Arms Races and the Coming of the Second World War

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It was not a coincidence that the phrase"arms race" was coined in Europe in the late 19th century. Armed rivalry between political communities is ancient, but the intense military competition, which scholars have come to label "arms races," emerged with the industrial revolution. By the 1840s, industrialization had revolutionized the manufacture of weapons. European armies seized on the communications and transport revolution embodied in the spread of telegraphs and railways, while navies exchanged wood and sails for steel hulls, steam engines and screw propellers. The pace of industrial production and technological change accelerated, and with it the urge to keep pace with potential enemies, especially after Prussia demonstrated in the wars of German unification (1866-71) how the new technologies and mass conscript armies could combine with systematic planning to achieve swift and decisive results.[1]

The intensity of the military competition before the outbreak of war in Europe in 1914 appeared to confirm that arms racing had entered into great power politics as a new and dangerous factor promoting war. One of the most authoritative statements on the subject came from Lord Grey, who had been Britain's Foreign Secretary in 1914. To him the lesson was clear: "It is that great armaments lead inevitably to war. If there are armaments on one side there must be armaments on the other sides. While one nation

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arms, other nations cannot tempt it to aggression by remaining defenceless. ... Each measure taken by one nation is noted and leads to counter-measures by others."[2]

In the 1920s, the belief that an action-reaction cycle of arming had spun out of control and caused the First World War inspired efforts by the League of Nations to negotiate global control of arms. Those efforts failed because by the time that the World Disarmament Conference had met in Geneva in 1932, the turmoil of the Great Depression, Japan's conquest of Manchuria in 1931-32 and Adolf Hitler's appointment as Chancellor of Germany in 1933 meant that disarmament had become impossible and war much more likely. The series of international crises resulting from Japan's expansion in China, Italy's aggression in Africa and German expansion in Europe from 1936 to 1938 ultimately led to the coming of another European war in 1939 and then global war in 1941.

The series of military disasters suffered by Britain, France, the Soviet Union and the United States in the first two and a half years of the war seemed to confirm that the war had started because these powers had failed to arm enough to deter the aggressive powers. This common belief that the war had started because the *status quo* powers had failed to arm in time became a rationale for the aggressive foreign policies on both sides in the early Cold War. As the nuclear rivalry between the superpowers sped up in the 1960s and 1970s, the study of arms races by academics became more systematic and urgent. Most scholars agreed that arms races were an "intense competition between Powers or groups of Powers, each trying to achieve an advantage in military power by increasing the quantity or improving the quality of its armaments or armed forces."[3] On other basic questions, specifically what caused arms races, did arms races have independent effects and did they cause wars, scholars remained divided.

One important reason why academics remained divided in the study of arms races was the politics of the Cold War. In the West, scholars who believed that arms races could spin out of control and induce war advocated arms control talks with the Soviet Union. Like Lord Grey, these scholars argued that it was mutual suspicion and the search for security that drove states to arms against each

other in a self-defeating cycle of arming and counter-arming. Other scholars dismissed the notion that arms races had independent effects produced by cycles of action and reaction; for them intense arms rivalries were symptoms of the underlying political-economic disputes that had caused all wars. They argued that the danger in an arms rivalry was not that it might spiral out of control, but instead that one side might fail to arm enough to deter the other from gaining a political advantage or even launching a war to exploit its superiority. The "spiral" versus the "deterrence" models had policy implications. Those who feared that an arms race might spin out of control and who criticized the power of President Dwight D. Eisenhower called "the military-industrial complex" advocated détente with the Soviet Union to avert an unwanted nuclear war and to reduce arms spending. Those who feared that weakness might invite attacks called for ever-larger defence budgets and greater armaments. In Washington, this kind of thinking was most evident during the first term of President Ronald Reagan (1981-85). Hardliners in the Reagan administration attributed the on-going Cold War and the stockpiling of nuclear arsenals to the inherently aggressive nature of the Soviet political system and often referred to the lesson of the 1930s to illustrate the danger of failing to arm against dictatorial regimes.[4]

