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Voiceover: The following is a production of the Pritzker Military Museum and Library. Bringing citizens and citizen soldiers together through the exploration of military history, topics, and current affairs, this is *Pritzker Military Presents*.

Clarke: Welcome to *Pritzker Military Presents* with author James Holland here to discuss the second book in his trilogy on WWII, *The Allies Strike Back: 1941 to 1943*. I'm your host Ken Clarke, and this program is coming to you from the Pritzker Military Museum and Library in downtown Chicago, and it's sponsored by members of the Museum and Library. This program and hundreds more are available on demand at PritzkerMilitary.org. By June 1941 Nazi Germany's war machine looked to be unstoppable. The Nazi Blitzkrieg had taken Poland, France, and Holland with shocking speed. The Luftwaffe had bombed London while German U-boats wrought havoc on Allied shipping in the Atlantic. And yet, cracks were already appearing in Germany's apparent invincibility. Shortages of food and material were becoming critical. And having failed to defeat Britain Adolf Hitler faithfully pivoted east to invade the Soviet Union, territory he felt compelled to conquer for Germany's protection, leading to the largest clash of arms the world had ever seen on June 22, 1941. By the fall of '41 German forces were bogged down in Russia, blunting the Nazi momentum. Acclaimed historian and author James Holland's second installment of his WWII trilogy *The Allies Strike Back* offers fascinating new perspectives on WWII's critical middle years in the Western theater. Picking up where his last book left off, it is during this time that the advantage between Axis and Allied forces swung back and forth, ultimately deciding the outcome of WWII. Holland tells a captivating story while calling on new research to challenge our assumptions and to reframe our understanding of this momentous conflict. James Holland is the author of the best selling *Fortress Malta*, *Battle of Britain*, and *Dam Busters*, as well as numerous works of historical fiction. Holland regularly appears on television and radio and has written and presented the BAFTA shortlisted documentaries "Battle of Britain" and "Dam Busters" for the BBC. A member of the British Commission for Military History and the Guild of Battlefield Guides, he also regularly contributes reviews and articles in national newspapers and magazines. He is a fellow of the Royal Historical Society, and he has his own collection at the Imperial War Museum. Please join me in welcoming back to the Pritzker Military Museum and Library James Holland. (Applause)

Holland: Well, thank you all very much for coming, and it is really, really good to be back in Chicago. Now, yes, I'm on the second volume now and careering through the Second World War, but it still feels like I've got a long way to go, I've got to admit. So I think we're awaiting a little bit of time before we get to volume three. Anyway I wanted to start with this picture, and as you can see it's a bunch of--load of Sherman tanks, US Sherman tanks about to be loaded up into a whole series of landing ships. And this is just before the Sicilian invasion, Operation Huskie in July 1943. And I just want you to kind of try and remember this image and remember this scale of weaponry on show here; the scale of the ships, the size of this, because this is really significant in what I'm gonna tell you between now and the end of this show, the end of this talk. But one of the things that really interests me about WWII is, despite the fact that it's been something of an academic revolution in the last ten, fifteen years is how much there is still very entrenched assumptions about WWII. Now I'm sure all of you in here are extremely well educated, extremely well read, and know all the latest thinking about WWII, and yet it is still amazing how often those sort of stereotypes ring true. So here we've got the kind of

archetypal Nazi, haven't we? When you're thinking of the kind of tough, mean, badass Nazis, Joachim Peiper here is kind of what you're looking at. I mean, look at him. He's devilishly good-looking, he's got the cleft chin, he's got his hat at a rakish angle with the skull and crossbones of the Waffen SS on the top of his cap. That's the image we're thinking of. When you think of Americans, when you think of GIs, they're incredibly wholesome and healthy-looking. And, look at him, you can see that this is just--he's doing his bit for Uncle Sam. He's got his helmet at the jaunty angle. He's got a couple of days' growth of stubble. Ferociously good-looking. You know he's got fantastic teeth underneath those lips. And you can just see, can't you? I mean, this photo must have been taken in I guess August or early July of 1944, 'cause here it is on the front of Life magazine in August 1944, and you just know--I mean, you can see where every war movie, every episode of *Band of Brothers*, etcetera, etcetera, has got their inspiration from. That is the look of the US--you know, US GI in WWII. And then we think of Russians, and we think of beautiful but deadly snipers. Gorgeous-looking but lethal. And then you think of British Tommies.

(Laughter)

