

## Interview of Ray Brim

Interviewer: Okay, Ray, we're really honored to have you with us today. We want to tell you that we appreciate your service and we hope we can rekindle your memory of about 65 years ago. Can you tell us what you were doing when the Pearl Harbor was attacked? What you were thinking?

Ray Brim: I was a student at the University of Utah in my sophomore year. We'd just completed our first quarter and World War II started on December 7th. I had hoped to become a dentist, but with the war coming along, I made the decision I should try to become a cadet in the Army Air Corps. So that started this whole adventure.

Interviewer: Did you enlist shortly thereafter?

Ray Brim: I think about the 10th of December, General Arnold, who was head of the Army Air Corps at that time, lowered the age limit to become an aviation cadet from 21 down to 18. I had just turned 19, and I didn't have a draft number. I was able to pass the physical as well as the mental exam, and on the 22 of January, 1942, some 60 days after Pearl Harbor, I became an aviation cadet. I started my training in California, and then ended up being trained as a fighter pilot, but then all of a sudden was assigned to become a copilot on a B-17.

Interviewer: Tell us about going overseas and the, maybe a little more about basic training and how you got your assignments.

Ray Brim: I had never been in an airplane when I made the decision to become airborne. I'll put it that way. So it was a new adventure for me. I had difficulty landing the PT-17, which they call the Steadman. It had a narrow-gauge landing gear. I had several check rides, and somehow

with the help from up above, I was able to pass them. I went on from primary to basic at Lemoore, California, and then from Lemoore, California to Luke Field where I was to become a fighter pilot. Unfortunately, or fortunately in retrospect, I wanted to be a fighter pilot, but they went down the list every other pilot who graduated that year, and was selected to become a copilot on B-17s or B-24s. I ended up being a copilot on a B-17 and became a member of a crew in Spokane, Washington, Geiger Field. From there, we went to Casper, Wyoming, now this was in the winter of '42 and '43. I would say that Casper is not the most delightful environment to be in for training and almost anything. But we did our training as a crew and crew integrity was extremely important at that time. From Casper, the crew went to Salina, Kansas and from Salina, Kansas we were assigned to Europe. They would not tell us exactly where we would be in Europe, or if it would be in Africa. We left Salina and took the long way to get to Europe. The weather was not only bad for the 8th Air Force in Europe, because of cloud cover and also bad England as well as Germany and the route over the north, which was the shortest route going up through Greenland and Iceland and into Scotland. It was about, I'd say 30 hours of flying at the most. We were ordered to go through, use the old Pan-American route to go to Europe. We flew from Palm Beach, Florida, to Trinidad, from Trinidad to Belem, from Belem to Natal, then to the little island called Ascension Island, which is just off the coast of Africa. It had been discovered by the British when they were taking Napoleon to Saint Helena. So we landed at Ascension, they told us we had 24 hours to be there because they had limited amount of water. So from there, we flew to Robert's Field in Liberia, and from there, up the coast to Dekar and Marrakech, and at Merrakech we were told we would be going to England. We flew out to the ocean to avoid the German fighter pilots attacking us up the coast of France. So we flew out north out of the range of the German fighter pilots, and this was in March of '43. My first experience of

going to London took place on a weekend at that time and we did some more training and it was at that time we were given our guidance regarding escape and invasion. I remember very well, it was an Army British major who discussed escape evasion and the first thing he asked was, "How many of you speak German?" Well, out of our class of maybe 60, four or five hands went up. He said, "Well, how many of you speak French?" A few more hands went up. He said, "Well, you've just reduced your chance of escaping if you bail out. Do not attempt to speak either German or French to anyone unless you have established their identity pretty well. If you spoke in a broken German or French, they could consider you a spy." From there, I was assigned to the 92nd Bomb Group and flew five missions as a copilot.

Interviewer: Let me ask you a question. This B-17 that you flew over to Europe with, was that the one that you, did you have your same crew with you?

Ray Brim: We arrived in England and we had hoped and prayed that we'd have the same B-17. After arriving in England, we were told that our B-17 would go into an inventory of B-17s as placement planes for the crews that were already in England and fighting combat. This was a great disappointment because the plane had gotten us to Europe, so we lost our plane. Then we were assigned a plane after we had joined a combat group.

Interviewer: Was your crew together?

Ray Brim: We maintained crew integrity through this whole training program. I have to tell you one experience. We were in Salina, Kansas, and some of the crew came down with measles. Well, to maintain crew integrity, we had to confine them to a wing of the hospital at Salina. Some of us that had measles and so, I was able to get checked out as a first pilot at that time and we waiting till their confinement was no longer in existence and we became a total crew again.

