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**Masters of the Air: America's Bomber Boys Who Fought the Air War Against Nazi Germany**

*Best-selling author Dr. Donald L. Miller discusses his award-winning book, "Masters of the Air: America's Bomber Boys Who Fought the Air War Against Nazi Germany."*

It's a nice place to speak, good crowd. I hope I don't fail. It's an honor to speak at America's oldest, best Air Force, I would say military museum, and I appreciate the introduction by General Medcalf and I had a wonderful day here touring the facilities, the preservation effort. You people are lucky, really blessed, to have a place like this to visit regularly. I wish I were close. I want to thank General Carlson as well for having me on his reservation here. I guess I better acknowledge all the brass, I learned that from my Marine Corps training. General Klotz, fellow Oxfordian, if you will.

I'm going to talk a little bit about World War II and then we'll segue into a piece on the Eighth Air Force. I want to leave plenty of time also for questions. So, if you save your questions until the end, I'd be happy to stay as long as -- I don't fly out of here until tomorrow at 9:00, so we have plenty of time.

I want to begin with a short film clip from the 303rd Bomb Group. They put it together themselves but it gives you the sense of fury and horror that these kids, and they were kids at the time -- the average air crew age in 1943 was 23 years old -- experience. So, why don't we start with that and then I'll return.

World War II was the most destructive in the history of humankind. Some people estimate that more people died in that war than in all of the wars since the beginning of recorded time. We do know that the figure is -- thanks to our work recently in the Russian archives, the figure is up to 60 million dead, civilians and soldiers. Two thirds of those who died in the war were civilians, and a great number of them were under the age of 9 years old.

It's also the first war on terror in human history. I read an article recently in The New York Times by a distinguished historian at Harvard and he said 9/11 changed everything. Militarily it changed everything, because now, for the first time in the history of warfare, the main objective of the enemy is not the military forces of a nation but the civilian population. They are the targets. Well, that's not quite right. They are the targets, but they were the targets also in large in World War II. The Nazis began, and the Japanese in the Pacific at places like Shanghai, and the Germans at places like Rotterdam and Warsaw and London and Coventry, began a war of terror on civilians.

There's a great film by William Wyler, of course the William Wyler of Memphis Belle, and he won an Academy Award for it in 1940, it's called Mrs. Miniver. There's a terrific scene in Mrs.

Miniver where a pastor in a bombed out church is standing before his congregation and he's speaking eloquently about the situation that they're in and he says, "We are in a different kind of war. We're in a kind of war where the enemy flies over our armies and hits us, the supposed innocents, in the struggle. We are the targets. In many cases we are the victims." Churchill, I think, summed this up when he called it a people's war, or a war, as he often called it, of unknown warriors.

So, when you come to World War II, you come to something that's -- there's a lot of glory in it but it's a sad experience. My father served in the Eighth Air Force as a radio gunner and never talked about his experiences. My uncle was in the first D-Day with the Big Red One. I couldn't get six sentences out of him before he died, and he lived to be an old man, and I was curious.

But it is a war of unrelieved destruction and people don't like to talk about it afterwards. As one vet told me, "My war didn't last four years, it lasted 40." Well, the Allies, in response to German terror attacks on civilians, they struck back and they struck back with terrific fury. By the time the war is over, 61 German cities had been turned to cinder and ash, almost wiped off the face of the earth. A similar number of Japanese cities, with even more square mileage of wreckage in ruin. We don't know how many people died under the bombs but the figures are roughly in Germany 600,000 dead civilians, and we do know that over 20 million Germans were made homeless by the war.

The Luftwaffe also lost heavily in the war, well over 70,000 airmen. In fact, you hear a lot of stories about the U-boat crews and they suffered horrifically, and the percentage of deaths to those who survived is just harrowing, but the figures are close, if not, the Luftwaffe don't exceed them in horror.

But in this war, there are two sets of victims; I deal with both of them in my book. I deal with the people who were under the bombs in London, in France, in Normandy, along the shoreline and all over the Reich. But I deal centrally with the second set of victims, the kids who flew the planes, because they were victims too. They wanted to be home messing around with their '39 Chevys, playing football, eating ice cream sundaes, going out for a hamburger. They don't want to be in this war. Nobody wanted to get pulled into this thing.

The kids who flew suffered horribly. Take the Royal Air Force Bomber Command -- 110,000 men served in Bomber Command in World War II; 55,000 of them were killed. Take the Eighth Air Force, one of many U.S. Air Forces. The casualty is very high -- 26,000 killed, 28,000 POWs. Now think of the number 26,000. This is one of the things that triggered my interest in the Eighth Air Force. I was doing a book on the Pacific and computing the figures and roughly 100,000 American soldiers lost their lives in the Pacific, 20,000 Marines died in the entire Pacific War from Guadalcanal to Okinawa. Well, the Eighth Air Force, a relatively small unit flying out of England, sustained 6,000 more casualties in the war than the entire U.S. Marine Corps.

Your chances of surviving, if you were one of the pioneers as they call them, those guys who flew with -- you know, the crews of the Memphis Belle and Bob Morgan, who got to England in August of 1942 and generally started completing their 25th mission around May and June the

following year -- those guys had a one in three chance of surviving. Those aren't good odds. You have better odds playing Russian roulette.

Harrison Salsbury of The New York Times said, to be a member of the Eighth Air Force, and he covered them, is to hold a ticket to a funeral, your own. One of the characters in my book, Robert "Rosie" Rosenthal, who enlisted the day after Pearl Harbor, wanting to fight the Japanese as most of these kids did and found themselves in England fighting the Germans. Rosie on his first mission flew to a place called Munster, a German railroad center, with the 100th Bomb Group, my dad's outfit. He was the only plane to return, and he was in shock. He got out of the plane and he burst out crying. He couldn't believe it, he looked around, he wasn't crying for himself, he was crying for the crewmen he didn't even know. He didn't even know.