This article will reassess the arms rivalries of the 1930s among the Great Powers in the light of this debate between the spiral and the deterrence models. It will argue that the military rivalry of the great powers developed into a system of intense arms competition beyond the control of any one participant, in other words an arms race as described by the spiral model. Although the arms race *alone* did not cause the Second World War, it certainly did have independent effects and determined the timing of war's outbreak and its expansion in 1940-41. This article also challenges the common view that the war started because the *status quo* powers had failed to arm enough to deter the

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Before I discuss those plans, let me first set out the origins and distinctive character of armaments competition in the decade before the Second World War. Ideas about arming for future war were profoundly influenced in the experience of the First World War. That conflict marked a profound change in the way military men thought about war. Before 1914 general staffs assessed the strength of nations by measuring the size and quality of armies and fleets and the money spent on them. In 1914 Europe's armies advanced according to offensive plans intended to achieve swift and decisive results. The war, however, lasted for four terrible years and demanded an unprecedented commitment of national resources and ever-greater mobilization of entire economies and societies by the combatant governments. This changed war from a clash between armies and navies to a national endurance test, or "total war" as it became known, framed the way contemporaries interpreted the outcome of the conflict and the way in which they imagined wars to come. Germany and its allies had lost the war, so ran the conventional wisdom, not because Germany's armies had been defeated, but because the Central Powers' economies had failed and the morale of their populations had collapsed, owing in part to the Allied blockade. The lesson that military men the world over drew from 1914-18 was repeated time and again at staff colleges: winning the next war would require extensive pre-war planning to mobilize the totality of the nation's industrial and human resources, as well as self-sufficiency in food and in key raw materials such as iron ore, coal and oil. In other words, the definition of "armament" had expanded to encompass not only frontline forces (arms *in breadth*), but also the readiness and the capacity of entire economies and societies to wage total war (arms *in depth*).[5]

Naturally, the war made an indelible imprint on the minds of those who survived it and who came of age after it. For many scholars, industrialists, officials, soldiers and statesmen of all political shades, the war had opened up the awe-inspiring possibility that in the future technocratic elites could rationally

plan and manage entire industrial economies and societies to realize grand political aspirations. After the war, big government, multi-year industrial plans and a command economy first took hold in the Soviet Union. Stalin's drive to industrialize Russia under the Five-Year Plans aimed at catching up with the advanced capitalist economies, not just to build socialism, but also to get ready to win what Soviet officials believed to be the inevitable showdown with the capitalist powers. Among Stalin's soldiers, none supported the idea of turning the Soviet economy into a vast military-industrial complex more enthusiastically than Mikhail Tukhachevsky, one of the top military theorists of his era. While the Soviet Union went its own way after the war, the overwhelming political impulse among the victors in the 1920s was not to perfect the wartime practices of centralized state control but to put into reverse the political, economic and social distortions generated by total war from 1914 to 1918.

During the 1920s one of the major feats of demobilization was the restoration of the pre-1914 mechanism of international currency stabilization and exchange known as the gold standard. By adhering to the gold standard, all the capitalist states not only promoted the smooth flow of trade and capital across frontiers, but they also locked themselves into a strict budgetary discipline that would inhibit massive arms build-ups. Among the major capitalist nations, the onset of the Great Depression from 1929 onward broke the trend toward demobilization. The industrial slump, the spectacular failure of markets to self-correct and the breakdown of the gold-standard system helped to propel into positions of power cohorts of eager bureaucrats, soldiers and politicians who dreamed of salvation through the exercise of state control over every aspect of national life. The rise of these total-war visionaries had its most immediate impact in Japan. A conspiracy of military officers and like-mined civil servants plotted to conquer Manchuria to give Japan the raw materials and eventually the industrial capacity to wage future total wars. Their conquest of Manchuria in 1931-32, and their subsequent efforts to turn it into a military-industrial complex, was a direct reply to Russia's first Five-Year Plan.[6]

