulnerable stations – and strengthened the alliance with Britain. All in all, the campaign on North Africa was the only possible offensive venture by that time, being Bolero, at least under a naval perspective, “unrealizable before 1944” (BAER, 1993, p. 223). Ultimately, it was Roosevelt’s bold leadership in pushing strategy to a different direction than proposed by the high military ranks that made possible the military objectives be in congruence with the political goals, being the main one the alliance with Britain.

At the operational level, the US Navy demonstrated great evolution during the Battle of the Atlantic. That was probably due to an adjustment in the Leadership. In the beginning, affected by a turbulent civil-military relation over its design and the control of its budget, it developed a flawed strategy to deal with the submarine threat: a *Mahanian*-inspired seek for a decisive battle against a non-surface fleet to dispute the command of the sea. Worst, this offensive behavior was not supported by enough scouting. All this is sufficiently covered by Baer (1993) who also shows that the course of the battle provided the Navy with a valuable reassessment that the military negative aim (protecting the cargoes) was more suitable to the overall political goal of assuring the continuous supply of Britain. Going after submarine packs was neither necessary nor productive. Also, the convoy scheme was more aligned with the indirect approach carried on land. Few years after the maritime strategy was adjusted, including the use of land-based antisubmarine aircraft, the patrolling (scouting) capability has been enhanced and the Atlantic gap was finally closed to German U-boats. All this without an overall increase of assets, just by the correction of the military objective and more focus on intelligence.

On the other hand, and bringing Clausewitz again to the discussion, German (the Axis) trinity sides “passion - calculation - reason” not always matched the triangle vertexes “people - military - government”. Often, passion and ideology drove government’s goals while military campaigns were marked by flawed assumptions, sometimes in deliberate disregard of the intelligence piece. Murray & Millett (2000) argue this happened in the campaigns against Norway, England, Crete, and Russia. A strategy for a conventional war that disregards the aforementioned harmony is useless, and we may postulate that a state will fail in waging war while subverting the bijective correspondence of the trinity’s sides with the triangle’s vertexes. A wise strategy would work to maintain, and take advantage of, the passion associated with the people; chance, friction and calculation with the military; and reason, to manage all rest, with the Government.

In Germany, Hitler was the first to occupy a different vertex in the war polygon: “in effect, only Hitler would determine the strategy and provide the guidance for [...] the military operations of the three services” (MURRAY; MILLETT, 2000, p. 44). The three Service chiefs were directly under him, and there was no atmosphere for joint preparation and even combined operations. The intermediate strategic level has been eliminated with a consequential compromise in the definition of correct military objectives. The result was that Hitler’s ideology of a *Lebensraum* was always an impeller, with no filter, for new territorial campaigns. Blinded by initial quick and decisive triumphs, Hitler’s ideology pushed Germany into a trap of fighting just to reach its culminating point, especially after accepting a two-front war, invading Russia without finishing business against the Brits. Even considering the Soviet regime a threat, Nazi political guidelines should have avoided an invasion first place, maybe playing with the Soviets a sort of hybrid warfare, while not formally denying the Molotov-Ribbentrop Pact. For example, execution of an informational campaign against Stalin, coupled with low-intense movements and informal “occupations”,

could have capitalized on the effects of the Stalin's Purge in the Red Army and on the outcry of satellite provinces' people. This would likely have been more efficient than the ethnical steamroller that brought the Soviet – especially those who were not Russians –, desperate people into the arms of its tyrant and, ultimately, enhanced the force of the Soviet triangle.

As for the Italians, it was no different. Moved by the ideology to recreate the ancient-Roman *Mare Nostrum* by conquering lands around the Mediterranean, Italians got stuck in less important theaters, while allowing the most valuable target – the British – to maintain their haven in Egypt. Worse, after losing manpower and assets in Yugoslavia, Greece and Albania, Italian dictator Mussolini was no longer able to sustain its eroding leadership. He lost, then, the minimal harmony between government, military, and people, meaning that the Italian *Clausewitzian* triangle collapsed. That gave room to the rise of a relevant internal adversary – the once-supporter King Vittorio Emanuele III – who welcomed the allied invasion to Sicily in 1943, which, in turn, led to the Italian capitulation.

Wrapping up, this section meant to discuss the influence of leadership on the outcome of WWII in favor of the Allies. In regard to some of Clausewitz's writings, we were given lenses to visualize that an experienced leadership is more likely to maintain the desirable harmony within the state, keeping stable relations between government, military leaders, men on the field, and the people as a whole. That is what happened on the allied side and failed to be observed inside the Axis. In addition, except for the USSR, allied states' systems of governments and democratic experience have been in frank development for, at least (considering the US), more than a century. This also contributed to stronger internal institutional relations. Altogether, the Allies were led to a more balanced flow of political goals, strategic ends, and military objectives. As a secondary consequence, it became easier the establishment of a stronger commitment to the allied coalition, but this is a subject for the next section.