Holland: You see, you're all laughing, aren't you? But I'll have you know that this is Stanley Hollis, VC. The only VC winner on D-Day. I mean, a ferociously brave guy, but of course being British, he's skinny. He's a bit scrawny. He's got really bad teeth in contrast to kind of you guys. Or we think of people like this, General Carton de Wiart, who sort of smacks of kind of being out of date and a little bit old fashioned, and Britain it's about time you got over the Empire, isn't it? That kind of thing. It's the suggestion that we're kind of somehow--Britain is stuck in the past. And I think there is this assumption, isn't there, that at the start of the war Germany was just the best at everything. They had the best-trained men, they had the best kit, they had groovy BMW motorbikes with sidecars. They had fantastic Panzers. They had disciplined men, they had Stuka dive-bombers, and they even had the best small arms, too. You know, the Spandauers as Allied soldiers referred to it--the MG 34 and here in this picture the MG 42 with this incredible rate of fire. I mean, boy, you did not want to come up against one of these. And you also think of course of Tiger tanks. I mean, when you think of Panzers in WWII, even though the tiger doesn't come in until kind of right at the end of 1942, that is what we're thinking about. And I think those assumptions need to be challenged a little bit. But it is hard, and the struggle continues when you see something like *Fury*. Now I'm sure most of you have seen this movie. And I have to say I was going to--I had to go and see it, and I was reviewing it for a newspaper and a radio show, and I was really pumped for this. I was really looking forward to seeing *Fury*. And then the first thing that came up was this line, you know, "In WWII American tanks were outgunned and out-armored by the more advanced German tanks." And I just went, "Oh, no." No they weren't. Not necessarily. You just can't say that. There's a whole load nuance that needs to be applied to that. You know, how many Tiger tanks do you think were built in WWII? Well, I can tell you. It was 1,347. You know, 6,000 Panthers. What there were lots of were Stukas. There were about 11,000 of these, and these were based on a Panzer 3 hull, and you can see that this is a self-propelled gun. It's not on actually a tank because the turret doesn't move around. But actually a lot more prevalent than Tiger tanks. And then have a think about how many Sherman tanks were built in the Second World War. Well, I'll tell you, it's 49,000 and 74,000 Sherman hulls, which were adapted to all sorts of different things. And the beauty about the Sherman tank is it was fantastically simple. And you can see in this picture here, if you just look at it here, you can see on the outside of the tracks you can see the suspension bodings. Now those, if any--if one of those went wrong, you could repair them individually really simply. If you tried to do that that to a Panther or a Tiger tank or whatever, you had to take the entire wheel system off

completely to get to the back of it. The Sherman tank for my money--I'm jumping the gun a little bit I admit--but the Sherman tank for my money is the best tank of the Second World War. And of course if you lined them all up on a football pitch and you put a Tiger against a Sherman, the Tiger's gonna win 'cause it's got a bigger gun and it's got more armor. But that's not what it's all about. And this is the point. And if I'm repeating myself from the last time I was here two years ago, forgive me, but it is really important to understand this, that the narrative of WWII in the last kind of fifty years I guess, but certainly probably even sixty years, has really focused on two levels of war. Now war is understood to be fought on three levels: the strategic, which is the high level stuff. This is your Patton, Roosevelt, Montgomery, Churchill and so on. The big decisions are going on. General Marshal and Hap Arnold and so on. Then there is the tactical, which is the cold face of war. This is the private in his foxhole in the bocage of Normandy somewhere outside of Saint-Lo. This is chap in his P-51 Mustang or in his tank, his Sherman tank. It's the actual attritional part of fighting. Then there is the operational level, and the operational level is the bit that I'm really, really interested in and which has completely changed my view of WWII, because the operational level is the nuts and bolts. This is the glue that binds the strategically to the tactical. This is the economics of war; it is the supplies, logistics. It's making sure GIs get their Hershey bars and Camel cigarettes. But it's so much more than that. And don't think it's boring. I suspect this is why it has been left out of the narrative. It's given lip service and nothing more, so what you get in your books, what you get in your films and documentaries is lots about the actual experience of war, of what it's like--the hardships of it, the terror, the fear, the actual fighting. You get lots of, you know, the inside of the headquarters of army groups at Westminster and Washington and so on. And inside Hitler's' headquarters. We get lots of details about that. But what you don't get is that kind of context of how the whole thing works and where people are good and where people are bad and where countries are good and bad. And that's the bit that really, really interests me. And I promise you once you start putting the operational level back into the narrative, the whole thing starts to twist and change quite dramatically. So here we are. I think I'm just gonna start with this map. Okay, this is Germany in 1939, but it is relevant for us because as you can see Germany lies right in the heart of Europe, and you can see that at the top there at the North Sea coast you've got the Baltic. And what a mess that is, that little narrow passageways and islands and all the rest of it. And then it's got a little bit of the North Sea coast just to the west of Denmark. But the problem Germany has, and it's a massive problem for Germany, is that supplies get around the world largely by ship. It's exactly the same today, and what holds true today certainly held true in the 1930s and 40s. The problem is the moment they step into Poland in September 1939, the Royal Navy, which at the time is the world's largest, imposes an economic blockade in the North Sea. So they haven't got much shipping anyway, and what shipping they have got can't get out. It can maybe go up to Sweden and get north of Norway and get some iron ore, but that is about it. It's very difficult. The only thing that can realistically get in and out of there without being caught or stopped are submarines, U-boats. And this is a fundamental problem because--and it's a problem that's always faced Germany, which is why Germany favors fighting its wars and its campaigns very, very quickly. This has always been the way. This is the German way of war. It was the Prussian way of war before 1871 when Germany became Germany. And that's because they know they're very short of resources, and if you're short of resources, what do you do? Okay, the only alternative is to win your battles, your wars very, very quickly. So Poland in a couple of weeks, France and the Low Countries in six weeks. That's the way they do things. It's what they've always done. It's what they tried to do in 1914 at the start of the First World War but didn't. And what happens if you let your war drag on and you don't win in six weeks

