Nuclear Arms and WWII

Nuclear weapons are popularly regarded as the horror of the twentieth century. Yet, many argue that they promoted peace through the cold war. To examine the effect of nuclear weapons on international politics, this essay explores how nuclear arsenals could have stopped WWII or made it all the more horrifying. This essay first explains the relevant understanding of the use of nuclear force. It then constructs a thought experiment in which Germany, France, Britain, Russia, and the US, have nuclear weapons in 1933. It will examine the perceptions and motivations that led to German aggression under Hitler and show how nuclear weapons would amplify or negate those causes. This essay will conclude that nuclear weapons would not likely have restrained the lunatic Hitler from taking Poland or Czechoslovakia, but would have left the response of France or Britain either the same or more timid. It will also conclude that while the German army would then have been deterred from attacking the nuclear powers, Hitler would not have. Europe would only have been saved from a nuclear holocaust by a successful German Coup d'etat during the sitzkrieg.

Explanation of Nuclear Weapons:

Nuclear weapons posess an unparalleled and terrifying destructive ability, yet in the hands of rational states they promote peace because they make it clear to all sides that aggression will have unacceptable consequences. Their destructive power is far clearer than that of conventional forces. They are small, inexpensive, and can be delivered after a defender has already been defeated, which makes defensive states more secure and aggressive states less brash. Also, if both sides posses high enough quantities of these weapons, then they have equivalent destructive ability independent of force ratios, which makes preventive war pointless. All of these benefits however, require that the nuclear

weapons are in the hands of rational actors. Non-state actors are not deterable because they lack a homeland to strike and nuclear weapons cannot necessarily be traced back to them. States led by irrational or insane men are still susceptible to mispreception and may not care about the affects of a nuclear weapon on their own population.

Less Susceptible to Mispreception:

The destructive power of a nuclear weapon is far more clear and obvious than that of a regiment. A leader may face the fact that his state only has half the standing army of another and still believe victory is certain because his soldier are better trained, or of tougher racial stock, or better armed or of higher morale. He may fail to account for his enemy's reserver troops, or for the unarmed men which might be called to service. But a nuclear weapon has no morale or vague potential change to it's power. It is simply an explosive that can be understood on two dimensions: the distance it can be delivered and the explosive power it possesses Therefore, a leader is far less likely to misperceive his nuclear capability.

Nuclear Destruction is Effectively Absolute:

The level of destruction a nation armed with conventional weapons is able to inflict on his enemy is roughly proportional to the size of that nation's arsenal. Thus, if a nation sees it has a fleeting advantage over an enemy that is building artillery and rifles, it has an incentive to start war sooner to avoid a worse war later. However, large enough stockpiles of nuclear weapons allow one actor to inflict a level of harm on his enemy that does not vary based on the relative stockpile size. After destroying major cities, industrial centers, ports, and small towns, and chicken coops, further bombing serves only to "bounce the rubble". Therefore, if one nation increases the size of its nuclear arsenal, the other need not worry for it can still threaten to deal unacceptable levels of harm.

Promote Defensive Advantage

Defensive states benefit from a nuclear-armed world. A conventional war can be won by a state that can successfully overrun a defender. That defender can now no longer pose a threat to his attacker. Because his army has been destroyed in the process of conquest. Even if the defender's forces have simply been isolated, "an army marches on its stomach" and that army is now cut off food, fuel, or matériel In contrast, nuclear forces are easily hidable and very small relative to the amount of damage they can do. Therefore, the defender, even after he has sustained an invasion, or even a pre-invasion nuclear attack, has a second-stike ability; He can launch his nuclear arsenal at his attacker.

If two states posses nuclear weapons, it is very difficult for one to prevent the other from having this second strike capability. There are in fact two types of nuclear attacks that can be launched against an enemy. A counterforce attack is one that seeks to destroy an enemy's nuclear arsenal and thus prevent the enemy from launching. A countervalue attack is one that seeks to destroy an enemy's industry and cities either as a pre-invasion first strike, or a vengeful second strike. Countervalue attacks are far easier than counterforce because, as mentioned, nuclear weapons are small, do not require gasoline, and can be launched from a submarine or remote mountain base. Cities are of course, large and stationary. Given the difficulty of a first-strike counterforce attack, nuclear deterrence is very stable way to ensure that aggressors know they will endure unacceptable harm if they begin an attack.

Nullify First Strike Advantage

Nuclear second strike capability also makes irrelevant any advantage that one actor might gain by being the first to attack, preventing states from daring to start wars. If the leaders of a state believe war is likely and that they will have an advantage in it by being the first to strike, they have a powerful incentive start what may be an unnecessary war. Even if they believe that their adversary had such an

advantage, that belief will impel them to strike first and deny their enemy that advantage. Nuclear weapons provide states with the ability to deal unacceptable harm to the enemy with a second strike, making this advantage is irrelevant. The size and durability of a nuclear weapon renders futile any state's attempt to use a first-strike counterforce attack to disarm an enemy and thus gain a first-strike advantage. Thus, nuclear weapons remove first strike advantage as a cause of war.