The Great Depression also coincided with the 1932 World

Disarmament Conference. As I mentioned above, in the wake of Japan's challenge to the League of Nations in 1931-32 and the advent of the Nazi regime in Berlin in 1933-34, the disarmament talks had no chance of success. Hitler came to power with a programme for the German conquest of Europe through war, first against the Soviet Union, but ultimately against France and Britain too, that required a huge expansion of German armaments and the mobilisation of the whole German economy and society for total war. Briefly perhaps, before Hitler came to power, or even had he not come to power at all and some sort of army dictatorship had been established, there was a chance that some sort of deal on disarmament could have been made between Britain, France and Germany. If an opportunity was squandered at Geneva in 1932, however, it was only the opportunity to conclude a short-lived deal on European armies and air forces. Even had a military dictatorship ruled Germany from 1933 instead of the Nazi party, then that military regime would have given in to the temptation to race ahead once the boundaries of a disarmament agreement had been reacted. In any case, in 1933 Hitler took office. The armed forces under War Minister General von Blomberg formed an alliance with the new government to rearm Germany in defiance of the international restrictions and disarmament imposed on Germany's armed forces after its defeat in 1919. Once Germany began to arm in 1934-35, Britain and France were forced to accept the outcome of the breakdown of the disarmament talks – uncontrolled German rearmament.

In the political science literature, arms races are often described as waves of action and reaction that ripple through the international system. In periods of acute political tension, so runs the general description, one state races ahead to win a military edge over its rivals, who in turn respond to the menace by arming too, and a perilous cycle of actions and reactions ensues, which ends either in war or in some sort of uneasy stalemate. Before 1914, for instance, the European powers raced against each other by building ever more powerful battleships and by equipping mass conscript armies that could be mobilized for attack faster than their competitors. During the Cold War the superpowers spurred each other on to

stockpile nuclear weapons far beyond the point of overkill.[7]

During the 1930s surges of action-reaction among the great powers sped up the making of ships, tanks, guns and aircraft. Diverting ever more money, factories, imported raw materials and labour to the mass production of munitions at the cost of profitable exports and living standards placed great strains on the competitors. To do so the competitors found themselves imposing, or under increasingly political, economic and competitive pressure to impose state control over economic and social life. Entering the arms race was not a politically neutral act. The symptoms of escalating arms growth such as expanding state bureaucracies, multi-year industrial plans and social regimentation seemed to foretell of profound political change. As the arms race accelerated, in discussions about the implications of these changes, it was no coincidence that the term "future war" became interchangeable with "totalitarian war." Arming meant turning entire nations into tightly integrated war machines that were self-sufficient in food and industrial raw materials. That was the universal military-political lesson of 1914-18 and the compelling emulate-or-capitulate logic that drove the arms race forward. What made the arms race of the 1930s distinct was that it operated like a giant machine compelling all the fast-arming powers to adopt what were described as "totalitarian" practices with increasing intensity.[8]

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1936 was the turning point. From the low point of 1933, worldwide arms spending had tripled by that year. In part because of the soaring demand for armaments, industrial activity everywhere heated up fast. The output and price of raw materials shot up too. Governments, first under the pressure of the slump, and then the arms race, were impelled to intervene more vigorously and continually into industry, trade and society. Everywhere

military men saw disciplined societies, state-managed industries, and the suppression of market forces, as the logical necessity of modern warfare and the arms race. Sometimes they met opposition from industrialists and state officials; sometimes they allied with like-minded entrepreneurs and ambitious civil servants to lobby for industrial concentration, autarky and technocratic rule. Because future war would be "totalitarian," the prevailing political impulse was to make state power more "total," societies "regimented," economies "planned" and "autarkic." Of course not everyone reacted to that *competitive pressure to conform* in the same way. Some embraced it; others resisted, but the pressure continued to mount.

