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NEW BRUNSWICK

AN INTERVIEW WITH HELEN M. WALKINSHAW

FOR THE

RUTGERS ORAL HISTORY ARCHIVES OF WORLD WAR II

INTERVIEW CONDUCTED BY

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Kurt Piehler: This begins an interview with Ms. Helen M. Walkinshaw on June 13, 1996 at Peapack, New Jersey with Kurt Piehler.

Barbara Tomblin: And Barbara Tomblin.

KP: I guess I would like to begin by asking you a few questions about your parents.

Helen Walkinshaw: Certainly

KP: The first question is how did your parents meet, do you know?

HW: As a matter of fact, I do. They both lived in the metropolitan area, in New York City for my father and across the river in Jersey City with my mother, and they actually met at a kind of a young peoples' community outing on a trip up to Bear Mountain, and hadn't known each other at all before. I don't know whether they were convergent churches or business groups or whatever going together, but that's how they actually met, at a young peoples' outing on a Bear Mountain boating trip, out of the city.

KP: Your father, he was in the military at one point.

HW: That's correct. Well, he was actually a career Army officer, oddly enough. He served in the Mexican border wars and then, as second lieutenant, then first, then acting captain, I think, of his surviving company. I've forgotten his regiment, but over in France. All wartime service, was wounded three times, and as a result of being gassed for the second time, he was unable -- came back here invalid and for over a year and a half in hospitals, as well as in Paris. He came back here and was unable to resume his active duty and had to resign his commission. And I might explain, in those days there was no carry-on insurance and no carry-over for anyone, even the people in the professional military, so he was forced at that time to resign his commission, which almost broke his heart, I guess, and look for a civilian job just at that critical time in his life, which he, of course, I suppose, was … pretty much in the dumps learning how to cope with. But my mother and father had kept up the usual correspondence overseas from him and with him, and they got together after the war was over and were married about two years after he arrived back and as soon as he got out of the hospital. He was at a rehabilitation hospital down here in Lakewood, New Jersey. It's interesting that following on from old Army buddies, a former colonel of his was a member of the New York Stock Exchange. And he was the one who introduced him to the people who finally got him in his "depressed after World War I" job opening at the New York Stock Clearing Corporation where he worked. So, his Army career ended with the usual kind of military liaisons that are set up, and which were effective at that time.

KP: How much did your father ever tell you and your sisters about the war and its experiences?

HW: He did tell me, yes he did. Of course, he had certain classic versions of war stories, amusing and telling incidents. He never dealt directly with descriptions of combat scenes. He had, as I said, been wounded more than once himself. However, he set the scene very vividly, the anecdotes that he experienced. His position in the lines, I might explain beyond Chateau-

Thierry, was on the North where they kind of butted with the British forces and worked alongside both Australian survivors from Gallipoli and many of the Indian regiments. He used to tell tall tales about the Gurkas creeping out at night and stuff of that sort, with hand-to-hand fighting which was unusual, of course, for trench warfare in that time and which most of the regular Army people mostly decried, thinking that was a hangover from the Khyber Pass days, and so forth like that. But he did have apparently close contacts with a couple of the Australians that he got to know. … As I say, the British regiments were alongside of them; he must have been on the northern edge, I would expect, of the US lines there to have had those contacts.

KP: Was your father active in any veterans' organizations?

HW: … He wasn't active, no. He belonged to the VFW for a number of years, just locally, when we moved out, first of all, from the city to Dunellen before we had come here {to Peapack} after his death. No, I would not say he was active, it was just a question of maintaining ties and feeling comfortable and trying to still straighten out from his World War I experiences, which he fully discussed, except for the combat. He never got into combat aspects of anything, but I was very young at that time, anyway. But he never did, not that phase of it.

KP: Your mother, she worked before meeting your father.

HW: Oh, yeah.

KP: What did she do?

HW: She was a retail clerk who had a great capacity for personal fashion items and design and became head of the department store group of that kind in the city. And then, when family times came along, and we moved out from the city to the then-near rural areas, she just did house working and raised the family and had a great time with us until World War II came on. I went off to the Navy, my sister went into nurses' training, and she went back to work. She was manager of a retail milliners store in Plainfield. So she did indeed snap right back into it when the need demanded.

KP: So your mother really enjoyed working outside of the house.

HW: Oh gosh, yes. Of course, … yes indeed. And she enjoyed doing a lot of things outside of the house. … She only died, by the way, last year, February {1995}. Toward the very end she was junketing around with me. I would take her on more civilized aspects of my field trips from Bell-Labs, so she'd been over to Paris and to Athens and to London, for meetings in Madrid, and out to the West Coast. And where else? Vancouver was her last big trip; I had some meetings out there. But that was when she was going on 90; she was 93 at the time, well into her nineties. Her congestive heart condition began catching up with her about a year and a half before she died. And that was the last of her big tripping, but she went very quietly, died very quietly at home. And had up until about twelve to fourteen months before, led an extremely active life.

