

**Alvin Robert Brown  
Veteran**

**Wayne Clark  
Interviewer**

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NYS Military Museum  
Saratoga Springs, New York**

Alvin Brown: **AB**  
Wayne Clark: **WC**

**WC:** Today is the 23<sup>rd</sup> of April 2012, and we are at the New York State Military Museum in Saratoga Springs, New York. My name is Wayne Clark. Sir, for the record, would you please state your full name and date and place of birth?

**AB:** Alvin Robert Brown, and I was born in New York City on April 20, 1930.

**WC:** Did you attend school in New York?

**AB:** I attended school in Albany. In fact, before I came to Albany, I went to a one-room schoolhouse where there were six grades in one room. I moved to Albany in my fourth year of schooling. I went to various schools in Albany, and I went to the New York State College for Teachers and graduated in 1953.

**WC:** Let's go back a little bit. You were born in 1930, so when World War II started, you would have been about eleven or twelve?

**AB:** I was eleven, yes.

**WC:** Do you recall hearing about the attack on Pearl Harbor?

**AB:** Oh, very well. It was Sunday afternoon about 4:00 and I was coming home from a party, and a friend came up to me and said, “Hey, the Japs attacked Pearl Harbor.” And of course, I’m very aware of what was happening in the world at that time, and Pearl Harbor, to me, was a place in China. And I said, “What’s the big deal? They’ve been in China for four, five, six years.” “No, no – Pearl Harbor is in Hawaii.” And I said, “Oh.” And I ran home and I found out that that was what was going on.

**WC:** Did things change shortly after that for you? Did you notice a change in the way that—

**AB:** There was a change in everything. In school, they lowered the heat on the thermostats, and they started various drives... metal... bringing in things for the war effort. In fact one of the things we used to do is cigarette packages were wrapped in tinfoil, and we used to take the tinfoil off cigarette packages and put them in a big ball. So yeah, there were things. And of course, the shortages came in and the rationing, things like that; we could talk about that a little later. But yes, on the home front you could see changes. Right away, we had to sell a car. What was the sense of keeping a car if you had to provide tires for the car, you couldn’t get rubber tires, you couldn’t get gasoline. In those days you had to park a car in a garage, you could not park it in the street. So what’s the sense of paying \$5 a month to garage your car when you couldn’t get gas or tires for the car?

**WC:** What kind of work did your father do?

**AB:** He worked for the State. He had to walk to work, and he couldn’t drive his car any more to work. What happened soon afterwards is he sold the car, a 1939 Plymouth, and it was

sold for I think \$350 because what's the sense of keeping the car when you couldn't get anything for the car. So there were changes. We used to take little rides on Sunday, and there were no more rides on Sunday, and things started tightening up all around. Ration books, shortages of meat, things like that.

**WC:** Now, did you have a garden in the summer?

**AB:** No, we did not. We lived in the city.

**WC:** What about blackout curtains and air raid wardens?

**AB:** Yes, my father was an air raid warden. He was at an awkward stage. He was too young for World War I, and he was too old for World War II. So he had to do something, so he volunteered to be an air raid warden. They gave the air raid wardens three things: they gave them a helmet that said AW, air raid warden; they gave them a flashlight because if they saw lights, they'd flash the light on where the light was coming from, the window; and they also gave them a whistle, and that was to call attention to the fact that somebody was showing light. And he liked his air raid warden duties.

I knew a little about aviation, and I tried to figure out how the Germans were going to bomb New York and fly back, when the range on most of their planes in those days was like 400, 500, 600 miles, if that. The Germans unfortunately—or fortunately—did not build many four-engine bombers, mostly two-engine, so they didn't have much of a range.