3 Alliances need a glue of pragmatism

To this section, Stephen Walt (1987) provides a sound theoretical support. According to him, alliances tend to be stronger when forged based upon a sort of existential threat rather than when created as an instrument of balance of power. Also, he offers that, in view of an emerging threat, states have two options: *balancing* – allying with others against the perceived mutual menace –; or, *bandwagoning*, which means simply joining the threat (WALT, 1987). Finally, the author underscores that “balancing is far more common than *bandwagoning*” and that “ideology is less powerful than balancing as a motive for alignment” (WALT, 1987, p. 5). The study of the alliances operating in the WWII's European theater shows that the Allies, truly based on a balancing system, were able to keep stronger ties within it and, as a result, was more pragmatically successful than the Axis.

Beginning our analysis with the side of the Axis, we shall recollect that diplomatic successes collected by the Nazis had their apogee in the first half of 1939. That followed the union with Austria (the *Anschluss* in March 1938), the acceded claim over the Czech Sudetenland, in September of the same year, and the final annexation of the whole Czechoslovakia, in March 1939. This success is attributed more to the weakness of the Anglo-French will to deter Germany than to a strong diplomatic proficiency in the Nazi side. Anyway, German diplomacy was able to show a last breath of effectiveness with the Nazi-Soviet Non-Aggression Pact (Molotov-Ribbentrop) of August 1939, which came out aligned with general objectives of the *Führer* in preventing waking up the Soviets and allowing the concentration of efforts on the Western front soon. After that, once the pact was torn apart, war became much more than “the continuation of policy by other means”, but the only instrument of policy the Nazis used until the end of the WWII. War was turned into an end in itself. Even before that, the acceleration of German’s military plans and the movement over Poland finally brought, after years of appeasement, a resolute Churchill-led Britain to the war. The latter’s boldness, as it was not compelled by the Nazi “aerial diplomacy” to surrender in 1940, may have represented, according to some writers, like Stephen Bungay (2009, p. LIX), the war’s turning point and the beginning of the Nazi defeat.

Britain’s survival reignited German’s fear that a stronger naval blockade would paralyze its war machine by 1941. Especially because the acceleration of German plans did not allow the conclusion of Plan Z (started in 1939), for recreating the High Seas Fleet to counter British naval superiority. The plan was organized in a way to materialize only by 1945, when Erich Raeder (1876-1960), Grand Admiral of the *Kriegsmarine*, was told the war against the Brits would be inevitable (HUMBLE, 1971). Pressed by the British, the envisioned solution to keep the supply of food and raw material, Operation Barbarossa (June-December 1941), came in total disregard to the Molotov-Ribbentrop Pact, to Nazi-Soviet economic agreements, and to the Soviet pledge to join the Axis⁵. Military might had overthrown the reason; the belief that Germany was able to beat the Union of Soviet Socialist Republics (USSR) before the Soviets had the chance to reorganize the Red Army turned a blind eye to the fact that the USSR aid was of decisive military importance to German (MURRAY; MILLET, 2000). The venture, besides cutting off important supplies for Germany, opened a second front with very extended lines of communication and geographically divergent military objectives (Leningrad⁶, Moscow and the Caucasian region Rostov-Stalingrad⁷ - Baku). Politically, it ended up providing Britain with the foremost instrument of its traditional and “comfortable” warfighting scheme: a powerful allied continental army.

5 Roman Brackman (2001, p. 289) argues that “the purpose of Molotov’s visit to Berlin in November 1940 was to reach an agreement with Hitler on the conditions under which the Soviet Union would join the Berlin-Rome-Tokyo ‘Axis’.”

6 Saint Petersburg nowadays.

7 Volgograd nowadays.

Still discussing German flawed diplomatic movements, another despised ally willing to *bandwagon* the Axis was Spain. “Francisco Franco [...] was making clear [...] his eagerness to join the Axis as quickly as possible” (MURRAY; MILLETT, 2000, p. 84). After years of civil war, it was not a power in Europe, but its strategic bases in the Canaries and its proximity to Gibraltar would have provided a less difficult enterprise to deny the Mediterranean to Britain and to avoid the future execution of the Torch Plan. Again, it was Hitler’s belief in an easy victory over Europe that prevented the alliance with another second-class power with which the spoils would have been shared.