Interviewer: You flew to Europe with that crew?

Ray Brim: Flew to Europe with that crew, yes. Crew integrity was extremely important for us at that time. The love, the loyalty to each other, you always didn't get along, but it was a thing that they emphasized.

Interviewer: Then you started flying missions from Great Britain?

Crew: Can we pause for a second?

Interviewer: Yeah.

Interviewer: Ray, take us through a day of a typical mission -- what you did, the time you woke up, and go through the whole thing.

Ray Brim: Normally, we would be advised the evening before a mission of an upcoming mission, and that we were on the schedule. They would only take the four squadrons of a group -- they would only take three of them, always leaving one squadron as a nucleus to develop the organization again. After being advised, we would go to our rooms -- sometimes it was the barracks, sometimes it was a room, depending on how fortunate we were -- and, depending on the time of take off, about three hours before takeoff, they would come in and announce that it was time to get up and get going. We'd board a truck to get our breakfast and from there to a briefing about the mission that was scheduled for that day. The briefings were comparatively simple at that time in that we were not going to penetrate Germany any great distance. Most of our targets were submarine pens in France. But after the briefing, which would have a colored yarn going from our base and they'd set up a schedule for our take offs, forming up into the bombing formation. We would go out and draw our parachutes from a common storage area. I

had chosen parachute number 13. I was arrogant enough that back luck number did not apply to me -- also stupid enough. We would go ahead and get our crew briefing. The office navigator always had an additional briefing, and the pilot. Then we'd all assemble at the airplane. The gunners would go out and check their guns, not fire them, but just for the mechanics of it. Then we'd stand and board our plane and wait our turn to get in line to take off. We would form up into a group, and the first missions I went on, we didn't have enough airplanes in the 92nd Bomb Group, so we had to consolidate a group. We'd get planes from different organizations, form up as a group or a squadron and then take off following the leader into our target. The first targets didn't have fighter support. They had a ruling at the time, or a program, that you had a fifty percent chance of surviving 25 raids. They had to do that so they could program crews coming in, airplanes coming in, and that was the goal. As a result, some organizations would not have a complete contingent of airplanes.

We would form up, climb to our assigned altitude, attempt to dodge other B-17s in the area, and we would then, in the first raid, proceed to Saint Lazare, which was a submarine pen in France. I remember that raid from the fact that the plane that we were flying off of, we were lower echelon and the plane we were flying on became disabled and we made the mistake of just staying with it for a period of time. The rest of the group went on, attempting to get home. We fell behind, and that was exactly the type of an event the Germans would like for the fighter attack. So we were able to put max power on that old B-17 and gradually caught up and only witnessed one or two fighters, but they weren't after us. We landed back at our base and walked around the airplane. I never made a raid, but my plane was damaged from flack and also from 20 millimeters from the fighters. There's a picture I have of a tail gun compartment being hit by a 20 millimeter, but that was later on.

Interviewer: So on your 25 raids, your plane was damaged on every one?

Ray Brim: On every one, and most of that was from flack. That was, you would have to put up with the fighters going in as you entered Europe, and they would make all kinds of attacks from the rear, from the head on, and later on, that was a major concern because I was in the lead airplanes using radar. They would even ride the contrails if the planes were leaving. The fighters would just ride -- you couldn't see them -- and as a result, they'd pop up to take a shot at you, peel off, and disappear, and then they'd come back and ride the contrails again. So the German fighters, I have a lot of respect for. They were, they had good equipment, they were, to begin with, well trained. After all, they began in the Spanish Civil War -- many of them had been trained there -- so they came in with a higher experience level than our pilots. They made a mistake, the German Air Force, never letting their fighter pilots retire after a certain number of missions, as we did. As a result, as we built up our fighter force, and the German military capability was reduced, their experience level depreciated over a period of time. That made a difference on our life expectancy.

Interviewer: Yeah, hang on a minute. I have to cough. Sorry about that. Well, what does it feel like to a young 19, 20 year old guy to be told that you have 50 percent chance of surviving 25 missions?

Ray Brim: They didn't tell us, sometimes it's ignorance that they capitalize on. They just said, "This is your number of missions you have to accomplish." They never told the other side of that equation, and it was a much higher loss rate early in the war because we were new at the game, we had to learn a lot, we didn't have fighter protection, and our intelligence was limited. I

think the survival rate early in the war was right around less than 50 percent. I think it was much closer to 33 percent.