or a month or whatever it is, then Germany's failings, weaknesses, fundamental weaknesses, which are largely as a result of geography, come back to haunt her. And of course that is exactly what happened in 1914-1918. Let's think about why Germany sued for an armistice in November 1918. It's because it ran out of money, and it wasn't gonna win. The big problems that they have most of all is that they're short of oil, fuel, and they're also really short of food. And one of the reasons they're really short of food is because they're very, very under mechanized. Now we always say the Nazi War Machine, as though the whole thing is entirely mechanized. It is not true. The mechanized bit is just the tip of the spear. If you imagine the Germany Wehrmacht as a spear, an old fashioned spear, it is the silvery pointy bit that is the mechanized bit. That's the Nazi war machine. Most of the German armed forces are the big, long wooden shaft sort of lugging behind. And because they don't have much mechanization, it means their agriculture--there's a whole host of other reasons as well, which I haven't got time to go into now--is very, very inefficient. And if I told you this was a picture of, I don't know, Latvian peasants in 1931, I'd guess that most of you wouldn't doubt what I'm saying. In actual fact it's some Germans at the end of the 1930s. And this is kind of bog-standard agricultural practice at this time. By 1941 Germany is facing a real problem. It seems like it's one-way traffic. It looks like the German Nazi war machine is unstoppable, that there is nothing to get in its way, that it seems to have worked out a modus operandi for which no one has an answer. But actually it's not true, and one of the reasons it's not true is because Germany like us as historians and as the narrative of WWII as well, have tended to be very, very land centric. Now it is true that ultimately you would still need to get on land to kind of win, but a lot of the stuff that you need to do to enable you to win is happening at sea or it's happening in the air. And that point it's not looking quite so rosy for Nazi Germany. And one of the big problems is that now they've occupied parts of Europe, large parts of Europe and Norway and all the rest of it. They've got to maintain it, and they've bled those places dry. So France for example, which was the most automotive society in Europe at the start of the war, by some margin I should add, by the end of 1940 it has just eight percent of the vehicles in France that it had at the start of 1940. The Germans have just nicked them all. They've taken them. They've also taken all the coal and the food reserves, and the gold reserves. And it's not just France. They've done it everywhere. They're doing it to Greece. Why do you think Greece is still so grumpy with Germany even today? It all goes back to that, this sort of fleecing of all their resources. But the problem is that Germans have spent it. They've been like kids in a sweet shop. So what do you do? There's only one thing you can do. You've got to--you either sue for peace. That's not an option. It's Hitler we're talking about here. Or you go and get those supplies from somewhere else. What is the only feasible way they can get those supplies? It's by going into the Soviet Union. So mad though it seems in retrospect to go into the Soviet Union in June of 1941, they don't really have any choice. If they're gonna keep on in the war, it's the only area that offers any chance of providing the fuel and oil and supplies and bauxite and copper and ore and most of all food--most of all food that they so desperately need. That is the only chance for that. And it's really, really important to understand that when we're thinking about invasion of the Soviet Union in June of 1941. Where they have completely taken their eye off the ball is first of all land campaigns--you know, think about the Balkans, think about Greece, think about Crete. You know, this is happening in April or May. The invasion of Crete in the third week of May 1941 is just four weeks before Operation Barbarossa, the biggest clash of arms the world has ever seen. Do you need to be dissipating your resources and your--what forces you've got at that crucial moment? I would argue no, there's gonna be very little in my book that is of such strategic importance that you need to sacrifice at that time. And yet that is what they do. The other problem where they've completely taken their eye off

the ball is out at sea. And the fact of the matter is they've built up a reasonably large surface fleet before the war to absolutely no end. It was a pointless exercise because they were never gonna compete with the Royal Navy, and they've got no possessions beyond their borders from which they can refuel and rearm and repair any ships that are out at sea. The only viable option is U-boats, but they haven't built enough. So the U-boat arm in 1939 is just 3,000 men-strong. That's just not enough. You know, the Royal Navy, it's just huge. And when you want to suddenly expand it even more, you can do so because you've got that really large base layer in which you can use to expand. And Britain is an island nation, and it's got enough people who know how to do clove hitches and, you know, know about tides and all that stuff, which is quite useful when you're joining the navy, so you can suddenly spread your experience into that expanding navy and get in other people who learn very, very quickly. Germany are a bunch of land lovers that just don't get it. And unfortunately because the U-boat arm is so small, that means that in January 1941 when they've had a golden opportunity to really pummel British trade coming across the Atlantic, they have no more than six U-boats operating in the Atlantic at any one time. Six. You know, the Atlantic is a really big place. It's just not enough. And by May 1941 the situation has arisen where realistically they can no longer win the battle of the Atlantic. You know, long, long, long months lie ahead. The slaughter of the Americas in 1942 for example. That's all to come. But the point where Germany is gonna be powerful enough and technologically advanced enough in the Battle of the Atlantic to actually win, that moment is already passed. You know, and the fact of the matter is is however poor Britain's army might be performing in Greece, in Crete, or whatever against the Germans, out at sea the focus of their research and development is really, really coming to the fore. In this time this is the development of the cavity magnetron. The Germans never discover this. This is the means by which instead of having huge great lattice towers, you can actually make your radar so small that it can actually fit on a destroyer or a corvette or on an aircraft. This is vital, vital technology, and that's the focus of Britain's research and development and technological advantages. And it really starts to pay off because the U-boat arm is starting to take a pounding. Three crucial aces are lost, either killed or captured in March and May 1941. The enigmachine is captured with the coats. The Bismarck, the mightiest of them all, of all the German battleships, is sunk. Yes, okay, it sunk HMS Hood, the British battle cruiser just beforehand. But you know, and that's a big psychological blow, but the British navy is huge, and it can take those hits. The Germans can't. It's effectively the end of the surface fleet. Having built it up, having spent so much money and resources on it, it's a complete waste of time. What they needed was U-boats. And what you have to remember when you're talking about U-boat arm, even if you've got three hundred, that only means a hundred at sea because it operates in the rule of thirds. So you've got a third at sea, a third training up, and a third going back and forth. And so three hundred fleet means a hundred at sea, and that's still not that many in the mighty, huge, vast expanses of the Atlantic. And you know, the net is closing around. They're having to push--the U-boats are having to operate further into the center of the Atlantic as the air net is closing in around them. That of course takes more time, which makes them less efficient. And so on. So here we've got a map of Operation Barbarossa. And of course it's launched in the third week of June 1941, and to start off it all seems to be going incredibly well. And what they all recognize, what the planners recognize, the German planners recognize, is that there is a limit--that they have to win within 500 miles. And the reason is because the German way of war is not only to fight wars quickly, it is to also to maneuver quickly. That is a key part of the German/US fleet. And what they do is strike very hard, the Schwerpunkt, the kind of point of impact, and then they do a Kettleschlecht--the cauldron war--an encirclement. And what you want to do is do that