So, this was a hard war, and it was also a brand new kind of war which made it even harder. Nobody had ever fought and flown this high before. World War I is an air war and it's terrifically savage. It's been romanticized, but it was savage. It was like trench warfare in the sky. World War II though was fought above 10,000 feet, at 20,000 feet, where the air is un-breathable and the sun is actually your enemy, because you're seen, and to be seen is to be a target, a clear target.

The fresh air that we all like to breathe at that level, at that height, of course is a killer because it's un-breathable. You can't ... it's like going to the moon. When you go up that high you can't survive without the aid of machines. These machines have a tendency to break down and countless crews died, not from German flak or fighters, but from malfunctions, the result of the weather which is a bigger enemy in the first six, seven months of operations in the Luftwaffe.

It's new in another respect too. Nobody had ever tried strategic bombing before. The Americans went at it a little differently than the Brits. The Brits, beginning in 1940 and extending into 1942, tried precision bombing in daylight, hitting military targets only and not civilians. The bombing was abysmally inaccurate and the planes got savaged by the German Air Force. So, they flew in the dark, and they died in the dark, and they didn't hit targets very accurately, so they reverted necessarily to area bombing or carpet bombing. Later in the war they would emulate with fire and fury, entire cities like Dresden and Sforsten.

The Americans were going to go at it differently, as you know. We had this technological utopianism. We had a plane, a B-17. We had a great bombsight, a Norden bombsight. As the myth went, you could drop bombs from 20,000 feet into a pickle barrel, and daylight bombing would allow the Americans of course to hit strategic targets, note all targets, choke points they called them, things that all industries need, steel, electricity, ball bearings. We won't have to bomb entire cities, we could surgically bomb. We went in this with the idea that we'll fly so high with the B-17s and the B-24s, and so fast, that we'll fly above the flak and as fast or faster than the fighters. So there's not much attention given to providing escort services. And of course, it didn't work, didn't work. Pinpoint bombing turned out to be an oxymoron, but more on this later.

The point is, the history of the Eighth Air force throughout World War II is the history of the testing of a theory, the theory I just mentioned, strategic bombing, and we'll assess at the end of

the talk whether it worked or not in my estimation. I'll put some maps up and show you the targets, I'll try to give you some explanations. But right now I want to emphasize again the strangeness of the thing. First thing, 70 percent of the air crews in 1942 and '43 had never been in an airplane before they joined the Air Force. Not a commercial plane, not a trainer, nothing. So that's new.

One of my characters, Judge Nutter, who's still alive in California, was at Syracuse University trying to woo his wife at a party in January and the following December -- he's a sophomore, by the way, at Syracuse -- the following December, he's navigating a plane across the frozen Atlantic from Maine to Ireland with a skeletal crew, and guess what, he didn't have a driver's license.

The battlefield is strange, East Anglia, and those are the bases in East Anglia, it's like a little pork chop or an axe, as I point out in the book, pointed at the Reich, and they were the American Eighth Air Force bases. Imagine trying to come back from a mission, find one of those things, I mean find your own, I should say, it's not hard to find a base but your own. This is the strangest battlefield in history. Remember William Wyler opens the film *The Memphis Belle*, he goes, "This is a battlefield. This is a war front, the strangest war front in history." In the film, there's Norman churches in the background, here's the smell of hay and cows and things like this. This is a strange place to fight a war. We turned England into an aircraft carrier and mounted our missions. And the Eighth Air Force, these guys are the first to strike right at the heart of the Reich, I mean they take the war right to Hitler's doorstep, and this is the longest military campaign in World War II, longer even than the U-boat campaign on the American side.

It's a strange kind of thing too ... Ira Eaker, who founded this Air Force, to give you a sense of it's newness, the Eighth was founded in February, excuse me January, following Pearl Harbor, one month after Pearl Harbor in Savannah, Georgia. At that time, there were seven men in the Eighth Air Force and no planes. That's in 1942. By D-Day, 1944, the Eighth Air Force is the largest striking force in the history of warfare. That's how fast they ramped this thing up. From England, they hit targets all over the Reich. I'll leave that map up there and we'll come back to it later.

Now again to the strangeness of this thing, these civilian warriors flying these planes, these kids, it was strange too because it was intermittent warfare. You had these bouts of fury and absolute fear followed by these long bouts of worry and waiting, worrying on the line because the weather, you're out on the tarmac waiting, waiting, waiting to take off, that ate on guys' nerves. A lot of the so-called psychological breakdowns that occurred in the war occurred as a result of that, these phobias that developed about -- and worry, pre-mission worry and pre-mission concern, I mean it was something.

One of the people I interviewed for this book a lot was Andy Rooney, and Andy covered, he worked for Stars and Stripes, the Army newspaper, and he covered the air bases, and he said, "On the one hand they were like college campuses because everybody was so young." But he said, "It was like visiting a funeral parlor in the middle of the war. The mood was so somber and the men, some of the men were so white with anxiety and fear."

Although there's a lot of dying going on, it's strange because there are no corpses. Very few dead Airmen were returned to England. There were many more deaths than serious injuries in the Eighth Air Force, and when a plane went down, usually everybody went down and became, in a sense, lost to the war. They became an evader and got out with the help of the French and Belgian underground, or became a POW, or they were killed in the crash, in the explosion. So you never got closure with friends. There are hardly any funerals, burials, viewings. You got up one day and played a softball game and you don't have a right fielder or a second baseman, a catcher and a third baseman. Where are they? They're gone, they're gone. A lot of guys came at bases, didn't want to make friends because they saw what making friends meant. It meant losing friends so they stayed to themselves.