Italy was already a burden, with its parallel war to assure the Mediterranean as its *Mare Nostrum*. Whether Italy joined the Axis in a *bandwagoning* attempt or because of a similar ideology shared with the Nazis, or both, the reality was that the Axis in Europe lacked common objectives and each member was aiming its expansion in different directions; Germany towards the European Heartland and Italy, the Mediterranean and its periphery. There was no mutual trust and no formal combined staff. Italy invaded Greece without informing Germany, while the latter invaded the USSR without consulting Italy (HOSCH, 2010). Hence, the Axis in Europe was a fallacy and Italy did very little to the overall campaign. Quite the opposite, Hitler blamed the Italians for the failure of the Nazi campaign against the USSR. He argued that German intervention to save the Italian failed conquest of Greece delayed the invasion to the Soviet Union (KERSHAW, 2007). All in all, Italy soon became identified as the weaker side and an obvious target of the Allies (in this case, the US and Britain), who, in their indirect approach towards Germany, came to Sicily in 1943. Italy finally served itself as a strategic beachhead to satisfy both the periphery war against German and, partially, Stalin’s eagerness for a second, Western, front in Europe.

Although this paper is focused on Europe, it is worth mentioning Japan as well, as some of its actions had serious repercussions in the Old Continent. The way Japan fought its own war also shows the lack of common ground in the Axis. Aloof of Hitler’s objectives, the attack on Pearl Harbor, without German previous knowledge, brought the US to the war in the exact moment Barbarossa has become a failure. After the American declaration of war directed only against Japan, Hitler unilaterally declared war against the US. That gave the latter a legitimization⁸ of its alliance with Britain – and consequently with the USSR – and a reason to point to Germany (not to Japan) as the first enemy to be defeated. Rewinding the time before Pearl Harbor, although Japan was not willing to confront the Soviets because of a previous failed experience in Mongolia (YEGOROV, 2019), had Berlin offered Tokyo an expectation of material rewards over Russia (oil, perhaps), the latter might have been interested in opening a second front over Russia, instead of attacking the US in Hawaii.

Once it was inevitable the US jump into the war, more coordination of the Axis should have happened to prevent the concentration of the American assets in the European theater. Baer (1993, p. 204) argues that “because [the Japanese] did not [also

8 The American support to the Allies was already in place since the early war and turned flagrant by the Lend-Lease Act of March 1941.

mount *a guerre de course*], throughout the war, the United States could devote its limited escort and patrol resources to [counter] the German threat.” At the end of the day, the strategy of then-Captain Karl Dönitz (1891-1980, Grand Admiral of the *Kriegsmarine* from 1943 to 1945) “destroy more cargo ships than the enemy can resupply” should have had Japanese adherence to it. That would have possibly denied the US taking full advantage of its economic (industrial) power, due to its eventual reduced shipment capacity.

Previous examples show the Axis as simply a non-aggression pact, rather than a true alliance or coalition. Other than those examples, the late joining of Romania (November 1940) and Bulgaria (March 1941), once the Nazis were already close by their territories, reinforces the *bandwagoning* character of the Axis in Europe. Walt (1987) puts together some characteristics of a successful coalition, being them: the existence of a mutual threat; burden-sharing and a joint economic policy; a common strategy to neutralize the agreed-upon threat; a public sense of solidarity; shared mechanisms for the formulation of policy, strategy and planning operations; and a unified command. From all of those, the Axis’ sole feature was that Britain and the US (not even the USSR) were mutual threats. On the other hand, the Allies (especially the binomial US-Britain) established a unified command, with shared mechanisms, that defined and executed a common strategy, marked by a shared burden and a joint economy, towards a unanimous enemy: German. The early establishment of the Combined Chiefs of Staff (CCS) synthesizes the mutual commitment inside the US-Britain partnership. Altogether, the Allies formed a pragmatic coalition, regardless of particular ideologies, and values of each partner. Neither the lack of agreement on the objectives for war termination nor the Soviet suspicion that a second front would ever come into reality were definitive hindrances for the alliance. Disagreement was usually surpassed by negotiations, several being a face-to-face meeting of their maximum leaders, as it happened in Tehran, Yalta, and Potsdam.

This section discussed the systems of alliances within the WWII, particularly those operating in Europe. By using the theory of Stephen Walt, the Allies were identified as a truly balancing alliance, according to which a mutual powerful threat is the main glue that holds states together, even those with different or opposing ideologies. The Axis, on the contrary, was formed in Europe by weak states joining Germany in a *bandwagoning* initiative. As a result, it was simply a non-aggression pact and its states did not orchestrate their efforts. Altogether, as an alliance, we had that the Allies were much stronger than the Axis, and, in so being, their tactical victories were able to produce strategic and political effects that made more sense. Especially because they pressured Germany in two geographic fronts. The discussion around geography and its features, by the way, pertains to the ensuing section.