very quickly, knock your enemy off balance, and annihilate them before they've had a chance to regain that balance. That's the plan, and so far it's kind of worked in the war in most of the battles they've done on land. Augmented by the Luftwaffe, it has to be said. The difference of course is that when they attack France and the Low Countries in May 1940 we're talking about a battlefield of about 120 miles, 200 miles. Here we're talking about a 1200-mile battlefield, so then times the size. That's just the distance. In France it's only kind of 200 miles, 250 miles to the coast. Here it just goes on forever. I mean, it might as well be infinity and beyond as far as the Germans are concerned. So they've got to destroy the Red Army within 500 miles because if they don't then they've reached their culmination point. And the culmination point is the point in which they can no longer operate in the way and speed and maneuverability that they want to, and it's really, really important they do. And to start off it all seems to be going incredibly well. The slightly spread themselves too thin. They've got one army, a huge group of army, heading to the south, one to the center, one to the north towards Leningrad. So they haven't concentrated their forces perhaps quite as much as they could, but even so it's all going pretty well, and huge, vast numbers of prisoners are being captured. But at the same time they're also destroying lots of villages, lots of homesteads, executing people willy nilly, rounding people up, treating them like dirt. And actually this is shooting themselves in the foot because there are two reasons for Barbarossa. There is the practical reason. We need food. We need fuel. We need supplies. Then there is the ideological factor as well, which is where the Nazis come in. You know, and this is where all Slavs are untermenschen, that the Nazis are Arians and supermen and the rightful heirs to the whole world, and the world needs to be cleansed of these lower untermenschen, these inferior types. In actual fact Ukrainians were quite keen on the Nazis, for the most part quite willing to welcome them because there had been a huge famine in the 1930s. Many Ukrainians had blamed Stalin entirely for this and were quite keen to see the back of the Soviet Union and the Russians and Stalin and all the rest of it. But no, they kind of--the Germans come in and start burning villages and stuff and lining people up and shooting them, and it quickly turns all those people who could have been on their side and been quite helpful against them. Now this isn't to say that Ukrainians didn't end up fighting in the Wehrmacht. They did of course, but it could have been done an awful lot more smoothly and a lot better if they'd treated them and these people just a little bit better. The other problem of course is they've got many more prisoners than they planned for, and you have to remember of course is that one of the problems that Germany has is they're short on food. Rationing in Germany is far more stringent than it ever was in Britain. It's--rationing started before the war even began. Everyone's hungry, but you cannot give an untermenschen, an inferior human being, more food than your giving an already hungry German citizen. That would just be all wrong. So what happens of course is all these prisoners start starving. And they start dying through starvation and malnutrition and just being treated absolutely appallingly. And suddenly you're getting yourself into a very, very, very dangerous cycle of violence in which if anything goes wrong, if you have anything less than complete and total victory in the Soviet Union, you are gonna reap what you sow. And all those Germans that are fighting this in this very brutal and bloody and violent conflict know that. The problem of course is that the very reason why France--France's sort of modernity, its infrastructures--one of the reasons why they are--the Germans are successful in France--I mean, it is literally a case of "my Panzer has run out of fuel," you pull into a petrol station, a gas station in France and, "Go fill her up, please, Jean Pierre." You can't do that in the Soviet Union because there aren't any petrol stations. And if Germany is not particularly automotive at the start of the war, then the Soviet Union is even less so. And I love this picture, because then what you can see is this long train just disappearing into