It's such a different kind of warfare. I live near or not too far away from the Gettysburg battlefield, and I could go to Gettysburg and I can try to reconstruct in my mind whether or not Pickett was insane to make that charge on George Meade's position on Cemetery Hill from Seminary Ridge. I can go to similar battlefields and experience the battle, as it were. Patton loved to do that, only with ancient battlefields. But I can't do that with an air fight.

All of a sudden, the air is filled with -- Harrison Baldwin wrote a story in The New York Times during the war and he said, "In an average air raid, at the end of the war, there were half a million people committed. That includes pilots, crew, civilians who are going to be hit, etcetera, etcetera, radar, German installations, etcetera, huge operation." And you have this furious fight in the sky with as many as 60 B-17 Liberators going into death spins and hitting the ground.

One pilot said he looked out of the window and he saw haystacks burning, well they weren't haystacks, they were B-17s, and they were on a flight on their way with Curtis LeMay to a place called Regensburg. And yet in the midst of the battle, you have the Luftwaffe pouring in on you six and seven abreast and tearing apart these planes and bodies are flying all over the sky, engines that have been blown off, wings are flying around in the sky, guys are going down in parachutes, guys are going down in burning parachutes. Some guys are standing on their wing and just getting blown off, they don't have a parachute.

A Luftwaffe pilot described it to me this way, he said, "To me it was like a gigantic ashtray, 100 yards wide, like a football field," or he said a soccer pitch, "and you just turn the ashtray with all of the smoke and soot and you turn it upside down." He said, "That's what it looked like, a junkyard in the sky." But then he said, "When the Americans, when they left and we went back up, it was beautiful." The sky was clear, baby blue, the sun is out. There's no sign that there's a battle. You can never reconstruct a battle like this, never.

That's why so many Air Force guys ... in the Marine Corps everybody knows what Harrow is, Iwo Jima, beaten into you. I spoke to the Air Force about this this summer, they should teach the cadets the same thing. There were big air battles, like Munster and Stuttgart and several Berlin battles and places like that and Regensburg. But it should be taught. But you can't reconstruct them quite the same way so you can't learn a lot of lessons about how to fight an air war. You can't learn a lot unless you fly with the crews like Curtis LeMay did, and that's how he learned his lessons, and he was the greatest air commander of that war.

The other thing about it is, unlike a battle that's fought on the ground, and I'm not saying ground warfare is tougher than air warfare or air warfare is tougher than ground warfare, they're both hellish. But on the ground, you can retreat or you can reinforce, and who's telling you to retreat or reinforce? A general who's in overall command of the situation, of the battle, a Napoleon, okay, someone like a Caesar, a Grant, an Eickelberg on the Pacific, you know, a Bradley. In the air war, there aren't. Eaker flew on that first mission and then they grounded him. Spaatz didn't fly with the crews, master general, you know he didn't fly with his crew. The base commander would but these kids were largely on their own.

And they fly to the target, they fly directly in the target no matter what the opposition is, no matter how many casualties they take, no matter how staggering the odds, they go directly to the target. Not a single Eighth Air Force mission was ever turned back. You can't call for reinforcements. You're on radio silence and if you do call for them there aren't any. If you're hit in the sky, if you're wounded in the plane, you can't scream, "Medic!" There are no medics. So they put you on the frozen floor of the plane at 56 degrees below zero and throw a blanket over you, try to comfort you, give you some morphine and maybe five hours later, you hope you're alive, you don't bleed out when you get back to England.

So, it's not worse in combat on the ground, but it's as bad. It's fully as bad. I talked to a vet who said he was in a London bar and they were exchanging blouses, some infantrymen were about to go into the beaches of Normandy, and the English over there enforced too, they had some RAF guys there, and one American infantryman said to this Air Corps guy, "Yeah, he's got it easy, man. We're going to be over there fighting the mud and the slush and the slime in December. It's going to be horrible. You guys are here, you got women, you got pubs, visits to London, the whole thing and you're flying in comfortable planes and dropping bombs from 25,000 feet." And they said to this one guy, "Hey, what do you do in the plane?" He said, "Well I sit underneath the plane in a clear Plexiglas turret that is unheated, and that's my position for the entire battle." They said, "We'll take the ground. We'll take the ground." Different kind of thing.

If you flew on a mission, I mean this is a typical B-17 and structurally, I like this shot because it shows you how structurally sound the plane is. But the skeleton of course is very thin, you don't want to do this to an exhibit here but you can knock a screwdriver and punch a hole right in the plane. Same thing with the Liberator, a bigger plane. That's of course the Mustang later on. But I want to get to this position here. There's the ball turret gunner.

Rudy told me a story about a ball turret gunner by the way who, if you flashback to this kid, this isn't the exact kid but he was at a base not too far from Thorpe Abbots where the 100th Bomb Group was and he was doing a story, and they brought him into the tower and told him a kid was trapped in there, the hydraulics went out on the plane and they couldn't get it out. You could actually retract the whole ball and you get out through a hatch on the top, but they couldn't get him out. Because the hydraulics had gone out on the plane, they couldn't get the wheels down. So, they had to do a belly landing. So they got a priest on the phone and the priest told the kid that he was going to die. And he landed and he was crushed like that. Randall Jarell, a very famous American poet who was in the Air Force in World War II wrote a poem about this and

the last line is, "They washed him out of the turret with a hose." So you were happy when you got back alive.