4 Geography matters

For Sun Tzu, “who fights with full knowledge of [distance and difficulty of the terrain] is certain to win; he who does not, will surely be defeated” (SUN TZU, 1963, p. 128). What seems to be only of tactical concern, Vego (2009) also finds suitable, actually a fundamental factor, in the operational realm; for him, the operational factor **space** is key in determining the positioning of bases and in designing lines of operations. He also calls attention for the space’s sort of determinism; while the operational factor time is manageable, the space is less likely to be modeled in one’s advantage (VEGO, 2009). The consequence, then, is that Commanders shall be fully aware of the features of geography, so they can properly accommodate the disposition of force, in the proper time, to either overcome obstacles or take advantage of a benign terrain. Finally, Clausewitz (1989, p. 348) wraps everything up, bringing the result to the next level: “principal effect [of geography and character of the ground] lies in the realm of tactics, but **the outcome is a matter of strategy**” (our emphasis). When comparing the contenders of the WWII, geography was in clear favor of the Allies or more carefully considered by them. In general, geographic isolation and territory size – and its disposition and conformation, as well – have all played an important role to provide the Allies with freedom of action and the possibility of trading space for time.

Besides American geographic isolation to the European theater, the US was also able to enjoy a self-cultivated diplomatic isolation, during the first years of the war, as far as possible. This allowed the country to remain neutral, gaining sufficient time that permitted not only better military preparation and economic (and industrial) growth but also fighting a weakened Nazi enemy, after the long struggle of the latter in Russia. Also, had the US joined WWII in its beginning, American people could have been not as supportive as it happened after Pearl Harbor.

Once joining the war on the side of the Allies, geography played again to the US’ advantage. The vastness of the North Atlantic, along with German lack of capability to dispute command of the sea against the Americans, contributed to a comfortable condition of untouched territory in the whole US. All in all, the Western side of the Atlantic was preserved throughout the war as a haven for continuous large production of warlike material and goods to be consumed by the Allied war machine.

Regarding Britain, its geography kept it protected from the *Blitzkrieg* in its peak and a very unlikely *Kriegsmarine*’s amphibious campaign. For Murray & Millett (2000, p. 84), “an amphibious landing on the British Isles was never a serious option. Few senior German military leaders had a clue as to the complexities of such an operation.” Thus, the Battle of England became a *Luftwaffe*’s sole business, tasked to execute strategic bombing. Again, the operational factor space was fundamental in denying Germany, despite its numerical slight advantage, any possibility of conquering the necessary air superiority to proceed with the main mission.

Flying in the limit of their range, Nazi aircrafts ended up in a battle of attrition that favored the British. Flying over inimical territory, every engaged aircraft represented a definitive loss of aircrew and equipment. Even if the Germans had conquered air superiority, the bombing campaign would have been impaired anyway due to a poor intelligence gathering in terms of defining targets (MURRAY; MILLETT, 2000). At the end of the day, this early experimentation of *shock and awe* strategy was fruitless.

As for the Soviets, Stalin took advantage of his territory's size and moved the Soviet military-industrial complex east of Moscow during the preparation for war (MURRAY; MILLETT, 2000). During the struggle, the Red Army kept its continuous resupply and, even weaker than the German attacker, successfully traded space for time. Then, as professed by Vego and other scholars of the operational art, Red Army skillfully applied the correct combination of space and time, extending the fight until the heavy winter came and, along with it, gaining time to replenish its contingent – we cannot forget the Purge – and putting together the conditions for a counterattack.

As previously mentioned, Operation Barbarossa was the German response to their unsuccessful campaign against the Brits. Once implemented, though, the features of the battlespace were in favor of the Soviets. Luckily for them, Berlin chose to advance on three equally valuable objectives, being them very much apart from one another, in a Northwest-Southeast line more than 2,000 kilometers long. This caused the Germans not only to march over a huge terrain, under inclement weather, but also to do this in three divergent lines of operation. One towards Leningrad (Saint Petersburg), to detain the constant threat posed by the Soviet Baltic Fleet; the southernmost one directed to the oil fields of the Caucasus; and a third one aiming to smash the political center of Moscow. Had this movement done in a single line of advance, it would have already been a complicated enterprise with over-stretched lines of communication (MURRAY; MILLETT, 2000). The concomitant moves towards the three objectives caused a vast front scarcely supported by overwhelmed logistics. This eventually slowed the campaign and the German Army lost its main tactical advantage: The *Blitzkrieg*. Besides, when the counterattack came, the very wide and, then, poorly cohesive front was not in condition to hold it.

Same way geography was in favor of the Allies, Germany was seriously impacted by it. On land, it faced a two-front war without any major topographic feature to support its defense⁹. Especially in what concerns the eastern front, the cone shape of the space between Russia and Germany naturally implies in the principle of concentration when the attack comes from the East. Coincidence, or not, the Soviets were first to step on Berlin.