Will only be Used by Desperate and Defeated Rational Actors

Given the horror of nuclear war, and the fact that a second strike capability allows both sides to inflict unacceptable levels of harm on the other should one state use nuclear weapons, under what conditions will they ever actually be used? In a crisis between two nuclear-armed states, the nuclear attack will depend on the will to accept catastrophe. For this reason, rational states will not use nuclear weapons to decide matters that are not absolutely vital to their interests. Indeed, they may avoid using conventional forces where they otherwise would if to do so might spark nuclear war. That the United States chose not assist Hungary in the spring of 1956 is evidence for this. Conquest is however, another matter. A state that can would likely inflict a second strike on an aggressor that was on the verge of conquering it or had already done so.

Caveat: Actors must be rational and deterrable

The pacifying effect of a countervalue second strike requires that the leadership of potential aggressor is sane and wishes to avoid the effects of the second strike on their country. In many states this is not the case; A long line of dictators and tyrants are infamous for the slaughter of their own people. This lack of concern for the lives under their charge could lead a dictator to disregard the threat of his people and light the world ablaze. Knowing this, other states might then seek to preventively remove the leadership and in so doing trigger a war. Of course, even murderous dictators do not act

with wild abandon; they take risks with the goal of increasing and maintaining their personal power. A dictator is therefore deterrable to the degree to which he cares about maintaining the land an people from which he draws power.

A Nuclear World in 1933:

Five nations posses nuclear weapons in 1933: Britain, France, England, Russia, and the United states. No other nation is close to acquiring this capability. All five nations have nuclear submarines, large nuclear arsenals and reliable delivery mechanisms, giving them global secure second-strike and first-strike countervalue capability against all other powers. No nation has counterforce capability. All nations have held video-recorded tests or their nuclear weapons against empty Potemkin villages and so the effects of a nuclear weapon on human settlement cannot be misperceived The nuclear capabilities of states are well-advertised, greatly reducing the possibility for misperception.

Causes of WWII:

The driving force behind the second world war was Germany's aggressive grabs for an empire in Eastern Europe. Thus, understanding the effect of nuclear weapons requires understanding their effect on the perceptions and motivations of Germany that led it toward this aggression. Yet, as Germany took Czechoslovakia, the western states of Britain and France did nothing. Even as Germany trampled Poland, these states did not invade Germany, but waited for the 8 month long "sitzkrieg". It was only when Germany decided to invade France, and then also Russia that the major bloody struggle began. This essay will therefore also consider the effect that nuclear weapons would have had on the allied understanding.

Hitler's Desire for Lebensraum and Autarky

As a totalitarian state, Germany's will was largely that of Hitler, who wanted to build an empire for the German race on top of the wheat fields of eastern Europe. In 1937 he held a four hour conference at the Reich Chancellery in which he explained his assessment, goals and plans for foreign affairs that is recorded in the Hossbach memorandum. He believed that WWI had demonstrated that autarky was necessary for German security, explaining that Germany's current foreign trade was over the British-dominated seas. He was particularly concerned with Germany's need to import food and believed that the solution to this problem was to seek "living space" in east European wheat fields Nuclear weapons would not have filled the granaries of Germany and thus would not have prevented this as a cause of war.

The Allied Acceptance of Expansion.

In a nuclear-armed world, the major powers would not have been emboldened by their ability to resist Hitler with nuclear weapons, but would have been weakened and persuaded to allow Hitler his conquests. At Munich, the French Prime minister believed that Hitler's ambitions outstripped that of even Napoleon² <May, 153> and urged for a hard line against Germany. However, French General Vuillemin warned, "If there is war, there will be no French air force by the end of fifteen days." <ibid 168> General Gauche handed Premier Daladier a pessimistic report emphasizing the superiority of German land forces. This perception of millitary inferiority made France dependent on the aid of a Britain with similar fears. The British Air ministry stated that Germany would be able to land a knockout blow in a two-month bombing campaign. <ibid 175>. Such expectation of destruction is remarkably similar to the actual destructive power of nuclear weapons. This leads us to conclude that the response in Munich would have been similar. However, France and Britain in 1938 were at a

-

¹ Colonel Hossbach, "Minutes of a Conference in the Reich Chancellery, Berlin, November 5, 1937" *The Avalon Project at Yale Law School*, April 23, 2009 http://www.yale.edu/lawweb/avalon/imt/document/hossbach.htm . pg 2. Ernest R. May, *Strange Victory: Hitler's Conquest of France* (New York, NY: Hill and Wang, 2000), pg 153.

military disadvantage to Germany, so might nuclear weapons have removed this disadvantage and emboldened them? No.

Britain and France would have felt more secure, knowing that they could not be conquered by Hitler. Yet both states can be considered rational states and as such would not have been they would not have been willing to wage nuclear war and see Paris or London destroyed for the sake of Prague. The certainty that Germany could inflict unacceptable levels of harm on them would in fact make them less likely to ally with Poland or declare war in 1939. Though, given Britain's estimation of the danger of aerial bombardment, it is still possible. Hitler would have however, certainly rolled into Warsaw unmolested from the west.