**WC:** Do you recall the death of President Roosevelt?

**AB:** Very well, very well. It was April 12, 1945. In fact a standard saying was that next day would have been Friday the 13<sup>th</sup>. Yeah, I recall Roosevelt very well. I thought he was a good President. I thought he tried to help the country out of the Depression. He passed a lot of legislation, but nothing really worked. The only thing that brought America out of the

Depression was World War II with the factories going up and a lot of the laborers came from the South to work in the Northern factories.

**WC:** Was your mother involved in the work force at all during the war?

**AB:** No, not really. She was like most mothers, she stayed home. The father was the one that went out and earned a living, and the mother stayed home and she kept the family together, so to speak.

**WC:** What part of Albany did you live in? Do you recall?

**AB:** Yes, I lived on what's called the Mall now. It was 279 Hamilton Street, and it's no longer in existence. It was on the corner of Hamilton Street and South Swan Street. And it was convenient for shopping, for schools, for the parks—Lincoln Park and Washington Park. And that's what we did.

**WC:** When the war in Europe ended was there any celebration at that point?

**AB:** Yes, there was a celebration—you're talking about VE Day. That was on May 7, 1945 I believe. Yeah, people were happy, they figured the worst was over. Of course there was still fighting to be done, but there was celebration. But again, it took a toll. It took a toll physically. I remember what they used to do when somebody was killed, a telegram would be sent to the family. We lived in an area where you could hear, a lot of times when they got the news, especially the women, they would start shrieking. You knew when you hear the sound of a shriek that somebody had died. And they had the Gold Star Mothers—they'd take down the blue star and put a gold star in its place. They'd hang those little flags, maybe 8 inches by 12 inches, in the window.

**WC:** What about when Japan surrendered—there must have been a lot of celebration?

**AB:** There was a lot of celebration with Japan again. Japan surrendered and there was a big controversy not so much then, but later on. I went to the Space and Air Museum in Washington, DC, and they had the front part of the Enola Gay, the bomber, and there was controversy over—it exists today—should Truman have authorized the dropping of the atom bomb? And now you get some revisionists that say Japan was ready to collapse and all that. He had to do it. At the time, he had to do it.

**WC:** Were you surprised when you heard about the atomic bomb, was it hard to conceive that one or two bombs could do that much damage?

**AB:** Yeah, it was roughly August 8 and August 11, 1945 when they dropped the two bombs. One was on Hiroshima and the other was on Nagasaki. They had no idea. You just can't imagine what it can do. So we were surprised. But the atom bomb had to be dropped because the Japanese were going to fight to extinction, literally and figuratively, and even after the two atom bombs were dropped, the War Cabinet in Japan was split as to whether or not they should continue fighting or whether they should surrender. Finally the Emperor—history painted him a lot more favorably than he should have been—but he finally said enough is enough, we're surrendering. Otherwise, the race would have fought to extinction. They were prepared to fight with, literally, pitchforks and bamboo spears against the United States. Yes, we would have lost a lot. The Japanese forces at the end, they did not surrender, they did not surrender.

**WC:** Now, the war ended, and you graduated from high school when?

**AB:** I graduated in 1947. I went to Schuyler High School in Albany, New York. I worked a couple years, and then I went to Albany State [College]. What happened was it was June of 1950 when Korea started. In September of 1950 I was getting

ready to start my sophomore year at Albany State and with Korea they started to draft everybody, and I mean everybody. The draft board came to Albany State and spoke with the male students there. I said to them, "I'm starting my sophomore year. Will I be able to finish my sophomore year?" And the person said "You'll be lucky if you can finish the first semester, because they're drafting everybody." So I applied for a student deferment, 2S, and I got it. The promo at the time was if you wanted to stay out of the services, you had to make the dean's list—the top half of your class. So in my sophomore year, both semesters I made the dean's list. I figured that once I got through the sophomore year, then for the junior and senior years they'd leave me alone, and that's what happened. In my junior and senior years they left me alone.