BT: I am real curious about when you were growing up. Did she talk about her experiences in New York?

HW: Oh yes, she talked about meeting my father, and her work life experience completely. I mean, they were both people who very outgoing and pushing me with schooling -- literary efforts. I was reading by the time I was three and into Dickens by the time I was in the fourth grade and had a maiden aunt who was also very active, you might be interested in her, by the name of Charlotte, Charlotte Walkinshaw, since you seem to be interested in career women. She was in the Red Cross during World War I and came back and did a lot of the hurricane and refugee work down in Florida when they had that 1926 hurricane, I believe it was, caught typhoid fever and became very ill. And mostly stayed home and addressed her business career after that. … She was a good professional secretary, then administrator. She wound up working for the British ministry, the supply mission in New York, during World War II with the lend-lease procurement business that went through. So that she, too, was off and running from the word "go."

KP: So it sounds like your parents really had the vision that their daughters should find careers.

HW: Oh yeah. Well, … I guess in the sense I was probably the son my father never had, of course. And as the oldest one anyway, we were always considered to certainly aspire to at least college, if not beyond, whatever the finances of the Depression were, and they were a real crunch, which was why I hadn't gone to college up till then. I mean, we were into vicious Depression years, which I remember very well, which we thought of as a great adventure, frankly, at the time, being able to cope, you know?

BT: That's interesting.

HW: Oh yeah. So, there was never any intention to do anything. … This, in a sense, brings me to a point that I was going to ask you about. That my father, after coming out of the military, barely got through two years of business college. He went to Pace, I think it was, and didn't finish with a degree, and he had medical problems and, frankly, a drinking problem way back, periodically, that he would lapse into. … He really had it, I suspect, during World War I after almost two years of trench warfare.

BT: Sounds like it.

HW: … more than any of us, most of us, realized at the time. And Mom, of course, was totally knowledgeable about that, and therefore totally supportive. But, there is the skip-generation phenomenon, which I have noticed not only in my family, but others, where your immediate parents -- my mother never went beyond high school, my father didn't finish business college beyond the two-year type thing, but never went on to his BS degree. And yet my grandparents, this is the skip-generation phenomenon, both of them were -- well, one of them was an engineer from the University of Warsaw, and got his master's over here at Stevens, when he arrived in this country from Poland. My other grandparent, George Walkinshaw, was from the University of Edinburgh and he was an architect and a builder. So you see, you get this coming from both sides of the family, then a skip, where economic pressures and/or world events took over, then you come into the third generation, like myself, and we're back to it, immediately. And I wonder

whether you'd encounter that, that kind of alternating academic kind of background in your family.

BT: I think it was true in my family. Well, at least my grandfather.

HW: I didn't know; I thought that might not be a unique kind of thing, particularly when you think of everything that went on in the world.

BT: I think you might be right.

HW: And because of the depressions. I mean, after World War I, and really getting severe during the early '30s, and then World War II coming on, the skip-generation effect might particularly affect people who essentially came from parents who were immigrating from say 1860 or '70 through 1890 or so, I would think. Not the later-on ones that came after World War I or immediately before World War I.

BT: Anybody's been working on that?

HW: No, you can work on so many things. How much time and money and funding do you have to explore these kinds of themes? I don't know, but yes.

BT: The thing I noticed in history that I was thinking of as you were talking is how well educated some women were in the 1920s.

HW: Oh, yes.

BT: And then we seem to have a period where they're not.

HW: Yeah, right, … that's definitely so.

BT: … great leaps have been taken in terms of…

HW: Well, society gets so broken up, I suspect, and disrupted by any major world upheaval. World War I was that, at least for the Western European nations. And the same thing happened, even more so, after World War II, so I would suspect you get these surges of people being broken out of the generally constrained societal mode after upheavals of that kind.

KP: You mentioned, that the Great Depression was very hard on your family.

HW: Yes.

KP: How hard was it, and for example, how long was your father able to maintain steady work?

HW: Well, actually, through the Depression, but even with the highly secure position at the New York Stock Exchange, by the end of 1939, which was when World War II started over in Europe, in September, he was actually down to working for 50 percent of his salary.

KP: From what he had been …

HW: From what he had been making.

KP: In 1929?

HW: That's right … half pay, working for half pay and, of course, horrendous hours. And, he went through interesting experiences, he went through the 1929 Stock Exchange crash …

BT: I was just about to ask that.

HW: Where he didn't come home for four nights, because the tickers were running behind and they were doing all of the clearinghouse accounting and everything that had to be, of course, coped with before the brokers even knew what side was up.