Morgan here on the Memphis Belle crew were a mission -- and I think I'd take you on one just to show you what the procedure was like for those who aren't familiar with this and I know a lot of you are, but patience. We'd begin in the morning and the officers would arrive on a jeep, the gunners would already have been out there. They usually pitched a tent and kept their guns greased and had their little dogs with them and their bicycles and they were close to the plane and they had that plane ready to go, armored and ready to go, when the officers arrived. Sometimes a priest would go out to the plane and bless the plane and bless the men before they went up there.

Most of the bases had a Protestant as well as a Catholic chaplain but not a Jewish rabbi. Although Bob Rosenthal told me, Jewish fellow, he said, "I went to all the services. Anytime there was a service, I was there. Completely non-denominational, didn't bother me at all." Forming up, can you see this at Newark Airport today? They say they have problems with air traffic, taking off every 25 seconds. You get a sense here how big these bases, they were laid out, spread out like this because they feared something that never happened and hardly anybody has written about why it didn't happen, and that is that the Nazis didn't mount, the Luftwaffe didn't mount massive raids either with V-1 or V-2 rockets or with fighter planes or dive bombers on American air force bases. That was the great fear of Hap Arnold, that that would happen. Well, they almost got Hap Arnold with a buzz bomb when he was staying near in London, one landed a couple houses away.

That's a typical forming up mission. The problem was the weather. In England, and I lived there for a while, it's perpetually cloudy, but you could take off, see, you had to worry about three or four times the weather. It was the weather when you were taking off, was it good or bad? If it's decent, you flew, but then you had to worry about the weather to the target and then the weather over the target, was it sufficient to clear to bomb? Then of course if you execute the mission and bomb your target, you have to worry about the weather on your return. This remarkable shot was taken by a gunner on a B-17 of two planes colliding over an English base just as they arrived, they thought, safely home. In flight, this is a staged shot but it gets the message home, a Browning machine gun. They weren't very accurate, more for psychological security than anything else. When the Luftwaffe went down, it was usually because of the fighter planes, not the gunners from the planes, although they performed heroic work.

This guy is ready for war. Inside the plane, as I mentioned, say over a city like Hanover in January you could get as low as 58 degrees below zero, that's inside the plane, with no heat in the back of the plane, not even insulation in the back of a plane. The danger here too, your gun jams and in the fury of combat, in the frenzy, you take your glove off to clear the jam and your hand would stick to the metal and you pull it away and you pull off a couple layers of flesh.

Frostbite, guys didn't protect their noses and their ears and they turned black and they turned a lurid purple. This is days later and then, as one doctor said, we used the Russian cure, we just let things drop off and when things stop dropping off we could treat the kids. Frostbite was a big problem.

Another problem was anoxia. You were breathing through an oxygen mask, which you put on at 10,000 feet, but the mask could clog. It could clog for a number of reasons. It could clog from saliva and it could clog if you got airsick in your mask, and you probably wouldn't know it in the fury of combat, and six or seven minutes later you're dead. You pass out maybe in three minutes and six or seven minutes later you're dead. So lots of problems for these crews going up like that.

Or you had a situation like this. This is Sherman Small, a friend of mine who's still alive today, thankfully. He wasn't in a Liberator, but he was in a B-17 and he's a tail gunner, and the tail was severed from the plane as in this shot. He said they were about 22,000 feet, and he had his parachute on but he couldn't get out the tail. He was kind of locked in there somehow. He fell to the ground from 22,000 feet and lived, in the tail. But what made it a little crazy for Sherman was this was on a Monday, on Tuesday he was flying again. He thought he was okay until they hit Holland, where they ran into the German "ack-ack" guns and he got what they called a coastal fear, which a lot of the guys had. But Sherman had never had it before. This was his 18th mission when he was shot down, he was working to 25, and he froze up. He developed one of those phobias that I talked about.

See, a typical guy in ground combat gets ground down by the experience. An Army psychologist who studied this and Lord Moran who was Churchill's private physician did a tremendous book on breakdowns in combat and called it "The Anatomy of Courage." And Moran said, "The thing about fear is you have to talk about it in relation to courage because courage fights fear. Everybody is afraid, but courage can sometimes overwhelm it." You only have so much courage, he argued. It's like a reservoir, and when you draw on it, or like a bank deposit, when you draw on it, it's depleted and then you run out of it. The Army even figured out like an Army truck, you could get 38,000 miles from it, you could get about 86 days with the guys on the combat, on the line and pretty much they start to get a little goofy. But in the air war it's a different kind of thing, it's a phobia, it's a fear and what Sherman had was a fear of the wind. So by his 23rd mission, when he started to go up and hit the coast, he would freeze and he wouldn't even know it. He was in what they call it a torpor. He was unavailable to anyone, his whole system had shut down and they would carry him off the plane like a frozen Wisconsin log when it was over. But he flew his 25, the guys covered for him. They should have turned him in, and they should have got him medical care but he wanted to get through and he told him that. I said, "Sherman, how the hell did you do it?" He said, "I pretended I was in a movie. It wasn't Sherman Small. I was an actor and these Luftwaffe, these guys, they were props and that's what got me through." I sat with him and did an interview with him and his wife said, "The story is not over. Let's have lunch." And she said, "Let me tell you the rest of Sherman's story. He came home two weeks after the war and he flipped out, and he went down to Don Carlos Medical Hospital in Florida and he was there for three years." So that stuff can happen too.