The war in Korea—or whatever it was, the police action—ended, the shooting stopped July of 1953. So I figured oh, if the shooting stopped in 1953 they're going to leave me alone—I'm a 2S--because there's no more fighting. But I got a notice from the draft board saying we let you finish college--you owe us something. I didn't want to go in the Army, so I joined the Air Force.

**WC:** So you enlisted in order to avoid being drafted?

**AB:** Yes, that's about it. That's why I joined the Air Force. I went to Lackland Air Force Base—

**WC:** For your basic training?

**AB:** For my basic training, I went there. They picked me to go to navigator school. So for about a year and a quarter I went to navigator school.

**WC:** Did you have to go through any officer candidate program?

**AB:** No. I went through the cadet program; I was an aviation cadet.

**WC:** Ok. That was after college?

**AB:** That was after college, right. I was one step ahead of the draft board. What happened was I got commissioned in April 1955 and I was assigned to Travis Air Force Base as a line navigator. I was flying from Travis which was roughly about 50 miles northeast of San Francisco. I was a navigator and I would be flying all over the Pacific. I went to Hawaii. I went to many places that were famous for battles in World War II. I was at Pearl Harbor, Midway, Guam, Wake, Kwajalein, and of course I was in Japan many times, flying back. I was a navigator, and I was flying over... in those days.... I'll describe the types of aircraft we had; I was in a C97, it was called the Stratocruiser. It could carry about 110 people, a four-engine propeller plane, with a crew of 9: we had 2 pilots; 2 flight engineers (they would take care of the engines); we had—

[At this point the tape froze momentarily, and then picked up with:]

--Of course when you're flying westward, you're going against the wind, so that's what we did. We flew at relatively slow speeds. Coming in here--

[The tape froze again briefly]

--there was no trouble finding my way here.

**WC:** Now when you were navigating back then, were you following radio beacons?

**AB:** No, not over the ocean. There are different ways of navigating, about six different ways of navigating. What I would use over the ocean, I used celestial, and at night you would use the stars, you'd get lines of bearing off the stars. I get a big kick out of GPS—which to get a fix on where you are

it takes about, I don't know, 30 seconds? And it's accurate within 40 or 50 feet. I remember flying over the Pacific and if I take my bearings off the stars and if I'm accurate within three miles that's very good. But of course it was the middle of the ocean, three o'clock in the morning, flying at 25,000 feet. There's nobody anywhere near me, so three miles, big deal—I wasn't going to bump into anything. We're talking about in those days, middle 1950s, we used celestial over the waters. Of course, when you got closer to land there was radar, there was Loran, radio signals, and all that. Nowadays there are no navigators; they don't need them.

**WC:** Now you were transporting troops, basically?

**AB:** Yes, and civilian population. What I would do, to give you an idea. We'd fly from San Francisco to Hawaii, and that would take about 11, 11-1/2 hours. The plane would keep moving; the crew would change. We were in the air roughly 10 or 12 hours. In Hawaii most of the traffic was to Japan. You went from Hawaii to Wake Island, that's about 2000 miles. The plane would keep going but the crew got out and rested for about a day and a quarter. I'd say those were about 10 hour flights. From Wake Island you would go to Japan, and the hint I was given as a young navigator at the time, was if you're going to be off the path to Japan, be off the path to the right because Mount Fuji was on the left. So we would stay off and be on the right; we didn't want to bump into Mount Fuji, which went up to about 17,000 feet. Then we would pick up servicemen, mostly, civilian passengers, too, and transfer them from Tokyo to Hawaii, a distance of about 4200 miles.

We'd go the 4200 miles, but it depended on the season of the year. For example, in the winter, there were ferocious winds originating over Japan, called the jet stream. The jet stream blew at maybe 235, 250 miles an hour, pretty good. So what would happen is the plane went 225 miles an hour, and the jet stream was about another 225 miles an hour if not faster, so your ground speed over the water was maybe almost 450, 500 miles an hour. Well, that's what enabled us sometimes to fly

directly from Japan to Hawaii—a distance of about 4200 miles—because we were being pushed, not all the way, but enough of the way, by the jet stream, so what we would often do is overfly Midway. Japan to Hawaii is about 4000 miles, and Midway is roughly about 1200 miles northwest of Hawaii, almost directly you'd fly from Japan, over Midway, to Hawaii to Hickam Air Force Base. You could do that in the winter because of the jet stream pushing. In the summer, we would land at Midway.