Here it will be useful to discuss the Great Powers in two groups: the willing emulators and the unwilling emulators. The willing were those great powers dominated by the ideologies that had emerged from the First World War – Communism, Fascism and National Socialism. Each of them had the necessity of mobilising the masses to achieve an unbreakable level of national cohesion in total war. The military establishments in Germany and Italy in fact welcomed Hitler's National Socialism and Mussolini's Fascism precisely because both movements offered to regiment the masses for future war.

As the rapid defeat of Italy during the Second World War would show, Mussolini's rhetoric about preparing Italy for total war was always well ahead of the reality of Italy's armaments. Resource poor Italy was just too dependent on international trade and raw material imports to convert itself into an effective garrison state. The expansion of its empire in Africa could not make up for the lack of essential industrial resources. But the fact that the Fascist regime tried to keep pace in the arms race, and rejected alternative military-political strategies more in line with Italy's national resources, speaks volumes about how ideas of future total war, and what it meant to be a "great power," acted as powerful incentives to pursue arms, autarky and social regimentation. "In a world armed to the teeth," Mussolini explained, "to lay down the arms of self-sufficiency would mean putting oneself tomorrow, in the case of war, at the mercy of those who had unlimited resources for war."[9]

It was no coincidence that in March 1936 Mussolini called for an intensification of the pursuit of national self-sufficiency. By then his economic officials had re-structured the major arms suppliers in a way that made them effectively state-managed industrial enterprises.

Japan is another example of a nation pushed and pulled by the arms race in a direction that made little sense given its lack of resources. The feud between the army and the navy over national resources and primacy in national strategy only made matters worse. Despite efforts to turn Manchuria into a vast military-industrial complex, Japan never had the means to achieve that aim. Worse still, the conquest of Manchuria accelerated the Soviet arms build-up along the Siberian-Manchurian-Mongolian frontiers, and as a result the situation on the continent deteriorated. The outbreak of the Sino-Japanese war in the summer of 1937 paved the way for draconian mobilisation laws that introduced central economic planning and more military control over the economy and society, but new multi-year plans and more efficient distribution of resources could not overcome the basic problem – the lack of industrial capacity, fuel and other raw materials to compete with the Soviet Union and the United States.

Germany had a bigger industrial economy than either Italy or Japan, but its ability to be the pacesetter in the arms race was always constrained by how much iron ore, oil and other raw materials could be imported. The German propaganda minister Joseph Goebbels declared that Germans preferred "guns to butter," but unless Germany could export it could not pay for imports, and steel essential to armaments manufacture was sold abroad to earn foreign exchange. This constraint caused endless disputes in Berlin between the military elite, central bankers and industrialists keen to gain a share of world export markets. For the bankers and industrialists, arming was always a temporarily measure to pull the German economy out of the Great Depression and to restore Germany's political independence, but for the top military planners such as Colonel George Thomas, the head of the high command's war economy staff, arming was a means to restructuring the whole economy to wage total war. Adolf Hitler agreed. And in August

1936 he wrote his Four Year Plan memorandum, which ordered that the German economy should achieve autarky through the exploitation of domestic raw material sources and synthetic substitutes.

The launch of the Four Year Plan — coming just after Mussolini's March 1936 autarky speech and at the end of Soviet Union's second Five-Year Plan — best exemplifies the mechanism driving the arms race. The Four Year Plan was a deliberate act of military-economic emulation and convergence. It was not inspired so much by fear of the rapid growth of Soviet armaments, but by admiration of the Soviet style of arming. The head of the German air force and Hitler's close associate, Hermann Göring took charge of the implementation of the plan. His bureaucracy grew quickly and was enthusiastically supported by ambitious young industrial entrepreneurs keen to spend the huge sums of money he made available on previously unprofitable manufacturing processes. Although the Four Year Plan would pay off in some sectors of the economy, the truth was that Germany did not have the capacity to build up the armed force — rearm in breadth — and achieve autarky — rearm in depth — at the same time. And the plan could do little for years to come to clear up the main bottleneck to more rapid rearmament — the shortage of steel. As Göring admitted in early 1937, German rearmament had reached a "plateau" just at the moment when French, Russian and British rearmament was fast gaining momentum.