Interviewer: Huh.

Ray Brim: Now, I am just rounding on that, but I have documents that show that. Anybody who tells you they weren't scared, weren't frightened in my judgment is very loose with the truth.

There was always a higher -- I used to call it a high "pucker factor." Fear was a dominant motivator as well as something that you always had in the back of your mind. When I got my own crew, I was replaced by a former RAF, RCAF pilot, and on a raid that he was on, he had taken my place on that crew, original crew, a projectile came into the cockpit and severed his arm, at his shoulder, and he bled to death in the cockpit. Now that's just, from my perspective, I was lucky to have my own crew. I don't know why, other than the fact I wanted my own crew, but I could have been that chap by the name of Sullivan. I had seven raids when they took the squadron off flight duty, and we started to train with radar. The Germans had radar, the Americans did not. The British had radar. Radar bombing was mass bombing. We liked to tell people we were very accurate in our bombing. I would challenge that to some degree. The Norden Bombsight was fine, but the fear factor, when you're being shot at, and you're in that airplane, sometimes you don't concentrate enough, even with the best instruments you have to release the bombs, and when you stop and think about it, the bomb, at 20,000 feet, would be released two miles away from the target with a Norden Bombsight. The distance from the lead airplane which used the Norden Bombsight and the ones that further back in the formation supposed to release at the sight of the bombs. Just the time interval alone would degrade your accuracy. The strategic studies survey after World War II said we missed our target as much as six miles, which they were able to measure. So, we used to say that the British and the Germans

would bomb cities and bomb areas. Area bombing is what we called it at the time, on the basis that if you denied a German -- or in the British situation, where they were being bombed by the Germans -- the ability to go to work the next day. You denied them military capability. Our theory was by bombing a daylight, we could isolate the target -- a rubber factory, or an electric plant, or something of this type. If we hit it, we had a lot of luck on our side, but we also killed a lot of Germans by missing the target.

Interviewer: Tell us about your most dangerous mission.

Ray Brim: Hmm. I think, I had two rather difficult missions. I will put it that way. I was with a radar group, and we were trained by the RAF, but we were using radar to bomb targets because of the weather over Germany. It would be cloud-covered, and with the radar, we could identify metal structures and the difference between water and land. It was very crude, but the RAF had used it, and we adopted that technology. Because there were a limited number of airplanes equipped with radar, we would be farmed out to lead another organization. We had five airplanes originally equipped with British radar for bombing technology. On this one mission, I was assigned to fly with the 100th Bomb Group. The 100th had a reputation of high losses. No one really wanted to fly with them because of this reputation, but orders are orders, and I was by assignment. Our target, as I recall, was (inaudible) and a refinery there. Since we were radar equipped, we were the lead airplane for the 100th Bomb Group, and they had other bomb groups flying up behind them. We would drop a flare to indicate when to drop a bomb using the radar. As we approached Europe, we were greeted and escorted the rest of the way by the German fighters until we got to the general area of the target. At that point, the German fighters would leave, and then the "ack-ack," or the flack guns, would take over from the time we reached missile point till the time we got over our target and released the bombs. On this particular

mission, we had just released our bombs, and were making a turn off the target when a piece of flack came in, penetrated the fuselage, went through the oxygen system on that one side of the oxygen tanks, ricocheted off a pillar that was holding the top turret gun in place, missed the pilot seat and then went out the oxygen systems on the other side. Well, at 30,000 feet, your life expectancy isn't great without oxygen. We had a few walk-around bottles, but we had to leave the formation. I called the deputy leader, told him we had to break formation and get at lower altitude. At the same time, I told the crew to use -- I think we had four walk-around bottles that the crew had to use sparingly -- and they would transfer it from one individual to another. Well, I dropped down to about 20,000 feet, and asked for a fighter escort. In those days we did have some P-51s and P-38s to help us, and 47s. It took awhile for us to get this escort, and the Germans greeted us with other attacks. I don't know how we survived it, frankly, looking back at it. When the fighters finally came into the area -- our fighters -- we were escorted back to the coast. We dropped down to 10,000 feet, where our oxygen requirements weren't as great, and got on home. The plane was badly damaged with flack holes and we didn't have any damage from the fighters, fortunately. That's luck. The crew went through a difficult time. They were not only scared, as I was, but you didn't want to freeze to death and it was cold, maybe 30 degrees. So it was, unless you had oxygen, you were in deep trouble.