nothingness somewhere in the Soviet steppe. Just look at that. Look at the distance. Look at the scale. Look at the lack of infrastructure. And what you're realizing is because they're so under mechanized--and don't forget also that Germany is going into the Soviet Union with 2,000 different vehicles. That is not efficient. The reason they're going into the Soviet Union with 2,000 different vehicles is because a lot of them are captured. They're captured Bedford trucks from Dunkirk or Renaults in the Battle of France or whatever it might be. And that's all fine. And they can pat themselves on the back and think how clever they've been, capturing all of this stuff. But what happens when you need a new gasket or a new distributor cap or some other vital part? Where's it gonna come from? You know, what do you do? I mean, do you have 2,000 different gaskets? I mean, you know, quartermaster's nightmare. And of course the whole thing starts to grind to a halt. And the problem with trains as well is there is a differently loading gage in the Soviet Union. It's slightly wider. And of course what the Soviet Union do as they retreat is they destroy all their trains. So you can't just capture the Russian ones, the Soviet ones, so you've got to use your own, which means you've got to narrow the tracks. I mean, that just makes my head hurt just thinking about the logistics of trying to do that. I mean, what a nightmare. And don't forget, you've got to win within 500 miles. And suddenly it's July, and Hitler's starting to meddle because he's starting to get a bit nervous. It's not happening quite as quick. And suddenly then it's August and yet more Soviet armies are being rounded up, but they're still fighting, and there's still more. And it seems like a hydra's head that it doesn't mater how many armies and army groups you capture from the red army. There's still more appearing. And suddenly then it's no longer summer. It's autumn. It's the fall. And the rains start, and then the snows come. And I love photos like this. You're looking at a picture of German troops with a whole bunch of horses and carts and wagons. That's how most of the German army gets from A to B. It is not in BMW motorbikes with sidecars. It's not in fantastic halftracks and armored cars and tanks. You know, remember that's just the spearhead, that's the point of the spear. Most Germans, and this is a private taken photograph, not a piece of propaganda. And look at that. Oh, dear, this is not looking good, is it? And then, oh, that looks cold, doesn't it? So what we're looking at here is a bunch of miserable-looking Wehrmacht soldiers with their horses and carts. You know, the snow is really getting in now. And of course the wheels by this time have literally dropped off. And what that means is all that speed and maneuverability, which is so much a part of what makes the Germans successful, suddenly has evaporated in the snow and the falling temperatures. And suddenly they're not quite so special after all. And don't forget that at the same time the Russians as they're retreating scorched policy, all that lovely food that maybe the Ukraine should be offering to them is suddenly not there. And also they've had the foresight to move most of their industry not well back from the west, but actually 600 miles further east from Moscow. So even if they do get to Moscow, there's no guarantee that that's gonna bring down the Soviet Union, because the Soviet Union is fighting back. It has held the Germans. They haven't had that complete victory that is necessary. It's no good capturing army groups. It's no good taking huge swings at the Soviet Union. You've got to take it all, or else it's gonna come back and haunt you. Of course on the night of the fifth and sixth of December temperatures drop to -35, and the Russians actually counterattack outside Moscow. And these poor Germans soldiers who are freezing, who haven't been issued with winter kit 'cause it was all gonna be over in three months, and because their oil in their machine guns and Panzers has started to freeze and just completely solidify, have no answer. Then of course 7th of September, Pearl Harbor, day of infamy, you know, suddenly the United States is in the war. And it's all looking rather bad for Germany and just to hold this fort because at the end of November 1941 Fritz Todt came to visit Hitler. And Fritz Todt was the armaments minister, a man

who Hitler greatly respected, and he'd been to the front and he'd seen the difficulties of the motorization of supplying spare parts, of getting tanks up to the fronts, these huge distances involved and the terrible troubles of the falling temperatures, rain, and snow, and all the rest of it. And he said, "You know, my fuhrer, we're not going to win." And Hitler turns to him and says, "So what do you suggest?" and Todt says, "Sue for peace." Well, Hitler's not gonna do that. But just think about this. Just, let's take an arbitrary date, the 16th of June 1941, so kind of just a few days before Operation Barbarossa. And on that day Germany has one enemy: Great Britain, albeit Great Britain and her empire--the dominions, Canada, Australia, South Africa, India, two million-strong volunteer army. Six months on, let's fast forward to the 16th of December 1941, the day that von Brauchitsch is sacked as the commander in chief of the German army and Hitler himself takes over. The man who's only ever been a half-jack, kind of one stripe in the First World War, who's never been to staff college, who's read lots of books about military history, but so have I, and I don't know anything about commanding armies in battle. He takes over. And thinks about who he's got as his enemies now. He's got Great Britain again plus her empire and dominions and Canada and Indian and all the rest of it. He's got the United States of America because he's declared war on the 11th of December, and he's got the Soviet Union. All of whom have access together to vast arsenals of manpower. Ninety-five percent of the world's merchant shipping. Complete command of the oceans pretty much, apart from in the Pacific where the Japanese obviously have command of some of it. Do you think Nazi Germany has a way back from this point? I would argue not at all. I really would. You know, traditionally it has been Stalingrad when it finally falls in the beginning of February of 1943 that has been the turning point of the war, or even Kursk, you know, the great tank battle in July of 1943. Not for me. It's when Fritz Todt goes in to Fuhrer and says, "We're not gonna win." That is for me the moment where it's all over. I cannot see--admittedly this is in retrospect, but that's fine. I'm a historian.

(Laughter)

Holland: I cannot see how they could have possibly won. I really don't. The other thing of course is that America coming into the war does of course change everything. And here of course is a picture of FDR. Now I just think this guy is amazing. I think he is one of the great statesmen ever lived. I mean, just a complete genius. And he's got this Machiavellian hard-nosed streak, but he's also got vision. And this is the two things that Britain and America have that I don't think Italy or Nazi Germany do have. They don't--you know, our leaders have this geopolitical understanding. They have this vision. They can see the bigger picture in a way that Hitler, Mussolini are incredibly myopic. They just look at the world through their own narrow prism of experience and understanding. What Roosevelt has done is started to transform America completely, totally, irreversibly. I mean, you are still today feeling the effects of that here in the USA. And let's think about what it--when he became president, when he was elected president in November 1932 on an isolationist ticket, the whole theory then was kind of military was bad, that armed forces were bad because if you have a large armed force, you use it. Conversely, if you don't have a large army, you don't use it or air force or navy and all the rest of it. America is largely isolationist, but what Roosevelt realizes even in 1939 is that the Atlantic is no longer the big barrier that's gonna protect the United States. That actually it's only a matter of time before bombers and fleets of bombers and more sophisticated submarines can actually reach the shores of the United States. And he also realizes that the United States is woefully unprepared for this. I mean, we're talking about the nineteenth largest army in the world behind kind of Romania and Portugal. You're talking about seventy-four fighter planes in 1939, in September 1939. And even by May 1940 when it's all starting to go pear-shaped in France, you're talking about just fifty-four heavy bombers in the whole of the United States. Think about what's to come. Think