Back in 1933 Stalin and his inner circle felt confident about Soviet armaments, but by 1936-37 the arms race, above all German rearmament, had eroded that confidence. The volume of military hardware coming out of the factories was impressive, but below targets. At the same time, the complexity and therefore cost of aircraft, tanks and guns was inflating rapidly, and military men complained bitterly to economic officials that they were getting much less for their rubles. Keeping military and economic officials at loggerheads was part of a divide-and-rule strategy that Stalin pursued to ensure his dictatorship.[10] The use of terror and purges of the elite was another method. That the launch of the Great Terror in 1936-37 coincided with the acceleration of the arms race was

no coincidence. Stalin regarded the purging of the party and the military as a logical extension of arming. Removing older party cadres and military officers who might prove unreliable in a crisis and replacing them with new elites was a way to harden the Soviet state for the trials of total war. In this light, it is not at all surprising that Marshal Tukhachevsky, the brilliant but temperamental war planner was removed from office, charged with conspiracy and executed. During the early 1930s in discussions with Stalin, he had displayed an unhealthy habit of elevating military necessity to the point of demanding the subordination of the whole economy to the Red Army planning staff. It was only one more logical step to assert that the soldiers should run the state. Although Tukhachevsky was widely admired as an innovative thinker and one of the fathers of the Red Army's successful military doctrine known as "deep battle," Stalin simply did not want a budding Napoleon Bonaparte around in a moment of crisis.[11]

Let's now turn to the unwilling emulators, France, Britain and the United States. During the 1930s, once military competition sped up and another big war loomed, it was widely accepted (though largely incorrect) that the states that had already adopted "totalitarian" practices had a head start in the race toward all-out social and economic mobilization for total war. Confounded by runaway German rearmament in both breadth and depth, the liberal great powers struggled with the problem of how to arm themselves against the escalating threat of "totalitarian war" without succumbing to totalitarianism.

France by far had the greatest problems trying to resolve this political dilemma because the nation was divided between the right and left. In June 1936, the Socialist Leon Blum became prime minister as head of a left-wing coalition called the Popular Front. At the time, France was suffering an economic downturn caused by the Great Depression and a profound security crisis caused by the threat from Nazi Germany's rearmament. During the election, Blum had promised to create jobs through a "New Deal" style plan of state investment similar to the one President Roosevelt had introduced in the United States in 1933 to cope with the economic slump and he also promised to keep the peace through disarmament

talks. But within a few months of becoming prime minister, under the pressure of the arms race, specifically the German threat, Leon Blum, a man committed to peace, launched the largest peacetime build-up in French history, which included the nationalisation of many arms factories, above most of the aircraft industry. His government also slashed social spending and plans for job creation. Sadly for Blum, French investors, anticipating a devaluation of the franc, began to export their capital — in effect vetoing Blum's spending plans.

Many Frenchmen, including Blum and his advisors, wondered whether a liberal financial system was compatible with the gigantic armaments effort required to counter Germany. The logical next step for France was to introduce controls on currency movements and trade, just like Japan, Germany and the Soviet Union. But Blum rejected state control of currency movements and trade. Not only would abandoning liberal capitalism alienate Washington and London, but Blum also regarded exchange controls as the slippery sloop to fascism. The dilemma of how to match the totalitarians in the arms race while maintaining a free-running economy tormented the Popular Front government. A solution of sorts was not found until Edward Daladier became prime minister in 1938. Like Blum, he was a man of the left, but he was willing to move further over to the right in politics to keep France in the arms race. Given the choice of backing workers or backing employers and capital holders, he chose the latter. In November 1938 he began to roll back much of the progressive labour legislation introduced under Blum. In my view, as France's prime minister from 1938 to 1940 Daladier would have gone much further in emulating German and Italian methods of disciplining workers and organising big business to make armaments at full speed had he been able to do so, but his new allies on the conservative right feared that any increase in state control of the economy would be a slippery slope into communism. Daladier never fully escaped that dilemma.