That was a problem too, with the phobias, I mean. Going through the flak field, when you entered the flak field which is right over the target, you couldn't get diversionary action. You had to fly straight and level to the target. That was LeMay's policy. He said, "Guys, we got a bomb and we need a steady platform from which to bomb and if you don't bomb accurately we have to go in again. We can actually save lives by doing this," and he was right. That's no



security to the crew who has to do it, and you see that stuff exploding in front of you and you're dropping bombs from Plexiglas nose of a plane and that gets a little bit unnerving.

Guys really started to get ... The flak didn't bother them as much as the fighters early on, but once we knocked out the Luftwaffe, the flak by the summer of '44 becomes the major and sometimes the only problem. But it's a lot like being bombed on the ground. There's a very close symmetry between a German family sitting in a cold cellar, fräulein, grandma and the three kids, all under the age of 10, in a candlelit, stinking, cold cellar, and they're just hoping that the string of Allied bombs doesn't fall on them. It's all luck whether they live or not. With these guys it's the same thing, it's luck. These were the fighters you can call out, the fighters coming in 12 o'clock high, 10 o'clock high, this in that.

The Air Force found that crew morale was real high when there were fighters because guys were working together as a unit. Crew morale climbed dramatically as one -- the best book I've read on the air war is by Bert Stiles called "Serenade to the Big Bird." He was a B-17 copilot and later flew Mustangs and was killed in the war. He would have been an F. Scott Fitzgerald, he was that good a writer. But he says that that happened to him, very tight crew, he said, he had a very tight group of guys before they went up -- they went up during the flak stage and he said, the morale wasn't there and he said it must have been better when they were fighting the fighters, and I think he was right. Because flak can cause major damage and guys saw it when they landed. They might not see the bodies but they saw the wreckage and that was painful, and of course ditching in the North Sea was always a problem too. We didn't have good air-sea rescue at first, we depended upon the RAF. We didn't implement it, good air-sea rescue, until very late in the war.

I love this picture because it looks like my junior varsity high school basketball team. I mean these kids are so young, you know, I mean incredible baby faces there, a burn-out crew kind of returning from a mission and you went in for coffee and a few Red Cross girls on base, God help them. They were there. Jimmy Stewart, sometimes they brought him in to calm the crews. Clark Gable right there for us, things like that. But anyway, we'll leave it at this.

The other thing is how did guys ... My students asked me this, so, how did they get in the planes? What got them in those planes knowing what they had to face? It's a combination of leadership and love. Good leadership on bases by guys like Jimmy Stewart, who flew with his crews, Rosie Rosenthal flew with his crews, the example of your fellow crewman. It is interesting I find in my studies of warfare, about the Civil War and World War I, World War II, you can't fight a sustained war, no army can, not the Wehrmacht, the Red Army, anybody, without love. The kind of concern you have for your fellow, the guys in your regiment or your crew, that's what keep you together, because everybody who served knows that a soldier's first battle is with himself. How will I perform? As Henry Fleming in "The Red Badge of Courage" says, "Will I fight or will I run?" So that's your first battle and what sustains you is the courage of others, and when one person's courage breaks down, others do generally as well. So that thing, that indefinable characteristic of love and concern and this band of brothers idea, the Shakespearean idea that everybody's told, that kept these guys together, and they had good help when they broke down. They had a thing called Central Medical Establishment in England and it was staffed by six or seven of the most eminent, who would be after the war, eminent

psychiatrists, not psychologists, psychiatrists, real medical men in the world, all went on to preeminence, and they did, they get a terrific job, a terrific job with these kids.

I don't think -- going back to my original idea of no generals, young crews -- I don't think in the history of warfare so much authority has been placed in people so young, whether they got to the target and hit it and knocked it out and got home, dependent in large on the leadership inside that airplane, the crew togetherness and cohesion. It's an immense amount of authority to lodge in several human beings.

Now, there's another form of coping, and after this we can go briefly to the map and talk about the results of this whole thing, coping on the ground. Because as I mentioned before, 28,000 of these guys, Eighth Air Force, over 34,000 total U.S. airmen in Europe wind up as prisoners of the Nazis. They're in Stalag Luft 1, Stalag Luft 3, Stalag 17 if they're enlisted men, and early on they saw they weren't going to be killed. But toward the end of the war they didn't quite know what was going to happen to them. Would they be killed? Jewish Airmen in particular didn't know what was going to happen to them. I have a somewhat humorous story of an Airman, if you read my book, Lewis Lovesky -- God bless him, Lou is still alive with his wife Molly. Lou is on his first mission, and he got nailed with some flak and he barely got out of the plane, he was a navigator on a Liberator and next thing you know, he's parachuting to the ground into Berlin. As he said, "Not a friendly place, I didn't think." But see, Lou had another problem that day and before they left from Kearney, Nebraska, a couple other guys said, "Hey, you know, England. They got women over there and the men are in Burma, great opportunity here." So they all went to the PX and they brought Hershey bars and stockings and whatever, but Lou bought 12 dozen prophylactics. I said to him in an interview, "Lou, were you that sexually active?" He said, "No, I was a virgin but I was very hopeful." But he stuffed them in his dress uniforms before he left England. He thought to himself as he's coming down into the Reich. He thought, "Hmm, in three minutes, I'm either going to be dead or a prisoner." In either case, what they're going to do, and they did this quickly with a downed Airmen, they are going to go into my room, to my bunk and my barracks and they're going to strip it and they're going to take all my clothes and put them in a foot locker and send them home. And my mother who is an Orthodox Jew is going to open this thing up and say, 'Did I raise some sexual maniac?' But Lou was captured, he was sent to a camp, he arrived the other day after the great escape, but he said, his continuing war worry was what happened at home until another Airman from the same base was captured and he said to Lou when he saw him, he said "Lou, we took care of it." So he knew it hadn't gone home.