The other raid was rather unique. We were testing some equipment called Oboe that the British had used in bombing. Now, the British did not fly as high as the 8th Air Force. Their planes were about 20,000 feet when they made their raid. We were about 25 or 30,000, usually in that altitude. I made the mistake of volunteering to make this raid. It was supposed to be a milk run. Well, it proved to be anything but a milk run. We went out through the normal routine, briefed on the target and got out to the plane, and the ground crew had told me they put an extra 200

gallons of gas aboard. There were 2 airplanes scheduled to fly that night. One of them did not go. I went on the mission. The ground crew, we had to take one of the generators off the plane to operate the Oboe equipment. The ground crew chief told me they had to replace another generator on the number four engine, as I recall, because it caught on fire on the preflight. They did not have one in supply, so they went to the hangar queen, which was an airplane used for spare parts, took a generator off it, put it on. We got the green light to take off and took off. All of a sudden, the lights started to flicker and our communications system went out. This was supposed to be a milk run -- easy mission. Well, we got over to Europe, and I had no electricity in the airplane. Now, the B-17 was electrically-operated: bomb doors, the gear movement, everything was electrical, communication system. I ended up over Germany, at night, one airplane, and didn't have an electrical system. My navigator lights were gradually going out on my instrument. Some instruments froze in the position, like the gas gauge. We had no idea how much fuel we had left. I made the decision to salvo the bombs, so we probably plowed up some farmer's field, but at that point, I didn't care. We started back for England. I got headings. The compass I had was the old magnetic compass. I had the magnetic compass, needle ball and air speed instruments to get back to England. We had search lights flashing in the air, and my tail gunner said he was seeing imaginary fighters coming at him at night. Anyway, we finally approached England, and at that point, I became frightened the British would shoot us down because our IFF, our identification equipment, was out. We had flash lights to get the direction of the airplane going, and we had no real navigation system other than dead reckoning.

Interviewer: Did your crew know all these problems?

Ray Brim: Well, we passed the notes back with a flash light, and they knew about this. Now, I should back up. The flight surgeon, a major, decided he'd volunteer to go on this milk run. He

was with us this time. This was a new experience for all of us, but I think he was more aware of the fear factor because it was a new mission for him. Anyway, we got over England, and they had told us that the spot lights would, if we were in trouble, that they would point for a field that we might land on. Well, every time I turned to one of these cones of the spot lights, they would go out. I finally found what we called a "pundit." That was a ground beacon that would flash a code, and this code was changed hourly. We found one that was fairly close to our home base. I fired some red flares, hoping that somebody would come to our attention, and finally one field put the parameter lights on. Now the British had a system that, around your field, there was some lights that if you're at the right altitude, you could see them and they would take you right and then lead you into the landing strip. We found this, so I had to crank down the gear manually, the sergeant engineer did. We cranked down some of the flaps, and I made the approach. No lights, of course, I made several landings without lights. Got on the runway somehow, I'd offered the crew an opportunity before doing this if they wanted to bail out, and they said, "No, we'll stick with you as long as you think we can make it." We got on the runway, put on the breaks, used the emergency breaks to stop the airplane, and about that time a flood light came on from the tower and I was back at our home base. That was fine, much of the crew got off, but the ground crew came aboard and they said, "Taxi the plane back to the hard stand." Not thinking, emotionally drained, I started the airplane back toward the hard stand. I'd forgotten that the accumulator, brake hydraulic accumulator to operate the brakes, was electrically operated. I had used up all of the hydraulic power on the landing. As I approached the hard stand, I wanted to slow up -- impossible to slow up. I ran through a cement mixer that was being used to repair the run way between number three and four engine. Parts of that cement mixer came through the cockpit, part of it went through the airplane. I ended up in a

ditch, part of the landing gear in a ditch. It was difficult. I finally got out of the plane -- shaking like a leaf, went back for a debriefing, and they gave me sleeping pills. The doc who had gotten out of the plane when we first landed and went in his own Jeep to go back to the hospital and back to the debriefing. I didn't take them, but I relived that mission. They never sent me a bill for the airplane. Those two missions were perhaps the most difficult, even though I'd had damage to the plane and I only had one person, a tail gunner, who had a purple heart in the 25 missions.

Interviewer: He got wounded with flack, is that right?