I have to tell you this about Midway. I studied a bit about history; in fact, when I graduated from Albany State I was a history major and I specialized in the area of the causes and consequences of World War II. On Midway I would sit there—it was in the summertime, and there was a layover. In the summer you had to stop at Midway from Japan to Hawaii because you had to refuel, there was another 1200 miles. Midway, by the way, is two small islands, not one island. I used to sit in the sands of Midway—Midway, by the way, had the whitest sands I ever saw, they were bleached by the sun. I'd look to the northwest and I'd think to myself, fifteen years ago, there was one of the great battles in world history--it really changed everything. The United States, up to Midway—six months from Pearl Harbor to Midway, which was about June 3 or 4—was taking a terrific shellacking in all fields. The Japanese were running wild.

Fortunately at Midway it was a series of blunders by both sides and fortunately the Japanese made more blunders than the United States because in the first day and a half (the battle of Midway lasted two days or so) the Japanese were winning everything, and it was sheer luck that the United States was able to sink the four Japanese carriers. Midway was a crucial battle, and I don't think many Americans realize how crucial Midway was. Not just to the Americans fighting in the Pacific. The United States in World War II had suffered a series of defeats and if they had lost at Midway, the US public would have demanded that we take more aggressive action against the Japanese, and it would have resulted in cutting some aid

to Europe. And Hitler would have had more time, with the US concentrating its efforts in the Pacific, Germany would have had more time to develop their V2 rockets, their jet planes—a lot of pressure would have been taken off. I'm not saying the outcome of the war would have been changed, but it would have been much more difficult for the United States, and much more costly if they withdrew and fought the Japanese in the Pacific. Germany really had to be the first enemy, the first ones conquered.

**WC:** So you spent all of your time with the air transport service?

**AB:** Yes, they called it MATS, the Material Air Transport Service. But in addition to flying passengers, it used to fly cargo planes, C124s carrying various provisions to different places. I preferred the passenger plane, the C97.

**WC:** I know we had advisors in the 1950s in Vietnam and in Laos and areas like that. Did you make any flights into Southeast Asia?

**AB:** No, I didn't. Once we flew into Okinawa—I don't know what we were doing there but we flew into Okinawa with supplies and things like that. But in Japan, as I say, mostly we were flying passengers—not all servicemen but mostly servicemen—back to the United States. Now one of the things, I was a navigator for maybe a year and a half or so, and the squadron commander called me in. He was a nice guy, Major Ben Parsons. He said to me "Brown, I understand you're a college graduate." "Yes sir, I went to Albany State College for Teachers." He said, "I take it you can talk before a group?" "Yes, I can speak before a group." He said, "Would you consider being a route briefer?"

Here I was a first lieutenant and he's a major, and he says, "Would you consider it?" Of course I'd consider it! It didn't bother me one way or another. So I became a route briefer. I said to him, "How is this going to affect my flying status?" He

said, "Oh you'll have time to fly." I think in those days to maintain flying proficiency you had to fly four hours a month. So he said, "Look, you can take a trip to Hawaii once a month," which was 22 hours, 12 hours there and 10 hours back. So I said, "That's fine." So I took my trip to Hawaii to maintain my flying proficiency and meanwhile I gave route briefings.