At sea, geography also played hard against Germany imposing natural difficulties in developing a sea power *vis-à-vis* Britain. Enclosed within the North Sea, the Kriegsmarine leadership should have not developed a *Mahanian*-inspired project to build a battle fleet to fight

⁹ Only referring to the eastern and western fronts, and not considering the front in the South, where the Cassino Range, south of Rome, provided enough natural support to build the Gustav Line that successfully slowed the Allied movement over Italy in 1943.

a decisive battle for the command of the Atlantic. The *Kriegsmarine* was to take into account that the classical Alfred Mahan's recipe for developing a powerful sea power considered not only means but also geographic features. None of the latter, as prescribed by Mahan (1991), was favorable to Germany. Then, the Nazis were not to reedit the WWI mistake in mirroring Britain to develop an antagonist fleet. Likely, it would have been blocked anyway. Hence, once again, twenty plus years later, the fleet showed its inutility: used as a fleet, it suffered definitive losses during the campaign against Norway (April-June 1940); when dispersed, isolated ships like the pocket battleship Graf Spee, adapted as commerce raiders, also failed (MURRAY; MILLETT, 2000). Considering Germany's geographical position, the battle fleet should have not been an option first place. Instead, the *Kriegsmarine* was to favor the production of the original number of U-boats requested by Dönitz (BAER, 1993). Had this happened, Germany would have presented far better results in the Battle of the Atlantic, reaching a greater deal of tonnage sunk in the side of the Allies. Possibly, the ultimate goal of the submarine campaign in provoking British paralysis might have been reached.

In short, this section argued that Germany neglected that geography did not favor its expansion war. German position in the European Heartland and its enclosed waters caused a war in two fronts, with no support from an organized battle fleet and over-extended lines of communication. Thus, geography was another factor that pushed the Nazis to their culminating point. Especially because they were fighting against a protected island, an industrial continent at the other side of the Atlantic, and a huge continental territory, full of maneuvering space for counterattacks.

5 Counterarguments favoring the numbers

Whenever doing research, especially in social sciences, which unveils preferences and sometimes passion, we may all be susceptible to bias. This said, it is recommended to raise counterarguments before someone else does so. So, despite these three aspects favoring the Allies, it might be argued that the answer to our proposed question is that the allied victory was indeed practically inevitable in view of their economic and manpower superiority. This counterargument can be supported by the *Clausewitzian* principle of the predominance of the defense (CLAUSEWITZ, 1989), with a resultant necessity of massive numbers of troops and materiel to carry offensive campaigns, especially amphibious assaults. With a focus on this principle, one looking for numbers would see a confirmation of this antithesis on both fronts of the allied territorial campaign; in the East, by noticing the capacity of the Red Army in implementing a counteroffensive even after the loss of roughly five million troops; in Western Europe, by examining the magnitude of the numbers involved in the execution of the Operation Overlord, in which amphibious operations were brought to a next level in military history.

At sea, where there is no such defensive advantage in *Clausewitzian* terms, another antithesis needs to arise. In this regard, the fight over shipping tonnage (resupply of ships vs. ships sunk) in the Battle of the Atlantic can be pointed as nothing but a war for numbers; a truly struggle for statistics. Also, it is a counterargument that counts in favor of the economic superiority and industrial power, for which the most emblematic example is the surprisingly high production rate of the Liberty Ships (BAER, 1993). The same reason applies to the aerial domain in which there is a compelling need of establishing air superiority before any other mission, being it terrestrial, maritime, or aerial. All the exposed can be synthesized in a correlation with the Lanchester's Square Law, by which an N-fold increase in quantity is only surpassed by an N-square-fold increase in quality.

6 Rebuttal – means are important but let's also consider the ways

Unlimited wars are those in which at least one of the contenders fights for unlimited ends, generally the complete overthrow of an antagonist regime. The study of those war types tends to overemphasize the importance of “unlimited” means. The counterarguments above reinforce this trend. What they do neglect, though, is that strategy, as presented by Arthur Lykke, Jr (2001), reflects the proper balance between ends and not only means, but also ways. Not by coincidence, Professor Milan Vego (2009) recognizes operational art as, among other things, a tool that works in saving resources – material and human –, by employing them wisely. Expanding this concept, the judicious usage of operational art helps, thus, overcoming technological limitations and even tactical setbacks vis-à-vis the adversary. In short, operational art turns asymmetry, as a strategy, viable. Returning to Lykke and not ignoring the ways, all the proposed counterarguments can be confronted against one, or more, of the triad of arguments: sound leadership, pragmatic alliance, and wise consideration of geography.