In Britain Neville Chamberlain, first as head of the Treasury from 1931 to 1937 and then as prime minister from 1937 to 1940, believed he had solved the problem of arming against Germany without adopting totalitarian methods. For him deterrence was

the key. Right from the start of British rearmament, he backed the building up of a large air force as a deterrent. Relying chiefly on air forces to deter war would keep the economy from collapsing under the weight of colossal land armaments, compel Hitler into talks, free Britain from any entangling alliances with France and its allies and, Chamberlain thought, be ideal for preserving the peace of Europe and Britain's liberal political-economy. The build-up of the air force never worked as the safety valve on all-out rearmament that Chamberlain had imagined. Germany continued to arm despite the rapid expansion of the British air force, the British chiefs of staff continued to press for faster arms growth, and state intervention into the economy, frustrated all of Chamberlain's attempts to control military spending. In September 1938, the British Cabinet realised that Britain was reaching the economic and political limits of what could be achieved within a liberal capitalist system in peacetime. As Sir John Simon, the head of the British Treasury put it: Britain could not compete with Germany in the arms race "unless we turned ourselves into a different kind of nation."[12]

The notorious Czechoslovak crisis in September 1938 marked the high point of Chamberlain's efforts to avoid war with Germany through diplomacy. The crisis began when Hitler demanded, on the pretext that German minorities living in Czechoslovakia were persecuted under Czech rule, that the Czechs surrender the borderlands inhibited by a majority of ethnic Germans to German sovereignty. Although Hitler said in public speeches that all he wanted was a revision to the frontiers to bring all ethnic Germans within Germany's frontiers, he had in truth hoped to provoke a small quick war to destroy Czechoslovakia. However, Czechoslovakia was a French ally and France was committed to its security. As the crisis unfolded in September 1938, the French army mobilised for war and the British Royal Navy did the same. Even if the British cabinet wished to avoid war in Europe, everyone understood that Britain could not remain idle if France, Britain's most important ally, went to war with Germany over Czechoslovakia. Chamberlain sought to resolve the crisis by negotiating in face-to-face discussions with Hitler over the transfer

of ethnic German territories to Germany. The British Prime Minister hoped that the solution to the Czechoslovak crisis would pave the way for arms control and the peaceful settlement of other disputes in Europe through diplomacy.

Although Hitler had wanted limited war with Czechoslovakia, he was now confronted with general war against Britain and France. At the same time his top military advisors warned him that Germany could not prevail in a long war of total mobilisation against the strength of the British and French empires, which would in all likelihood supported by the United States and the Soviet Union too. As the chief of the army staff, General Ludwig Beck warned in May 1938: "The military-economic situation of Germany is bad, even worse than in 1917/18. For this reason Germany does not have the capacity to win a long war."[13] Hitler was deterred and he accepted negotiations. On September 29, 1938, the leaders of Britain, Germany, France and Italy met in Munich Germany to agree on the transfer of Czech territory inhabited by ethnic Germans to Germany. The next day, Hitler also signed an agreement with Neville Chamberlain agreeing to settle European disputes through peaceful means.