What I did was, for flights leaving Travis to go to Hawaii I would give route briefings and this covered not only American military planes but British military planes. The British in those days, they were conducting their own nuclear tests on Christmas Island. Christmas Island is due south of Hawaii, almost on the Equator, so the British had their people there. So I got to know, in addition to American ranks, British ranks... squadron leader and people like that. So I gave route briefings and I had received many briefings. A route briefing is, when you go in somebody gave you a track to follow on the winds. There was one of six tracks you would fly from San Francisco to Hawaii, depending on the winds. I would lay out the track that I thought was best.

A point of interest: there used to be (I don't know if there still is) a Coast Guard cutter halfway between Hawaii and San Francisco. They called it Ocean Station November. And what they would do, the Coast Guard, if you were close enough, they had radar on board and they would give you a fix as to where you are. Sometimes the crews didn't know exactly—the Navy crews, not the Air Force crews. The Air Force crews knew where they were. It was primarily the Navy crews because in the Navy at that time—I'm talking about the mid-1950s, the youngest or the most junior pilot was the navigator and he really didn't know that much about navigating. So the Navy always made sure that when they were flying to Hawaii that somehow they would get close to Ocean Station November so they would get a fix and at least they'd know where they were halfway through.

So I, as a route briefer, would give them the best route to follow. We'd talk about primary and secondary radio frequencies, emergency ditching procedures, and things like that. It lasted about 15 minutes. And after the crew left, they would go to Weather, and Weather would give them a detailed analysis of what to expect.

**WC:** How often did you give these briefings?

**AB:** Every crew departing Travis had to get a briefing. I was on a shift; it went on 24 hours a day. You would alternate shifts, just like the air traffic controllers do today. One week I'd work from 12 midnight to 8 in the morning, I'd be off a week, and then I'd work from 8 in the morning to 4 in the afternoon, and then off a week, and then 4 in the afternoon until midnight, and then off a week. During that time off that's when I would do my flying to maintain my flying proficiency.

**WC:** Were you living on post?

**AB:** Yes, I was living on the post at the time. One of the things, as a navigator, you had to get shots, and you got shots that were indicative of what you were going to face in the Far East. In addition to my regular shots, I got shots for typhoid, cholera, and yellow fever. After a while you didn't mind the shots because after the you got the shots you got two days off to recover, and most of my friends would recover playing golf, and I would recover lying down by the side of the pool. So we looked forward to the shots because we got two days off. You were only allowed to fly 100 hours a month. A trip to Hawaii was 22 hours, a round trip to Japan was 55 hours, and so between Hawaii and Japan that was 77 hours and you couldn't find much else. Or if you wanted, you could take maybe four quick trips to Hawaii, that's about 88 hours. It wasn't bad, but I did enjoy my route briefings; I got to talk to different people and find out what's going on and every plane leaving, and the planes left 24 hours a day. Travis was the big

point for Hawaii. Down south was probably the naval base or the air force base out of Los Angeles.

**WC:** You carried wounded or injured, too?

**AB:** Yes, I can tell you what happened there. I remember it was the wintertime, and I was in Haneda—that's the air force base in Japan—we were scheduled for a midnight takeoff. I didn't like midnight takeoffs because I was on ground for a day, day and a half and my body was used to going to sleep at 11:00, and now I'm told at 11:00 I've got a fifteen hour flight ahead of me. What happened was, I said to the captain "We're leaving at midnight. Who are we carrying?" "We're carrying some wounded servicemen." Well, I'd flown with wounded servicemen before, they'd sit in the aisle seat, they'd have a broken arm or a broken leg – what's the big deal? These were not that kind of wounded servicemen; these were severely wounded servicemen.

What happened—they were stretcher cases, and they were on the side walls of the plane, maybe about 24 of them. I mean severely injured, missing arms, legs, head wounds and all. And so I said to the captain, "should we be leaving at midnight?" and he said, "Yes, we have to." And I found out-- because again this was my first time flying at night overflying Midway; the weather was extremely important; the winds were extremely important. We had about 24 stretcher cases and we had 12 flight nurses because these were people that needed constant attention.