When it comes to manpower superiority, it is worth mentioning that Stalin's actions towards the Red Army, before Barbarossa, show that his own Army was more a source of skepticism than of trust. Its leadership was one of the main targets of the Soviet leader's Great Purge, with 65% of its 1936's ranks eliminated (KUROMIYA, 2013). Stalin, to be sure that the Red Army would fight the Nazis [and the Japanese], and not with them, promoted a cleansing to rebuild a bottom-up army (KUROMIYA, 2013).

That said, the size of the Red Army would have served for nothing had the Germans adopted a “hearts and minds” strategy directed to the Soviet people and the opponent's army. Even simpler, the Nazis should have waited for, or sponsored, insurgencies in Soviet satellite republics, while preserving, as far as possible, its part in the Non-Aggression Pact. To use a buzzword from nowadays, a hybrid warfare, a grey-zone strategy, would have maybe sufficed against the USSR. The ideological component of Hitler's strategy was, however, truly relevant in denying the pragmatic proverb “the enemy of my enemy can be my [eventual] friend.”

When Barbarossa came into reality and it became clear the Red Army would fight it back, its huge size would have been equally unimportant had Stalin implemented his first plan of sending everyone to the furthest front with no reserves behind. In his mind, that was an attempt to hold the Nazi first blow in order to buy time. That, however, would have contradicted Clausewitz (1989), who reminds the dispersive nature of the defense against the nature of concentration of the attack. Had the Red Army stayed all in line beforehand, the *Blitzkrieg* carried closer to German centers of support, would have conserved its maximum speed and shock power and, then, would have likely smashed the Soviet line the same way it did against the French. All previous preparation in moving industrial support to the East would have been of no value.

In the Western front, the superiority of the Allies was already clear after the US joined the war. It is not an exaggeration, however, to state that it was the indirect approach, represented by choosing to carry first blows in Northern Africa and Italy, that allowed the Operation Overlord to happen at the appropriate time and place. Even though the manpower superiority and the abundance of means indicated the operation was feasible in June of 1944, the Allies did not neglect the use of evasion – Plan Bodyguard and Operation Fortitude – before its execution. “All warfare is based on deception”, prescribes Sun Tzu. Also, Overlord was preceded by proper isolation of the battlefield (JOHANSON, 1994), with judicious application of air interdiction and the destruction of Nazi transportation and communication networks in France. Altogether, those two procedures reinforce the importance of taking the ways into account in parallel to the consideration of the means. All in all, they are classic examples we have for the study of operational art when it comes respectively to the operational functions “maneuver” and “fires”, as they are defined in doctrinal documents like the American JP 3-0, Ch.1, *Joint Operations* (UNITED STATES, 2018). The success of the amphibious assault can also be attributed to General von Rundstedt’s “let them come” strategy, according to which only a light resistance would be stationed at the beaches to slow down the first phase of the allied movement and a steadier defense would be assembled around Paris (MARGARITIS, 2019).

As for the repercussions at sea, it can be argued that the submarine campaign, carried alone, was an insufficient venture and a bad strategy overall. It would hardly come to its tonnage objective and the American production would have been augmented anyway, considering that the US is a continent in itself, full of industrial centers that were physically threatened by no enemy. At the end of the day, the German submarine campaign finished off providing Roosevelt with another argument to ignite the Americans with his “Germany first” policy. Had the Germans not attacked the American shipping at sea, the outcry of American people might have pushed Roosevelt to point Japan as a first enemy. Authors, as Murray and Millett (2000), propose that the submarine campaign should have never carried out, and its resources allocated to the German Army and *Luftwaffe*. Possibly, the increased speed of the *Blitzkrieg* in the tactical level would reflect more vigorously and rapidly in Nazi overall strategy, deterring antagonist powers to join the war.

In the air, the superiority in numbers early gained by the Allies has never been a reason for them to try attrition battles for the skies. The allied air campaign followed the same rationale of the one used in land, facing the *Luftwaffe* in its periphery. Only when it was weakened enough to not be able to dispute the command of the heights, the Allies began their strategic bombing campaign over German interior objectives and the operational interdiction of German lines of communication in France.

In rebutting the counterarguments, it becomes clear that states need to meet some prior requirements that will allow the proper (right time, right place, and with the correct concentration) deployment of their means. Even if they are abundant. WWII in Europe shows how the Allies, by having a better leadership, a stronger commitment within the alliance, and a truly geographic-led strategy, granted massive numbers of men and assets that heavily contributed to their overall success. Manpower and economy were only the visible and measurable portions of a strong and comprehensive strategy; one that, by committing all instruments of national power to the war machine, was able to create a series of tactical victories and to take full political advantage of them.