Ray Brim: No, a 20 millimeter, a fighter plane. I think it was a 109, approached from the rear firing 20 millimeter shells, and actually hit the guns. He was slightly injured, not badly injured. When it was all over, he said to me, I won't use the language that he used, but he said, "You know, that so-and-so fighter pilot was a better shot than I was. I was trying my best to get him, but he got me." It was, uh, a scary time. I was very fortunate. I had a wonderful ground crew. I had a fine crew aboard the airplane. The support people seldom get the credit that they deserve. They put in long hours replacing engines, put in long hours damage control, and they never got the rewards that I felt they should deserve. Again, I feel very fortunate. I had a wonderful wife who supported me during this time. She came back and went to the University of Utah while I was overseas.

Interviewer: So you were married during the time. Did you have any children?

Ray Brim: No, no, we were married together for three months, and then when I left Salina, she took the train to Salt Lake City, and went back to University of Utah. She was an English major.

Interviewer: What was the average age of your crew?

Ray Brim: I was 19 when I was commissioned, and I was 20 and 21 when I flew my combat.

The average age, I would say, would be around 21, 22. We grew up in a hurry. We didn't have any options. I, again, consider myself very fortunate.

Interviewer: Well, I'm telling you, it was a wonderful service. That war in Europe was basically won by the bombers being able to stop the Germans from making wars so that when D-Day came, they didn't have much of an Air Force.

Ray Brim: Yeah, I was home before D-Day.

Interviewer: Were you? So tell me about then when you completed your last mission and going home.

Ray Brim: There was a ship that had been a French passenger ship by the name of Maracana, as I recall. That was the last thing I wanted to come home on was a ship because I had a great fear of the submarines. Anyway, you do what you're told. I came home on the Maracana, and we kept zigzagging across ocean hoping to avoid submarines or making it more difficult for them to launch a torpedo into us. Most of the people on that ship were Air Force people who had completed their mission. We landed in New York, in New Jersey, actually, then took a train to Salt Lake City. Then we got together again with my family. A little experience I had, I came home and we went to my in-law's home with my family being brought in for this occasion. My wife at the time asked me to come into the kitchen. I had different ideas about going out to the kitchen after being gone for 14 months. I thought there was more romance associated with it than anything else. She got me out in the kitchen and said, "You've got to clean up your language." Well, I had gotten very accustomed -- there wasn't a good German, there wasn't a

good fighter of the enemy. We always described them with four-letter words and with emphasis. I had gotten in this horrible habit, and so it wasn't long before I was corrected.

Interviewer: That's interesting. And was there a chance of you having to go back?

Ray Brim: I was assigned to the training command for a period of time, but before that, I was sent to Salt Lake City to be involved in recruiting and war bond sales. I had three months back in Salt Lake City, and then we went to the training command and I volunteered to go into aircraft maintenance and was at Chanute Field when the war came to an end. It was a happy day in many, many respects for us. I wanted to go and become a dentist. Came back to Salt Lake City in the university, but happy events took place. I went back into the Air Force and made a career of it.

Interviewer: After that. Well, we appreciate your service. Elizabeth, do you have any questions?

Elizabeth: Those two difficult missions you were talking about -- can you hear me well?

Interviewer: Go ahead, I'll repeat it.

Unknown Person: I just want to know, because he was beginning to talk about his wife. I would like to know what kind of emotional support he received and how it helped him through the war.

Interviewer: She wants to know what kind of emotional support your wife gave you and did it help you through the war.

Ray Brim: It was a major concern. Her love was very deep. I'm sorry. I just lost my wife. Cut this out.

Interviewer: Take your time, take your time. You're okay.

Ray Brim: Pat wrote many wonderful letters in support, loving letters. She gave me so much moral support, the kind of support you want to come home to. I was so fortunate. She was with me throughout my Air Force career. She was a great benefit. She was a student. She provided me a lot of support wherever it was. Whether it was the Aleutian Islands and she was here in the states, and we'd talk or other places, when we couldn't go together. It was a lot of emotional support. During World War II, it was very, very, important to both of us. She would read after the raids in the Tribune, and they would come out, it would be announced two or three days after I'd been on the raid, but she had a collection of those articles, and I have some of those and those documents I brought.

Interviewer: Yeah, anything else?

Elizabeth: Can you describe what a "milk run" is?

Interviewer: She wants you to describe what the term "milk run" means.

Ray Brim: Oh, milk runs. Okay, I gather that this had been termed over a period of time then come down the chain of command that any easy raid, where there was little or no opposition, was a milk run -- like they would deliver milks in the mornings in the car. That was the term that was used to describe a mission that was comparatively easy, and where you had little opposition, and little damage to your plane or your crew.