about that picture I showed you right in the beginning of all the Shermans and all the ships. Some massive transformation has to come. And I haven't got time to go into it here, I really don't, but I promise you this is the operational level, and it is the most extraordinary story. It is full of unbelievable human drama, of twists and turns and advances and setbacks. But what Roosevelt has done is one of the biggest political volte-faces in the history of politics, and done it and got away with it, because he's reelected in November for an unprecedented third term in November 1940. And he's started to get the train in motion. He's got republicans like Henry Stimson and Knox in his cabinet. You know, he's got--amazing geniuses like Bill Knudsen. And Bill Knudsen says to him, "What you've got to understand, Mr. President, that this is gonna take time. You know, it's all very well you suddenly saying, 'I want 50,000 aircraft a year,'"--don't forget seventy-four--only seventy-four, and now less than a year later he's saying, "I want 50,000 in less than a year." I mean, this is just unbelievable exponential change of figures. And what Knudsen says to him is, "It's gonna take six months to make the machine tools. It's gonna take six months to train everyone up, and it's gonna take another six months before any meaningful kind of numbers are gonna start appearing off the conveyor belts." And at the same time you've got to accept that big business is the only business that can do this. And this is a massive problem for the kind of isolationists, for everyone who's been very anti-big business since the end of the First World War in the 1920s. This is where this political volte-face comes. And yet by the time eighteen months on after if you consider kind of May, June 1940 as kind of year-zero really for the armed forces in the US, eighteen months on at pretty much the time that they enter the war in December 1941, that has happened. America has become the arsenal of democracy, and one of the reasons is because you've got enlightened people like Bill Knudsen, but you've also got people like Charles Sorenson, who's kind of one of the senior honchos at the Ford Company. He goes to consolidated in California, he looks at them, "Your B-24 Liberator is a great ship, but it's too many parts. It's too complicated. You're never gonna produce the numbers that you need. Let me take this. Let me--the principles of production of the Ford Motor industry and make B-24s for you." And what he does is build the world's largest factory in Willow Run. That is up and running by December 1942, and it is over a mile long. A mile. I mean, it's unbelievable. And so Cyril Thompson is a young thirty-something shipbuilder from the northeast. He's developed a new ship that he reckons can be made in 220 days. And it's very simple, it's very straightforward. It's basically a prefabricated house, but obviously a ship. Those are the same principles. And he goes up to American to see if Americans can make something like this. And he comes with his blueprints. And all the shipyards go, "Well, we'd love to help you, mate, but the problem is we're building ships for the US and for the US Navy." And eventually someone puts him in touch with Henry Kaiser. This is a man just absolutely full of energy and vim and chutzpah. This is a can-do man who can get things to happen. He's one of these kind of second-generation immigrants in the United States who is making America great. And energy Kaiser is this whirlwind of energy and dynamism, and he's built the Hoover Dam, or rather he's organized people to build the Hoover Dam. And he's built roads, and he's just gone into partnership with a guy called Todt and has a shipyard up in Oregon. And he goes, "Well, I've never built ships before, and I've never built a shipyard before, but how hard an it be?"

(Laughter)

Holland: And everyone said, "Well, I think it's going to be quite hard, to be honest Henry." And he goes, "Ugh, whatever." Anyway, they find these two places. One of them is in Richmond in California, just north of San Francisco Bay. The other one is at Portland, Maine, and it's just mud. There's just mudflats. I mean it's like flying over, like I was yesterday coming into Miami. You just lower, and you can just see a swamp. And

Kaiser says, "Well, I think it might take a little bit of time to get it done, but you know, in six months we should be able to start building this shipyard." The shipyard is functioning in four months and five months in Maine. I mean, it's just unbelievable. This is the speed and energy and motivation of these guys. Kaiser always pays his people very, very well. 1941 incidentally is the third worst year for labor strikes in US history, but Kaiser doesn't have any strikes. And you know, a few months, few weeks later, they are building the first liberty ship there. And what is absolutely amazing about this story--and this is a liberty ship being built--it's called a liberty ship because the first one of Cyril Thompson's is christened the Empire Liberty, and that's where it gets the name liberty from. The difference in the US is that this is welded rather than riveted like the British version. And originally as I say the idea is that these ships can be built in 220 days, but then Kaisers' crews, they start getting a bit competitive. His son is running the one in Richmond, and I can't remember the name of the guy who's running it in Portland. But they all start getting a little bit competitive, and they go, "Ah, I reckon we can build it quicker than that." And suddenly they get it down to 150 days, and then they get to a hundred days. And then seventy-five days, and then fifty days, and then twenty-five days. And then ten days. September 1942 they build one of these things in ten days. And then on the 12th of November 1942 at 3:27pm in the afternoon after four days, fifteen hours, and twenty-six minutes, the Robert E. Peary is launched. I mean, can you imagine it? Less than five days to build one of these things. Now admittedly that was a bit of a stunt, and they don't do it again. But, you know, five days, ten days, fifteen days, twenty days. Who cares? The point is American shipbuilding, American ingenuity, American brilliance is starting to churn these things at outrageous knots. And already the point that the Robert E. Peary is launched, we've way gone over the point where U-boats are sinking more than we're making. Already, so how--what possible way back is there for the Germans from this? Well, they think there is quite a way back, and that is to put right the wrongs that they made in the previous year in 1941. And what happens here is they decide to focus a little bit more, concentrate their forces, and go down to Baku into the Caucuses. And Baku is the main thing because this is the world's largest oil fill. The world's largest of course oil producer is the United States, second largest is Venezuela Dutch East Indies. But Baku in Azerbaijan in the Caucuses is the third largest producer, and the Baku wells are the largest. So much of their effort goes on that, but not before they'd been sidelined by a little yet more fighting up in Leningrad and also at Sevastopol, where they produce an 800-millimeter gun, the Dora. Again, complete utter waste of time and resources and money. But anyway, they drive off, and this is launched, and here again you just get a sense of the huge scale of it. But the distance from their launch point down to Baku is considerably more, ladies and gentleman, than 500 miles, the point and the limit that they'd given themselves previous year. The admittedly the Soviet Union are pretty scared about all this. They're not sure that they're going to be able to withstand it. But actually they're in much better foothold than they were before because the Germans aren't as strong as they were the year before. The Germans are very good at propaganda. They're very good at portraying an image of invincibility and military might, which is shielding a whole lot of ills and shortcomings. They head off in 1942 on the 28th of June, a week after Barbarossa had been launched incidentally the previous year. And off they go, and to be honest they don't get terribly far. And, well, they take Maikop, and when they get to Maikop, which is one of the oil wells, it's on fire. The retreating red army have set it alight. Now just assuming the Russians didn't set afire Baku had the Germans ever reached it, which incidentally they don't, then what do you think the Germans would have done once they got to this El Dorado of oil? How are they going to move this oil around the world? Oil moves around the world in the 1940s, as it does today, by ship. And the Germans don't have any. And they couldn't--even if they did they