8 Conclusion

“History doesn’t repeat itself, but it often rhymes.” Whether this nifty saying can be attributed to an acknowledged writer¹⁰, or it is simply anonymous, it offers a great incentive to examine the past in search for how things may unfold now. This is true for the studies in strategy because, although war involves a great deal of ever-evolving technology that eventually changes the war’s character – the way it manifests –, what war really is, its nature, is immutable. Then, it is still valid the *Clausewitzian* definition that war is a violent clash between two parties trying to accomplish conflicting political ends. This said and considering there was no ensuing conventional war between near-peer competitors after WWII, that past-century war can, even now, provide valuable insights on the dynamics of a future eventual armed conflict between two great powers and their allied states.

Regarding the fact that war may have its character evolved, we fully acknowledge that any near-future war would develop in a context of a much more interdependent economy – and, broadly speaking, more intertwined affairs – than it was in WWII’s epoch. Technology, also, would likely bring into play an escalating amount of new [robotized] war machines. Furthermore, current international relations are no longer the sole business of the states and we deal today with countless sub-state and multi-state actors. Thus, a considerable amount of these new actors represents security threats and challenges, sometimes with shining new material and a proxy given by a formal state. Behind all these, there is a profusion of international legal regimes in an attempt to govern a system that, according to a realistic view, is anarchic by nature.

¹⁰ Although the sentence is commonly associated with the writer Mark Twain (real name Samuel Clemens – 1835-1910), there is no formal evidence that the sentence is really of his own.

Altogether, the result is that our lexicon has recently incorporated new expressions such as lawfare, grey-zone strategy, and hybrid warfare. This paper lacks any analysis of them all. However, we bet that, more than ever, numbers of men and assets, alone, will not respond to this scenario.

On the other hand, considering the perpetuation of war's nature, this paper, looking the background of engagements, relations, and other affairs about the WWII, aimed at confirming that conventional and prolonged wars have been won by the side that presents, not only manpower superiority and economic strength, but also, and mainly, a more appropriate adjudication of all instruments of the national power. All that supported by a sound strategy that combines leadership, loyalty to an alliance and, observance to the features of the surrounding space. At any moment, we intended to deny the importance of numbers of men and assets and of the industrial power to deliver continuous support to the front. Rather, we wanted to emphasize what shall run in parallel to those. Superiority is only meaningful if it gets to the battlefield at the proper time, coming from the most suitable axis and with an adequate goal to achieve. Stepping down a little and reaching the realm of war's operational level, the operational art wraps everything up by calling our attention to the importance of a balanced interrelation between force, time, and space. Superiority in economy and manpower (force) is not a panacea for winning wars. Consequently, they are far from being the sole objective of a sound strategy.

Because this paper was started by acknowledging nowadays' great power competition, it is compelling that we wrap everything up by tying the lessons from the past to a recipe for the near future. Looking to the side of the US, the past indicates that the partisan politics of nowadays shall give room to bold and unifying leadership, the empowerment of the institutions, and interagency effort. Moreover, the US should keep enhancing true partnership around the globe, especially in areas to counter its rivals' influence. In this regard, it seems reasonable that the US shall seek, in the wake of the Interim Security Strategy Guidance, to achieve better outcomes from the international organizations and multilateral forums by working within their framework. As for its near-peer competitors, the US must understand that, although both have been proving to be good in "fighting" in the grey zone for limited objectives in their immediate vicinity, it sounds unlikely that any of them would try more pretentious goals. At least for now, such an enterprise – that demands warlike capabilities not recently tested in combat – seems an unreasonable effort for them. While one is enclosed by geography (First and Second Islands Chains in East and South China Seas) and overwhelmingly dependent on foreign resources, the other struggles with declining population and a stagnant economy. Direct confrontation does not serve well to the US. Instead, containment and indirect approach, especially if carried with the support of a solid net of allies, under a committed and wise leadership, still fit US' purpose of not losing its hegemonic status.

Authorship and Collaborations

All authors participated equally in the elaboration of the article.

References

ALLISON, G. The Thucydides trap. *Foreign Policy*, Washington, June 9, 2017. Available at: <https://foreignpolicy.com/2017/06/09/the-thucydides-trap/>. Access on: April 24, 2020.

BAER, G. *One hundred years of sea power: the U.S Navy, 1890-1990*. Stanford: Stanford University Press, 1993.

BIDDLE, T. Coercion Theory: a basic introduction for practitioners. *Texas National Security Review*, [Austin], v. 3, n. 2, p. 94-109, 2020. Available at: <https://tnsr.org/2020/02/coercion-theory-a-basic-introduction-for-practitioners/>. Access on: April 20, 2020.

BRACKMAN, R. *The secret file of Joseph Stalin: a hidden life*. London: Frank Cass, 2001.