So we were flying all night, and when it was about 11, or almost noon, I thought I'd go back and talk to the passengers because when I flew regular people I'd go back and talk to the servicemen. So I opened up the door and I got a shock because this was the first time I had seen these wounded servicemen. I opened up the door and looked around, and I thought, well I can't go back because the head flight nurse was sitting right in front there. So I asked, "Is it all right if I speak with some of the servicemen?" and she said, "Yes, as long as

they're not sleeping." I said fine, they were all dressed in their pajamas. So I go in and I came to the first one. He had his uniform hanging up by his side, and he had a strip of tape with his name on it. I knew ranks. So I'd say "Good afternoon, Lance Corporal Smith. How are you? I'm Lieutenant Brown and I'm from Albany, New York. Where are you from?" And he'd start talking, and we'd talk for a while. And while we're talking, all I could think—and I was about 25 or 26-- was how young they are. These were people from the Korean war who only now, three years later, were deemed fit enough to travel back to the United States for serious rehabilitation, more so than they could get in Japan. At Travis, they had a tremendous Veterans Administration Hospital where they got all the people who were now deemed fit to travel back from Japan to the United States for rehabilitation care. So we would talk and I tell you, really something. I'd get done with the talk—and I'd be thinking how young they were, with their severe wounds—and if I could I'd say "I'd like to shake your hand," though some couldn't do that. So I'd say, "Well, Lance Corporal Smith, I'd like to salute you for your service to our country." And it really affected me. I'd go back to the cabin and said I needed some time to recover. And yet as hard as it was, and it was hard, I'd go in and talk to the wounded servicemen and say I really appreciated what they did. And I'm thinking in a couple hours I'm walking off the plane, and they'll be staying where they are and when they finally get to California, to Travis, they're going to be carried off the plane on their stretchers. And I don't know if they could walk or what they could do. That for me was a very emotional time. I could see these young kids with these wounds.

I used my visiting of these various islands for years later, maybe up to 8, 9, 10 years. I would talk at various institutions, veterans institutions, nursing homes, senior citizen centers, different places, and talk about World War II. As I say, I brought up about the home front—I remembered the home front very well. I didn't go into the service until late in 1953, but I remember the shortages that they had, the meat

and all that, the tobacco. People used to line up for blocks to get cigarettes. The shortages, the book stamps, the ration books, and all that. They say there's such a thing as long term memory, and I think there is. I cannot remember what I had for supper last night, but if you ask me about the late 1930s, that I can remember, and I guess there is such a thing as long term memory.

**WC:** You got out in 1958?

**AB:** Yes. A lot of my friends wanted to make their career in the service. I gave them about 4 and a half years. I figured I did my share. I have no regrets about joining the service. I think it was eye-opening in many ways. Most of all, the people you would meet, my fellow cadets, they came from different sections of the country. Before I went into the service I was never on an airplane, and so everybody I knew was in the Capital District, Albany, New York. And now I was meeting people from all over the country, people who thought that I had an accent and I think they had an accent. But I think in my own personal observations, I feel that the northeast is a strong part of the country.

**WC:** Did you stay in contact with anyone you were in the service with?

**AB:** I stayed in contact for a while, and like everything else, you start a family, the kids growing up, the Little League baseball, the games and stuff like that, and the correspondence unfortunately becomes less and less. I don't know, at this stage of the game, I'm 82, my friends were probably basically the same age in the Air Force, who knows if they're still living. That's sad.

**WC:** Did you join any groups like the Legion?

**AB:** Yes, I joined ... in fact, I first saw you about six or eight weeks ago when you addressed the Jewish War Veterans. I'm with the Jewish War Veterans, I'm the historian and I'm also

the archivist. I write columns and I give talks to the group as well as to others.