wouldn't be able to get it from there all the way round through the Mediterranean up around England and all the rest of it. I mean, just not gonna happen. The only other way of getting it through is oil pipeline. Well there aren't any. The only oil pipelines around the world at that time are going east towards the Urals, which is where the burgeoning Russian Soviet war industry is going. The only other peaceable way is to use the Reichsbahn, the German railway, which is already fit to bursting. And frankly they just don't have the capacity. They don't have enough oil tankers and oil wagons in which to transport it. So the whole is just completely mad and fantastical anyway. It's just simply--okay, they can stop the Soviet Union from having it, but they can't make practical use of it themselves, so it's kind of stalemate. No one every seems to have really questioned this, and this is--you see this quite often in military history and in great battles sometimes, people think that the intent is enough, but they haven't actually thought it through. The truth of the matter is that the Germans by this point are flailing around. The whole structure of the Nazi state is starting to crumble. The foundations are incredibly troubled to start off with, and the truth, the fatal flaws, are really starting to come to bear even though they've still got 88-millimeter guns and Tiger tanks and Panthers coming into play and lots of very motivated and well-disciplined people, which still makes them formidable, but it doesn't make them world beaters. And as I said, anything less than being world beaters is not going to be enough. Meanwhile Rommel is in North Africa, the British--British historians have always been criticized for being obsessed, overly obsessed with Middle East and the Mediterranean and the North Africa campaign compared to the numbers of what's going on in the Eastern front, for example--it's small beer. Be very careful of assuming that boots on the ground equates to strategic importance, because it doesn't necessarily. Sometimes it does, but it doesn't necessarily. And it is really interesting that the one person above all who is obsessed with the Mediterranean and the Middle East is none other than Hitler himself. He's constantly fretting about it, constantly reinforcing it. And don't forget that a lot of times operations are restricted by size and scale. Obviously in the Soviet Union's Vassar, you need more. In North Africa where, again, getting to it is difficult, you need less. Rommel attacks on the 26th of May, does an outflanking operation. It is probably the nadir of British fortunes in the west, I think. Lots that we're getting right out at sea, in the air--the air forces are really starting to pick up. On the ground, it's not to do with bad tanks. It's not to do with bad machine guns. It's not to do with poorly trained men. It is poor leadership. And here you've got General Ritchie in the middle, and well he may be scratching his head, because he is frankly clueless. He is a very good staff officer. He is put there as Auchinleck's man who is squadron chief in the Middle East and in north Africa. And he's just making complete hash of it. He doesn't have the authority. All the commanders are all bickering with themselves. And the whole thing is a complete shower. And what happens is Rommel and his Italian German force Panzer army Africa outflank the British position when they never should have done--I mean, the British shouldn't have been there in the first place. They should have been reinforcing the port of Tobruk. And then suddenly the eighth army's in full. And the only thing that's saving them is the air forces. And then in contrast to Ritchie and those British commanders, British and commonwealth commanders, the British air forces are led by extremely competent, very, very able men. You've got Air Vice Marshal Arthur Cunningham here on the left and Air Chief Marshal Arthur Tedder on the right. Tedder is commander in chief of the RAF in the Middle East, and Cunningham is the head of the Desert Air Force. And what they are developing at this point is a new doctrine, new air doctrine. Tactical air forces, what we would call close air support. This is--the RAF has emerged in the 1930s in separate commands--bomber command, coastal command, fighter command--and this reflects the island nation that Britain is. Over France where it's