So coping there, and a lot of these guys, a lot of these guys, let me show you a shot of this, a lot of these guys became evaders like -- that's Lou, by the way on the right and a tough little guy from Lyndhurst, New Jersey. I got this picture from the Eighth Air Force Museum, it's a great shot. This guy was an Airman who landed in an apple orchard in France and they were making cider at a nearby plant and the owner of the plant is on the right, and he hustled this kid and got him away from the plant and that's his son on the right. Somebody jumped down in front of them and took a picture, and we had somebody show up at the museum with the picture and it's on display now at the Eighth Air Force Museum down there.

So, some of these kids were able to get out. Chuck Yeager was able to get out. He flew with the Eighth Air Force as a Mustang pilot and he was downed in Southern France and he was crazy enough to actually join the Resistance, the Marquis picked him up, the French Resistance and they were messing around with some dynamite one day to blow up some railroad lines to prevent the Germans from reinforcing the Normandy beachhead, and Chuck said, "You guys don't know what the hell you're doing." And he said, "My pappy was a miner and I know how to handle explosives." They told him, some of them spoke English, they said, "The minute you touch these explosives, you are a terrorist, as it were, to the Nazis, you're no longer a prisoner of war. Now if you're captured, you're caught, it won't be by the Luftwaffe police, you will be taken into the Gestapo and you will be shot." But he did it anyway, they dropped him off of the Pyrenees when he taught them how to handle the explosives and he carried an Airman, another Airman over the Pyrenees. That Airman was shot, Chuck picked him up and brought him to the other side and dropped them off and got back in the war, an incredible, incredible experience.

For everyone, the estimations are that -- I've interviewed a lot of Belgians about this and Dutchmen and things like that -- the average estimate right now is that one woman, and usually women ran these escape lines, one woman died for every Airman that was saved, because these lines were constantly infiltrated by the Nazis and broken.

So, coping there, and then at the end of the war, I was going to use this as a first chapter in my book but it's a concluding chapter. Over 30,000 Airmen were moved from camps, in Pomerania, Poland, Lithuania, Prussia, out of the way of the advancing Russian Army. This is in January of 1945. So they were told one night, in the middle of the night, I was talking to Nick Katzenbach about this the other day, he served as Attorney General under Kennedy, he was in this thing. He said, "You know, just woken up in the middle of the night, told to go out in the cold." And he said, "We feared leaving the camp, that's what we feared. We were safe inside the camp. Because when we were going out of the camp, we were going to march through the towns that we bombed."

I don't think there is anything like this in the history of warfare with 30,000 warriors, marched through the country they destroyed with their bombs, turned into a flaming brickyard and they march through the very streets of the towns, by the very families whose children they've killed and things, unbelievable experience. They were lost to the Red Cross, Eisenhower knew about it, Churchill was pressing for rescue missions, 86, 87 days later they started to show up at a place called Mossberg. It's like the European Bataan Death March, and hardly anybody talks about it, and hundreds of these guys are alive today to tell their ordeal, hundreds of them.

Now, did bombing work? Was all this suffering worth it? Yes and no. We can talk about this extensively in the Q&A but just a rough outline here. It did not work for a long time. When we were bombing U-boat pens on the Brittany Coast, we were bouncing our bombs off six, bunkers that were six and seven feet, U-boat pens that were six and seven feet reinforced concrete. So they bounced off and the bombs did like ping-pong balls, and we're getting massacred by German flak and fighters. So we're losing planes and we're not hitting targets, that's the theme of course of "12 O'clock High." Those are the pioneers, the Bob Morgans in the early years.

Then the war becomes one that, in the following year, 1943, we go into Germany and we start mounting deeper penetration raids, all the way to places like Regensburg and Schweinfurt and places like that. Those raids without escorts are terribly -- the guys suffer unsustainable casualties. By October of 1943 -- there's a myth about this, by the way, that the Air Corps was going to call off the air war, or fold itself into the RAF or they stopped bombing because they took too many casualties, that's not true. You read the orders and everything like this, the head of the Eighth Air Force at that time, Ira Eaker, was ready to go into Germany again and again and again in December and January without escorts. It was just the weather that held him up, and the record proves that. He was relieved of command that January by Hap Arnold and they put in Doolittle. Doolittle was under tremendous pressure because Eisenhower had taken over the Eighth Air Force and he said everything has to be commingled, all the forces in England, the British and American forces, strategic and tactical have to be brought together to make sure the Luftwaffe doesn't disrupt the cross-channel invasion.

I stood on the cliffs of Normandy with Tom Brokaw and Steve Ambrose. Steve was trying to explain to Tom who was going to do a documentary on this, how these kids got slaughtered on the beaches like this. I was thinking to myself, you know it's who wasn't here that was important. If they had had a U-boat right at that point, but they didn't, the U-boats have been knocked out of the central Atlantic by May of '43, or if the Luftwaffe had been there, it couldn't have happened.

Churchill said this in 1940, unless we kill the German Air Force, there can be no landing in Normandy. Well, Doolittle understood this and he released the fighters to fight the German Air Force, but he had a new plane, the Mustang, the miracle plane that nobody said could build. Even the Germans didn't think they could build a fast fighter that was also long range and could handle punishment. And now these fighters could fly actually with drop tanks even further than the bombers who were laden down with really heavy bomb loads, that's what determined the range of a bomber.