The irony of the Munich agreement was that instead of ushering in a new era of peace and disarmament the conference provoked an acceleration of arming and political tensions. Within weeks of the conference, German, British, French, American and Soviet arming all escalated dramatically. Angered that he had been deterred from launching a limited war against Czechoslovakia by the combination of French and British arms and Chamberlain's diplomacy, Hitler ordered huge increases for the navy, army and air force. Right from the start it was clear that these expansion plans were unrealistic. By spring of 1939, however, it had become clear to him that the economy could not deliver substantial increases in armaments just at the moment when Britain, France, the Soviet Union and the United States were escalating their armament production. Germany could not win the arms race, and Hitler's realisation of that fact made him reckless in 1939. In contrast to the orthodox version of the 1930s — the moral tale of a failure to confront the dictators with force — Germany's foes in fact armed early enough and with

sufficient resources to win the arms race. The real question was why did deterrence fail to stop Hitler from attacking Poland in 1939 in the same way it prevented him from attacking Czechoslovakia in 1938? The answer to this question lies in the nature of a spiralling arms race.

Hitler's programme for aggressive war and conquest had assumed that Germany could achieve military supremacy without provoking the powers that surrounded it from expanding their armaments. He mistakenly assumed Britain, France, the Soviet Union and the United States would remain idle while Germany raced ahead in military power. At the end of 1937, when German armaments expansion had plateaued Hitler began to sense that any advantages Germany may have obtained by arming early and quickly would soon be nullified by the accelerating arming of those powers opposed to German expansion. Hitler's sense that time was working against him points to how the arms race working as a mechanism drove the world to war. Like all historical processes, arms races occur over time. Once they get underway, there is no way to erase the unintended consequences of early actions and restore initial conditions. Escalating competition erodes the pacesetter's advantages. Time itself becomes a real player in politics and strategy, working for some powers and against others. First in Berlin, then in Rome, and finally in Tokyo, arms competition compelled leaders to make now-or-never decisions about war. In August-September 1939 Hitler decided it was better to risk a general war by attacking Poland rather than wait; in June 1940 Mussolini and his advisors decided to enter the war at Germany's side once it was clear that the French army had been defeated; and in late 1941 the Japanese leadership decided to attack the Britain and the Dutch empire in East Asia and the fast-arming United States rather than allow its resource base dwindle and American naval and air power to grow.

Still, the tidal-like effects of arms racing did not force anyone to choose war. In Italy and Japan we can imagine alternative choices being made. What made a great European conflict inevitable was Hitler's determination to wage one. Yet, as scholars have often

noted, Hitler did not get the big war against the Soviet Union backed by Britain and Italy that he had originally wanted. Instead he provoked one against France and Britain. The explanation for why events unfolded in that way lies in the arms race. Hitler was losing it and he knew it. Refusing to be deterred, he decided to run the risk of an all-out war against a constellation of foes that possessed a crushing level of economic superiority over the flagging Third Reich. As the historian Adam Tooze has shown, the wealth gap between Germany and its enemies was even wider than most contemporary experts believed.[14] That makes in retrospect his decision to venture into an unwinnable war even more astonishing. That the economic lightweights Italy and Japan followed that destructive path too is doubly astonishing.

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The course of American interest and involvement in the crises in Europe and Asia exemplifies the way in which the arms race worked as a force to expand not just the arms race but also the war as well. For most of the 1930s the United States only made marginal increases to its naval and air forces, while President Franklin D. Roosevelt called for disarmament in Europe. US rearmament did not accelerate in profound way until after the Czechoslovak crisis in September 1938. Roosevelt ordered huge increases in the size of US air forces and in the capacity to build aircraft. From the records of a meeting in the White House in November 1938, it is clear that he intended to pursue a strategy of containment. He intended to sell Britain and France the aircraft they needed to deter Hitler. Once the war broke out, he was determined to stay out of it. The United States would instead sell the bombing planes the Allies needed to win.