Interviewer: And after you left, they upped the mission rate to 35, I believe, because they had fighters who then had the gas to go along the whole way?

Ray Brim: Well, yes. Not only that, but you see, the Germans had paid a high price for the Russian adventure. They lost a lot of their talent in the Luftwaffe, so that added to our ability to

survive raids. In addition to that, the Germans' production was gradually being reduced. At the same time, our production in the United States hit its real high point. We were producing more crews, more airplanes, and they could put those resources to advantage in England and the 8th Air Force and throughout the world. There was a formula that they had in their planning program that they had to have at least -- how can I phrase this -- so many raids in a crew to be put into an act of force, and so many airplanes to put in, and when you had the fighters added to that, the degradation of the German military capability, your chance of survival increased. So they ended up with 30 raids, and as time ended on it was 35. It ended up at the end of the war 50 raids, but it was all based on the availability of resources and that 50 percent factor was always in the planning factor.

Elizabeth: I have another.

Interviewer: Yeah, go ahead.

Elizabeth: I was wondering if you could describe the coldness, the atmosphere in the B-17.

When you went on raids, what was it like, the environment inside the B-17?

Interviewer: She wants you to talk about the environment inside the B-17 was, the temperature, and--

Ray Brim: Okay.

Interviewer: --and just the general comfort and the environment about it.

Ray Brim: The environment was very, very basic when I look back on it. You have to remember that the planes were not pressurized. The guns had to protrude from the side of the fuselage.

Therefore, you couldn't have -- well, we didn't have pressurized airplanes until the B-29. The

temperatures were so cold that we would dress in wool lined jackets and boots and trousers and it was just difficult to move around because of that. Definitely in the bomb bay area, it was very narrow and to go from one part of the airplane back into the fuselage, the radio room, it was very difficult to maneuver. We would start to put on our oxygen masks about 10,000 feet. That was another incumbent, because you had this oxygen mask and having to be hooked up to a tube, bringing it from the source was also difficult. It limited your mobility. The temperature worked with you and against you. If you were wounded, it was so cold that you would frequently not bleed as much, depending on your wounds. We always had emergency equipment with some morphine and things of that type that could be administered, but it was very, very basic. The tail gunner, for example, sat on like a bicycle stool and his legs tucked in behind him. After awhile, it's almost impossible for him to get up because his legs have been in just that one position. The longest raid I had was nine hours and about 35 minutes. He wasn't always in that position, but when we reached the coast of Germany or of France, and when we got back to the coast, he could move around. The ball turret gunner -- isolated, cold, miserable position to be in. The environment for him must have been so confining in this little sphere hanging below an airplane, and communicating with other gunners and the crew with limited capability. His turret had to be in a very definite position before he could exit it. So we gave an order for him to bail out, they had to be sure that turret was up so that the door would open so he could exit it. The environment, today we would consider it pioneer.

Interviewer: Yeah

Ray Brim: I hope that answered your question.

Elizabeth: That was terrific.

Interviewer: That was good.

Elizabeth: I want to know his feelings about the whole war effort.

Interviewer: She wants to know what your feelings of World War II are, about the war effort and whether you thought it was necessary and how you feel about being a veteran.

Ray Brim: There's a lot of background information that I can understand why the Japanese kind of felt that they were superior. They had great success in China, they had much larger military force, they had arrogant generals, and but that's not uncommon among generals. You can quote or not quote that. Pearl Harbor came about for various reasons. Some of them were economic, some of them were the need to get resources for Japan, and so forth. We didn't handle it as well as it could have been, but that's always easy to say in retrospect. After Pearl Harbor, there's no question in my mind we had to go to war. We did the right thing at that time. I know that a lot of people don't feel this way, but the atomic bomb in my judgment was a necessary weapon to save many, many thousands of American lives. The Japanese would have defended their home country with great force and, thank goodness, the emperor had the great judgment to bring it to a close. You know, Hitler declared war on the United States before we did, so it was fairly easy decision to make at that point. World War II, in my judgment, was necessary under those conditions. It was very expensive, but the people had entire different attitude here in the United States. We never give the credit to the industrial capability, the sacrifices the people made in the United States -- rationing, things of that type. You think we would do that today? We paid for it in the way of war bonds. Now -- don't get me started. I think we didn't have many choices, to answer the question.

Interviewer: Yeah, well, I agree with you. Anything else, Liz?

End of recording.