Nuclear Deterrence Across the Maginot Line

Following a declaration of war by France and Britain, Hitler would have been left with the decision whether or not to invade France, a nuclear power. France, now defending its own territory, would have been entirely willing to use its arsenal in the last days of an invasion. Thus invasion of France by Germany would ensure the destruction of both states.

Potential Outcome: Unchecked German Advance Eastward

Suppose that in fact, the western powers had either not allied with Poland, or had abandoned her and not declared war on Germany? Germany's hand would have been almost entirely free, knowing that the French who had now twice proved themselves to be worms, would not invade Germany and face nuclear assault. It would then be free to roll into Hungary, Romania, Yugoslavia, and Bulgaria with no one to stop it except the Soviet Union. An assault on the Soviet Union would pose the same danger of nuclear retaliation as an invasion of France. This situation would lead to essentially a tripartite cold war between Germany, the Soviet Union, and a British-French alliance.

Potential Outcome: European Nuclear War

Though nuclear weapons would favor peace, Hitler would still have the ability to begin nuclear war with France, or with Russia. Yet in either case, surely Hitler would not have been stupid enough to commit an act that would turn Germany into a charred wasteland? Unfortunately, history reveals him to have been capable of magnificently tragic blunders, as this essay will demonstrate. Should Hitler doubt France's will to use nuclear weapons, or his inability to execute a first strike counterforce attack, It is possible that he would chose war. Furthermore, Hitler was concerned not for his own life nor that of the German people, and only believed they had value if they could fulfill his grand vision of conquest.

Hitler's Urgency for War

Hitler wanted war before 1945 and while nuclear weapons would have tempered his ability to argue for it in front of the army, they would not have restrained him. In the 1937 Hossbach conference he argued before his commanders that because the rearmament of Germany was nearing completion and the rearmament of Britain and France was just beginning, Germany would have a brief window of opportunity during which it would be stronger relative to France and Britain. While the military minds in the room might possibly have accepted this. Vast stockpiles of a nuclear would have rendered it silly. The destructive power of the whermacht would be dwarfed by that of the nuclear forces of both Germany and her enemies and any difference in nuclear arsenal would have just determined who could bounce the rubble more times.

Unfortunately, nuclear weapons would not have removed Hitler's personal ambition and impatience. Though worrisome, an argument for a war of opportunity would be the argument of a

³Hossbach, pg 4.

statesman, but as Sebastian Hafner describes in his book, *The Meaning of Hitler*, Hitler was no statesman.⁴ He had in fact dismantled the constitution so as to not be bound by it, leaving departments to quarrel over jurisdiction without clearly defined powers in a condition of chaos controlled only by the great fuhrer. In 1939 he stated, "I am now fifty; I would rather have the war now than when I am fifty-five or sixty."⁵ This implies that he was motivated not by the interest of the nation but by his personal quest for glory. Would he have been willing to risk plunging Germany into flames in order to satisfy this? Yes. Not only did he state in 1937 that "expansion could only be carrier out by...taking risks." But in fact preferred an obliterated Germany to a moderate timid one.

Recklessness and Suicide

Hitler's ability to murder large numbers of people was well known. Yet, not only did he seek the destruction of millions of "undesirables" in Europe, but he showed a recklessness in starting war and even eventually sought the destruction of his own nation. Hitler's decision to declare war on the US demonstrates most fully his ability to make wildly destructive or even suicidal blunders. Under the defensive alliance with Japan, Germany was under no obligation to declare was on the US after Pearl harbor, and Haffner speculates on possible reasons why, but is himself unsatisfied with what are in fact a string of foolhardy half-schemes that include trying to capitalize on Russian dissonance over allying with a capitalist power. However, the fact that no documents reveal his motives gives lie to the fact that he decided this and announced it in the Reichstag without discussing it with anyone. Furthermore, as the war drove on, he revealed that not only was he himself suicidal, but believed "If one day the German nation is no longer sufficiently strong or sufficiently ready for sacrifice to stake its own blood for its existence, then let it perish and be annihilated by some other stronger power." In mid-march of

_

⁴ Sebastian Schaffner, *The Meaning of Hitler*. (Cambridge MA: Harvard University Press, 1979), pg 42.

⁵ibid pg 108.

⁶ibid pg 121.

⁷ibid pg 120.

1945, when the day came that Germans in the west were hanging white table cloths out their windows, Hitler would give orders for Germans in the west to be forcibly marched westward and for all left standing in Germany to be destroyed. Hitler was clearly willing to destroy Germany when he saw that it could not conquer Europe. A Hitler faced with the choice between nuclear holocaust and a peaceful Germany in possession of Austria, Czechoslovakia, and Western Poland, nay very well have chosen the flames.

17.42 Causes and Prevention of War Spring 2009

For information about citing these materials or our Terms of Use, visit: http://ocw.mit.edu/terms.