BUNGAY, S. *The most dangerous enemy: a history of the Battle of Britain*. London: Aurun Press, 2009.

CHURCHILL, W. We shall fight on the Beaches. In: INTERNATIONAL CHURCHILL SOCIETY. Resources. Speeches. 1940: the finest hour. Washington, D.C.: International Churchill Society, June 4, 1940. Available at: <https://winstonchurchill.org/resources/speeches/1940-the-finest-hour/we-shall-fight-on-the-beaches/>. Access on: April 28, 2020.

CLAUSEWITZ, C. von. *On war*. Edited and translated by Michael Howard & Peter Paret. Princeton: Princeton University Press, 1989.

COHEN, E. *Supreme command: soldiers, statesmen and leadership in wartime*. New York: The Free Press, 2002.

COUTAU-BÉGARIE, H. *Tratado de estratégia*. Traduzido por Brigitte Manso et al. Rio de Janeiro: Escola de Guerra Naval, 2010.

HANDEL, M. *Masters of war: classical strategic thought*. London: Routledge, 2001.

HOSCH, W. Political leaders. In: HOSCH, W. *World War II: people, politics, and power*. New York: Britannica Educational Publishing, 2010. p. 189-204.

HUMBLE, R. *Hitler's high seas fleet*. London: Pan Books, 1971.

JOHANSON, W. J. Bitter Victory: the Battle for Sicily, 1943, by Carlo D'Este, and Decision in Normandy". *Naval War College Review*, Newport, v. 47, n. 3, 1994. Available at: <https://digital-commons.usnwc.edu/cgi/viewcontent.cgi?article=3406&context=nwc-review>. Access on: Dec 5, 2021.

KERSHAW, I. *Fateful choices: ten decisions that changed the world, 1940-1941*. London: Allen Lane, 2007.

KUROMIYA, H. *Stalin (profiles in power)*. London; New York: Routledge, 2013.

LYKKE Jr, A. F. *Toward an Understanding of Military Strategy*. In: CERAMI, J. R.; HOLCOMBJR, J. F. *U.S. Army College guide to strategy*. Carlisle: War College, 2001. 179-185.

MAHAN, A. T. *Mahan on Naval strategy: selections from the writings of rear admiral Alfred Thayer Mahan*. Annapolis: Naval Institute Press, 1991.

MARGARITIS, P. *Countdown to D-Day: the german perspective*. Philadelphia: Casemate Publishers, 2019.

MATLOFF, M. *Allied Strategy in Europe, 1939-1945*. In: PARET, P. (ed.). *Makers of modern strategy: from Machiavelli to the Nuclear Age*. Princeton: Princeton University Press, 1986. p. 677-702.

MURRAY, W.; MILLETT, A. *A war to be won: fighting the Second World War*. Cambridge; London: The Belknap Press of Harvard University Press, 2000.

SULLIVAN, D. *Destined for Competition: An Analysis of Graham Allison's Thucydides Trap*. *The Strategy Bridge*, [s. l.], Jan 24, 2018. Available at: <https://thestrategybridge.org/the-bridge/2018/1/24/destined-for-competition-an-analysis-of-graham-allisons-thucydides-trap?rq=thucydides>. Access on: Nov 26, 2021.

SUN TZU. *The art of war*. Translated by Samuel Griffith. Oxford: Oxford University Press, 1963.

THE WHITE HOUSE. *Interim National Security Strategic Guidance*. Washington, D.C.: The White House, March 2021. Available at: <https://www.whitehouse.gov/wp-content/uploads/2021/03/NSC-1v2.pdf>. Access on: Nov 26, 2021.

THE WHITE HOUSE. *National security strategy of the United States of America*. Washington, D.C.: The White House, December 2017. Available at: <https://www.hsdl.org/?abstract&did=806478>. Access on: Nov 26, 2021.

UNITED STATES. Joint Chiefs of Staff. *Joint Operations: 17 January 2017 incorporating Change 1, 22 October 2018*. Washington, D.C.: Joint Chiefs of Staff, [2018]. (Joint Publication 3-0). Available at: https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_0ch1.pdf. Access on: Dec 12, 2021.

VEGO, M. *Joint Operational Warfare: theory and practice*. Newport: Naval War College, 2009.

WALT, S, M. *The origins of alliances*. Ithaca; London: Cornell University Press, 1987.

YEGOROV, O. How the USSR under Zhukov Smashed the Japanese in Mongolia. *Russia Beyond*, Moscow, Sep 3, 2019. Available at: <https://www-rbth-com.cdn.ampproject.org/c/s/www.rbth.com/history/330922-soviet-japanese-war-khalkyn-gol/amp#>. Access on: Apr. 29, 2020.