supposed to be protecting the army and supporting the army, it hasn't got any doctrine. It hasn't worked it out. So it's been trying to work it out ever since. In the summer of 1942 all those thoughts, all those discussions are starting to bear fruit, and they're really starting to get organized. And there are lots of men who are motivated, tough. I mean, this is a one-one-two shot, squadron obviously flying P-40s there, American-built planes, fighter planes. Billy Drake was the commander of this squadron in the summer of 1942, someone I had the privilege and honor to meet, and what a fine man he was. I mean, he was just tough as old boots. Age twenty-four, super competent, new exactly what he was doing. Very tough man, drove his men forward with kind of enough stick and carrot. And these were the backbone of the RAF at this time, and absolutely instrumental in stopping the Panzer army in its tracks as it was moving down to Alamein. And by the time it does reach the Alamein line, the British have kind of got themselves organized again. And after that, you know, we're starting--there's a pause. Rommel is trying to do one last attack. That is the Battle of Alam el Halfa at the end of August 1942. And then there is a pause. You know, both sides are exhausted, and everyone knows that the big showdown is about to come. And of course British lines of supply have gotten a lot shorter, more American supplies are starting to come in the form of Sherman tanks, for example. But also American air forces are also operating under the auspices of the RAF in the desert air force by this point. The Battle of Alamein happens on the 23rd of October. That's launched. This is a big counterattack by which time, you know, British eighth army is retrained. At the same time the plan is to land a joint Anglo-US force in Northwest Africa and then Pincer movement onto the German Axis forces, German Italian forces in North Africa, probably in Tunisia. And what is amazing about that is while the American army--and it's only a quart-sized force that is in the joint first army that's involved in this operation in North Africa--while that is still incredibly green, an absolutely crucial lessons have been learned in planning. This is a joint planning operation overseen overall by General Mark Clark, who of course is American, an unbelievably competent commander. And basically in the first week of November, second week of November 1942, three invasion forces going, two from 1,000 miles, one from 3,000 miles, all land pretty much where they're supposed to pretty much on time, and the invasion is a success. Now, okay, they're only fighting Vichy French, but you know, just the logistics, just the operational level of it is really, really good, and we shouldn't underestimate the importance of that for forthcoming future operations. And things get stuck, things get bogged down. Germany of course is having a really torrid time in Stalingrad. Stalingrad falls beginning of February 1942--43, with the loss of the sixth army. You know, the dreams of conquering the Soviet Union are gone at that point. I mean, they could have been gone the year before, but they are one hundred percent gone at this point. And what's happening is that Hitler, because he's so paranoid about the Mediterranean and because he's so worried that Italy is gonna drop out of the war, he reinforces and reinforces and reinforces. And although Stalingrad is arguably psychologically a tougher blow, in terms of material the worst blow is Tunisia. More men are captured, but much more material in terms of aircraft, little shipping they have left, men, and machinery including Tiger tanks and a bevy of machine guns and 88-millimeters and all the rest of it. Earlier in 1943 in January had been the Casablanca Conference where the American and British chiefs of staff and heads of state--well, not heads of state, 'cause Churchill was prime minister. But Roosevelt and Churchill had met, and one of the first things they decide is that we need to win the battle of the Atlantic. And the reason for winning the battle of the Atlantic--I said in May 1941 they got to the point where they could no longer lose the battle of the Atlantic, but actually winning it is another thing all together. They finally think, okay, we've got to really focus on this and actually completely win it because until you've won it you can't plan future

operations because you don't know how much shipping is gonna make it. When you know that ninety-five percent or ninety-seven percent of your shipping is gonna make it across the Atlantic, that makes your life a whole load easier because you know pretty much how many ships, how many tanks, how much fuel, how many men is actually gonna reach where you want to be, and that means you can start planning. It means you can start planning properly. It means you can start planning for the invasion of Sicily. It means you can really start to think about that cross-channel invasion, which was the whole point the American troops were arriving in Britain in early 1942 in the first place. You can't do that when you don't now how much is coming. And the case and point is Rommel, poor old Rommel, in August nineteen-forty-- I don't know why I'm saying poor old Rommel. You know, He shouldn't have been on the wrong side in the first place. But in August 1942 his attack on Alamein at the end of August, the Battle of Alam el Halfa as it becomes, is entirely dependent on six ships coming with oil. Every single one of those ships is destroyed and sunk, and it's all over. And he loses, as he knows he's going to. You can't plan if you don't know what you're gonna get. So there's new technology again. This is a head shocker. This is a much more sophisticated kind of depth charging. You know, there is--the net of air power is closing in around the U-boats. And suddenly those convoys, which were already at about eighty percent survival rate getting across-- eighty percent coming across unscathed entirely--now that's risen even more significantly. Now the Allies can start a plan 'cause they know exactly what's gonna come. The net is starting to tighten around the Nazis. And part of that of course is that this is the time where the mighty eighth, the USA 8th Air Force is starting to build up strength in the United Kingdom. It is when Air Chief Marshal Harris is launching his all-out attack of the strategic air offensive against Germany, starts in the beginning of March with the attack on the Ruhr. It is in May, the same month that Tunisia is lost, that the dams raid takes place. It's often been belittled, but it actually really sets the Germans back a long way, costs them an absolute fortune to put right. And so I finish with the slide I started off with, this extraordinary picture. And for me it's really significant that all these Shermans lined up ready to go into these vast numbers of landing ships ready for the invasion of Sicily, because I just take you back to that point I was making about America in the summer of 1940, you know, how small it was--seventy-four fighter planes in September of 1939. There's fifty-four heavy bombers in May 1940, and look at this. You now, it's already millions of men and indeed women have been mobilized into the war effort. That incredible turnaround in political views has taken place. America is in the war. It's in the Pacific. It's in Europe. Its factories are pumping out vast numbers of tanks and aircraft. So are Britain's. The priority of manpower--and this goes back to the steel-not-flesh point I made earlier on--is not the navy. It's not the army. It's not the air force at this time in the middle of 1943. It is the ministry of aircraft production. At the end of the war Britain has produced 132 and a half thousand air craft. The United States has produced 315,000 aircraft. Nazi Germany produces about 80,000 in the whole war. You know, so it's probably not too much of a spoiler alert to tell you that overall the Allies do prevail in the war.

(Laughter)

Holland: But the road is long and bloody and fraught, and there are many setbacks along the way. But certainly by the summer of 1943 for Nazi Germany, I'm sorry, mates, but it's all over. Thank you.

(Applause)

Clarke: Thank you to James Holland for an outstanding discussion and to the members of the Pritzker Military Museum and Library for sponsoring this program. The book is *The Allies Strike Back: 1941 to 1943* published by Grove Atlantic. To learn more about the

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(Theme music)

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(Theme music)

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