So now, Doolittle went around, he told the air commanders that basically they were going to bomb prestige targets, not ball bearing plants anymore or electrical grid or anything like that, they're going to hit Berlin, for example, targets where the Luftwaffe had to come up, and the purpose of bringing the Luftwaffe up was to have the Mustangs massacre them, and the bomber boys understood this. They were bait. They were over there to be bait. They didn't care. Spaatz didn't care what they bombed as long as they brought up the Luftwaffe.

Then they told them the unfortunate news that they're extending their missions to 35, and so they're flying more. I think there ought to be a monument on Omaha Beach to the Eighth Air Force and the Tactical Command as well in England, because think about this, there were 10,000 American Airmen who were lost in the five-month lead up to D-Day. We suffered 6,000 casualties, not killed, casualties, about 2,000 killed on D-Day on Omaha and Utah Beach, almost all in Omaha.

Well, if you factor in the battle of Normandy in the Boucaage, there were 18,000 Airmen killed to make the landing possible, and they should have a cemetery, they should have a monument.

That's part of the story, and see, that is the most important air victory of the war because it allows the invasion to take place. It also clears the skies of German pilots.

The Germans still continued to produce planes. It didn't matter anymore because they're starting to run out of skilled pilots, and that's why so many jets that they mounted performed so poorly because they had inexperienced pilots.

Then we started to hit oil. Now because the Luftwaffe is depleted, we can really go after true strategic targets. We hit oil. Oil is the blood of modern warfare. We go after oil targets. We go after targets like this at Leuna, these huge oil mills that are outside cities. They seem like easy targets to hit, like a big steel mill sitting out in the middle of nowhere, but they're not because they threw up smoke and they had fake plants built all around them. They were tough targets to take. We lost 10,000 bombers taking Leuna. It shows you the cost of something like this.

When we destroyed places like this, we didn't destroy them with pinpoint bombing, we just saturated them with bombs, saturated, because we could now. We could fly more missions, there's less opposition, we got more planes coming off the assembly lines, more pilots, better trained crews, more flight hour training. We were able to just hit and hit and hit, and through saturation bombing, we don't hit any of the main facilities, we knock out the nervous system, we knock out the veins, we knock out in other words the water, the electricity, the whole works and then eventually the plant closes down, the Germans reconstruct it. It's a battle between construction and reconstruction, and we win it.

By September, and this had been hairy by the way. We hit oil at just the right time because German oil production peaked just around D-Day, and German fighter production peaked the following September. So in that summer, if we hadn't hit oil, they'd have had 4,000 warplanes in the air against our air force with fuel. So Spaatz's decision, against Eisenhower's opposition initially, to go after oil, because Ike wanted everything on the D-Day thing, was a very wise one, and they knocked out that part of the German economy.

The other thing that became controversial is they went after coal. They went after railroads as a way of getting coal, you'll don't bomb a coal mine. But you bomb a marshalling yard where trains are carrying coal, and we create a coal famine in Germany. So by January 1945, one month after the Battle of the Bulge, Albert Speer, who was Minister of Munitions, goes to the Fuhrer and tells him, "We've lost the war." But guess what? He writes the letter but doesn't give it to the Fuhrer because he's yellow, and he tells him that two months later. He was a Hitler sycophant who should have been hanged at Nuremberg.

But anyway, when you go after a target like this, the problem is, and this is where our bombing start to shade into RAF bombing, and becomes a little bit of area bombing, or any for a precision target, they'll throw a hundred planes, no, let's say a thousand planes over that target and the lead bombardier is the only one with a Norden Bombsight and he spots the marshalling yard and drops over it, everyone drops about the same time and you kill the marshalling yard but you kill a lot of the town too. Because unlike the oil plants, the synthetic oil plants I described, these facilities, these marshalling yards are right in the middle of civilian areas.

But I put to you a dilemma that I put to my students all the time, because you can't simply shout out moral decisions like bombing is wrong or bombing is right without knowing the facts, the facts are these, and you make up your mind. If you don't bomb, if you do bomb, you're bombing through overcast clouds, bad weather with radar, and with radar that is notoriously inaccurate, you know there's going to be collateral damage, but you know you're going to hit an important target. Or, because you're going to bomb inaccurately and kill civilians, you stop bombing and more Jews die, more Gypsies die, more slave laborers die, more American soldiers die, and the war lasts longer. That was the decision so they continued to bomb, and I think they did right thing.

These twin blows on oil and coal knocked out the Nazis. Now the Eighth Air Force doesn't win World War II, and I should mention the 15th, which I haven't talked about today, flying out of Italy, which did a deeply heroic duty, the Air Force doesn't win the war by any means but it shortens the war, and it does another thing, it brings home the lesson to the Germans. Look, after the war, almost every G.I. who marched through Germany and every reporterlike Margaret Gailhorn and people like that said, "There's very little remorse in Germany about the war." Margaret Gailhorn put it well, she said, "Germany is sick and doesn't even know it."

There's so much anti-Semitism. The feeling was we lost the war because of the mistakes we made militarily, not because we tried to take over other countries. You don't cure people of that by bombing them but what you do do is you destroy their trust in the leadership, the Fuhrer principle, the thing that drove the Nazi regime. That's the first step toward moral transformation. People have to have that broken, and by turning their country into a brickyard, we do that, we do that.

Roosevelt said that very early in the war to Henry Stimson, the secretary of the war. He said the Germans have to feel, unlike they did in World War I when not a single battle was fought on German soil. They have to feel the fury of war. It's a horrible way for them to experience a transformation like that.