The US willingness to sell aircraft to Britain and France was a huge bonus for their war efforts. Even so the Western allies

were well ahead in armaments by the time Germany launched its offensive against France. The coming of the war removed the peacetime economic and political obstacles to all-out arming in France and Britain because they were able to introduce emergency mobilisation laws that allowed for the economic and social controls that Germany, Japan, Italy and the Soviet Union had implemented earlier with varying degrees of success. French output of aircraft, tanks and other munitions climbed swiftly in 1939-40. When Germany attacked Belgium, Holland and France in May 1940, the Western allies had a superiority in numbers and in many cases quality of armaments: four million allied troops defending against three million Germans; the allies had 14,000 artillery pieces against the German number of 7,378; and the allies fielded 4,204 tanks against the German number of 2,439. Allied air strength was superior too: the combined aircraft of the allies was 4,469 and a German air force of 3,578.[15] More importantly, the British and French empires were in the process of mobilising a vast number of men and material to wage a long war while Germany was already near exhausting its economic potential. With their vastly superior naval forces, Britain and France also had access to the world's markets while at the same time denying Germany overseas supplies of industrial raw materials.

Hitler and his generals understood they would only have one chance to launch an offensive and if it failed to achieve great results the war would be lost. They therefore gambled on a very bold and risky plan to breakthrough the French frontline and encircle in a wide sweep the elite formations of the allied armies. That this plan worked and brought about the defeat of France has been the subject of historical debate for decades. While historians were once inclined to see the German victory in the Battle of France in May-June 1940 as a result of superior fighting doctrine, many experts have challenged this view in recent years and have attributed the German victory to a combination of luck and allied intelligence blunders.[16] In any case, the victory over France did not solve Germany's economic dilemma, especially as the Soviet Union and the United States both again sped up their rearmament

efforts. Indeed, one reason why Hitler decided to expand the war by attacking the Soviet Union in June 1941 was his realisation that he needed to destroy his foe in the East before the Anglo-American alliance solidified in the West and appeared over German skies in the form of huge bomber formations. In other words the arms race played a decisive role here in expanding the conflict to the two future superpowers.

When France fell in May-June 1940, Roosevelt's strategy of containment fell too. Supplying Britain and France with the armaments, particularly aircraft, to defeat Germany would have meant that there was no need for the US to arm on a gigantic scale. In the months between the defeat of France and Hitler's attack on the Soviet Union in June 1940, the American President came under great pressure to build a "fortress North America" and to mobilise industry to arm at breakneck speed. He consistently refused to do so. He also rejected appointing an "arms czar" to take control of the US economy. Some historians have criticised him for allegedly causing delays in rearmament by doing so. Roosevelt is a notoriously difficult character to understand because he left few traces of his inner thoughts on paper, but it is clear that he feared that allowing power slip to new mobilisation agencies risked the permanent militarisation of the US and an end to democratic freedom and social progress. While he pushed through the famous policy of lend-lease to support Britain's war effort, and won an unprecedented third term in the White House in November 1940, he realised that the worse thing that could happen was a British surrender. That would leave the United States alone in a world dominated by a fascist alliance. To fight the ensuing cold war, the US government under the impulse of mass fear would be forced to arm on a totalitarian scale, and so destroy the American way of life. After Germany attacked the Soviet Union, he decided the only way to prevent that from happening was to win the war against Germany by converting the US into a gigantic war machine under his control — the famous Arsenal of Democracy. The Japanese attack on Pearl Harbour in December 1941 unleashed the US economy from the constraints of peacetime politics

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In Europe the arms race was caused by the German challenge to the status quo and Hitler's determination to launch an aggressive war was the ultimate cause of the war. But once the arms race gained momentum from 1936 onwards, it frustrated the ambitions of all the great powers that tried to master it or cope with it. German rearmament provoked reactions from Britain, France, the Soviet Union and eventually the United States. Britain, France and the United States, each in their own way, tried to rearm enough to deter Germany, Italy and Japan from embarking on aggressive wars and compelling them to negotiate. These strategies failed not because the status quo powers did not arm in time and with sufficient resources, but instead because a spiralling arms race undermined their deterrence strategies. Faced with defeat in the arms race, first Germany, then Italy and Japan decided to risk the uncertainties of war rather than accept the certainty of defeating the arms race and its political implication — the maintenance of the international status quo.

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