**WC:** Were you able to make use of the GI Bill at all, like for buying a home?

**AB:** No I really did not. I went to Albany State, and that was taken care of. I did go to a couple graduate schools, but I got government grants to go and you cannot use a government grant and the GI Bill. I took the government grants, so although I was entitled to, I don't know, 4 or 5 years of college education, because of the government grants I received along the way, I had no need for using the GI Bill. So I did not use it. My son, he likes the military, he's in the National Guard. My other son wasn't that crazy about the military. But I have high regards for the military. My service in the Air Force, as I say, I think it was worthwhile.

**WC:** It says you were discharged January 1970. Was that when your obligation was over?

**AB:** I don't know. I got my DD-214; my grandchildren get a big kick because it says "Captain" on it. "Were you really a Captain?" "Yes, I was discharged a Captain, but while in the service I was a first lieutenant." But my DD-214 says Captain.

**WC:** How do you think your time in the service changed or affected your life?

**AB:** It made me much more aware. There are different people out there. There are people who think I speak with an accent, this is what they think. I say, "No I don't speak with an accent," and they say "Yeah, you have a New York accent."

**WC:** After you got out of the service, what type of career did you pursue?

**AB:** Well, what I did is I worked, in addition to be a history major, I also had a major in business. When I got out of the

service, I went to various organizations, junior colleges, doing work in the business departments. In fact I was the head of the business department for a junior college in New York City. My service, I think, it helped me see that other people have different ways of thinking and other people are different from me. They really are, and I'm different from them, I understand that. But I realize I'm different from them.

**WC:** Well, thank you so much for your interview.

**AB:** Well, let me just say this, and you can put this where you want. You know, in World War II, and I know a little about World War II, there were two battles in which the United States, the Allies, were totally outnumbered in both men and materiel. And what happened, it was a foregone conclusion that the battle would end in favor of the Axis forces. And the chances were so remote that the Americans would have anything resembling a victory, that they called these battles "miracles."

The first one I remember was when I was about 10 years old, at Dunkirk. They called it the Miracle at Dunkirk. What happened, the British and French and Belgian armies had roughly about 370,000 men that were all trapped in the port at Dunkirk and it was written off. Forget about the equipment, the equipment they knew was lost. The Admiralty was hoping that they could save maybe 50,000 troops out of the 360, 370,000. And yet, the Germans did not attack when they were in a very favorable position. And so the British did not save 50,000, they saved 350,000. It was a big thing. And they called that the Miracle of Dunkirk.

And in the United States we had our own miracle, and this was the Miracle of Midway, where by all odds the Japanese should have won a totally convincing victory, they really should have. We were totally outnumbered in ships, they outsupplied the United States, the Japanese had 6 or 7 aircraft carriers, and the United States had 3 and one of them was really patched up; a civilian crew was on board while the

ship was sailing out to battle. They were totally outnumbered in aircraft carriers and in battleships. The Japanese had like 10 battleships and the United States had none. And yet the United States won against all odds, and this was probably primarily due to the United States had codebreaking facilities that enabled them to have a pretty good idea of what the Japanese were doing.

So I always think when I hear of codebreakers--and I know they have all sort of sophisticated, computer generated codes these days--I wonder how our codebreakers in the early 1940s would have done against these machines they have today. In fact when I was in Honolulu they showed us the building where the codebreakers worked. And the British of course had their own codebreakers for breaking the Enigma German submarine codes. So I say, "Look, to be a really true warrior, you don't have to man a gun, you've got to use your head occasionally." That's where I got it. So the Miracle of Dunkirk I always like to talk about, and the Miracle of Midway where the United States with its codebreakers beat the Japanese. And many Japanese to their dying day thought the United States had secret agents inside Tokyo. They didn't acknowledge that the United States had codebreakers. They felt that their codes were unbreakable. As somebody said, "Whatever man can devise, man can undevise," so to speak, and that's said very well. I pay tribute always to the codebreakers.

**WC:** Anything else?

**AB:** No, that's about it.

**WC:** All right. Well, thank you again.