The second thing too, in a recent German volume on the air war, they point out very importantly, and I have argued this long before, and to everyone I could talk to, it is no question to me but if the war had lasted into August -- it ended in May, it's only a couple more months. If it lasted into August, we would have dropped the first atomic bomb on Berlin, and we would have dropped the next one on Hamburg.

Now, I talked to Paul Tibbets, he said when he was training, he was trained equally to drop a bomb on Japan or to drop a bomb on Germany. At the Dugway Proving Grounds in Utah they constructed a model German village and a model Japanese village, neighborhood I should say, not village. They even brought over an architect, Mendelson to do it, the German thing. They were going to hit both targets, either one. They'd have lengthened those runways, they'd have brought over B-29s and they'd have bombed Germany to smithereens, it would have been a hundred Dresdens.

So, it would have been a very different kind of war, and it's hard to contemplate, you can't conjure the whole thing up but I think that would have been a different kind of world we would have been living in if we had done that, major atomic warfare against the Germans.

Now, your museum has a great little slogan that you preserve the stories, and I think that's the most important thing you can learn from stories like this about the Eighth Air Force, and the individual stories of the heroes who flew the planes and the heroes who didn't come back. I just want to mention one because he died recently and was a friend of mine, Robert "Rosie" Rosenthal and his story sums up this whole thing. Rosie joined the Air Force, as I mentioned to you before on Pearl Harbor Monday, wanting to be a fighter pilot in the Pacific. He said, "That's the Army, I became a bomber pilot in Europe." He flew 52 missions. When he finished 25, they said, "Rosie, go home." And he said, "I'm not going home" because he was a little older than most guys when he went in. He was a lawyer at the time. He'd go into Brooklyn College and Brooklyn Law, in fact he's in the Brooklyn Athletic Hall of Fame for both baseball and football, and he had been in New York City in the late '30s, he used to go in to buy jazz records. He loved Duke Ellington, and he also stopped at the cinema to see the newsreels. He saw the newsreels of Hitler and he said, "I was a Jew, but Hitler was a menace to mankind, it wasn't the Jews. He was a menace to mankind. A nation had dropped into barbarism and needed to be stopped." And he said, "The thing that stuck in my mind was not the pictures of the Fuhrer and the salutes and all that bullshit." He said, "The thing that really stuck in my mind were the beatific smiles on the faces of German men and women as they saw the Fuhrer like he was some demigod dropped from the skies." He said, "There was a nation that had become sick, not just one man." So he said, "I'm going to fly until Hitler's dead or I am." On his last mission, and we're putting him up for the Medal of Honor as I speak, on his last mission he was flying over Berlin on February 3 on a big raid, and his plane was hit and he hit the bailout bell, and the crew got out, one guy lost a leg going out, everybody was in such a hurry and everything. Then when Rosie was in the plane alone, and this is the third time, he would have been shot down for the third time, he couldn't get control of the plane to the point where he could get to stabilize it, put it on automatic pilot and get to the escape hatch. So he said it was like quicksand. He was like trying to move through the quicksand. But eventually he did get out and he parachuted out at pretty low altitude, who knows, maybe 5, 6,000 feet and he landed right in the middle of a firefight between the Wehrmacht and the Red Army, because he's behind Russian lines, and he just says, "I hope the Reds win this one." And they did, but this big bear of a Russian soldier came running at him and he thought he was a Nazi, he's screaming, and Rosie just said, "All I could think of, I just stood up and started screaming, 'Pepsi Cola, Coca-Cola, Babe Ruth, New York Yankees!'" So the Russian embraced him and he went to Moscow and had dinner with Abraham Harrowman and flew his last mission pulling out French POWs. But the great ending to the story was he was back in his law firm. He'd only been there a week, a big Manhattan law firm and he went back, his war was over and it's the summer, August of 1945, and then just after that the surrender on the Missouri and he starts to read -- by the way he tells me, he's sitting at his desk and he said, "I thought this was the most exciting job in the day, in the world, but after what I've been through, it was boring. A law firm compared to that?" So he starts to read about Nuremberg, and he said, "You know, I should be there, I should be there." He went down and re-upped and they sent them over as a trial lawyer, and on the way over he met another young trial lawyer, Navy, a woman named Phyllis, and they fell in love. Rosie said, "I didn't know if I was seasick or in love but I gave her the benefit of the doubt." They got to Nuremberg and he

wrote a letter home to her father who's this very stern, patriarchal guy, big Wall Street lawyer and he said, "I want to marry your daughter and she's the greatest thing in the world. I'm asking you permission." He got it back, two little letters, no, in a telegram. So he turned to Phyllis and he said, "Well that's it." She said, "What are you talking about?" She said, "I told you that in order to marry me, you had to ask my father for my hand. I didn't say he had to give it to you." Rosie said, "From then on I've always mistrusted my own wife, who's a lawyer." But he interviewed, I should say interrogated, he interrogated Gehring, before he committed suicide, Jodl, Keitel, field marshal. Albert Speer called them the "nodding donkeys" because they nodded every time Hitler said something. She went after IG Farben, the petrochemical industry that was using Jewish slave labor. She prosecuted them. He had a chance also to go after guys that had prosecuted American Airmen. In one case, a German doctor had beheaded an American airman, boiled his head in water and used it as a decoration in his house. You ought to read those Nuremburg trials, all the atrocities against Airmen. But Rosie said at the end, he said, "You know, trials go on. These guys, just seeing them, those former strutting Nazis that I saw at the Nuremburg rallies in the films back in New York in '37 and '38, seeing them now reduced to this, out of uniform, cowering, waiting for the hangman, was the closure I needed. My war was over." Two months later, he was home and Phyllis was pregnant.

Thank you. I appreciate it.