KP: So you knew the Depression was coming probably much …

HW: Well, he expected it fully, and he said, … there's going to be some vicious days ahead, you know. And, of course, he had an awkward enough time adjusting after World War I, … and there was a fairly severe world economic downturn, I think. It was certainly evident over in Britain and over here in the States after World War I, but I suppose most people glossed over it, because they thought it was a kind of post-war adjustment. I don't know about that, I don't know what the official version of that is at all, but when '29 hit, that was it. Yes, he was working at half pay, held his job through the Depression. My uncles were completely out of work, completely. They opted for civil service kinds of jobs, or for police work. One of them became quite an interesting character. My mother's younger brother John became a detective, detective inspector on the Jersey City Police Force during the wild days of waterfront corruption and gun battles on the piers, indeed, shootouts, and, of course, the political corruption as well, in Hudson County, so he had a fascinating series of his own war stories to tell in his career as a detective.

KP: What did your father do while he was employed for the stock market?

HW: He essentially worked for the Stock Clearing Corporation as -- I suppose you would call him a glorified cashier or accountant. I suppose they have a managerial position for that today, but he essentially would oversee the daily balances … of the stock valuation exchanges, to see that the bookkeeping was caught up and clear for implementation for opening prices on the next day's trading. All of that had to be rationalized once the Stock Exchange was put to bed at night, so he used to sit down and get everybody's reports and rationalize them and approve them and set them up.

KP: It sounds like he worked very odd hours, did he work late into the night?

HW: When the occasion demanded, but, well he got home at seven in the evening to our house in Dunellen, which was an hour trip at that time, so normally he would go in early in the morning and he would, I suppose, get off around six or so.

BT: He took the train in?

HW: Yeah, and, of course, commuted on the good old Jersey Central Railroad from over the ferry at Hoboken and onto the train and off, and it was only about a five-minute, ten-minute walk from the train station to where we lived then. And, of course, that was the classic '30s, early '40s, before World War II hit mode of commuting, work-in-the-city type American life.

KP: Why did your parents choose Dunellen to live?

HW: Because my grandfather had bought property out there, … so it was a natural location to move under his aegis with the Depression coming on. He owned the house for a while that we lived in, … so it was a mutual family financial matter until we were able to carry our own load.

KP: When did you move? Was it 1929?

HW: I think it was, no it wasn't exactly in '29, I believe it was '30, 1930 or '31, but I'm not clear on that.

BT: So this was after the crash of 1929.
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HW: Yeah, right.

BT: Dunellen must have been very much the same and very different.

HW: It's about like it was around here now, [Peapack], although this is kind of suburban country and that was kind of urban-suburban, you know, that was on the fringe of the building out, whereas this is on the fringe of where it gives way. It's that kind of a thing. But it was meant to be both suburban, and, of course, it was very suburban and fairly rural at the time, a lot of open country, fields, kids used to run around and play games. …

BT: But the houses and all, when you go through Dunellen, I drive through them all the time on my way home from Rutgers and it has a real 1940s and 1950s feel to it.

HW: Definitely. It began expanding after the '40s and the '50s. The house we were in, which was owned by my aunt, was built in 1911, so it was one of the older homes there.

KP: Your parents had high expectations for you. How about the school system in Dunellen, you went to a parochial school.

HW: Right.

KP: And then the public school.

HW: … I had problems in the public high school; I was forever arguing. You know, everybody, at that time the Depression was in full blast, and everybody was very anxious, as young kids are today, to be trained, to be able to earn a living and so forth. And they insisted that people who were enrolled in a commercial course wouldn't take certain academic subjects. That was my first encounter with bureaucracy. I'm willing to say I was totally successful, believe it or not. Of course, the teachers were all for us anyway, saying no way were we not going to take English literature instead of more grammar, in fact, we are going to take … the history courses, we are going to take English lit, and the languages that we could pick up … and we were all successful in that. It was my first brush with authority and it was 100 percent successful.

KP: So in other words, the school wanted you to either take commercial courses or the college prep courses, and you wanted to mix the two.

HW: … Right, I wanted to have the college requirements, of course, both the language, and the little philosophy, and the civics, and the literature courses, of course.

KP: It sounds like you had a sense that you might not be able to go to college.

HW: Oh, I knew I wouldn't; my family didn't have the money at the time. We were all saving, but I knew darned well I wouldn't have enough money to go to college when I graduated high school. But I graduated high school in June of 1940. 1940 -- a fateful year. The war was already on, and it was just a matter of time. I knew that we would be into it again and lots of my classmates, of course, enlisted and/or signed up for college and then went into the R.O.T.C. at that time … and wound up in World War II. Several of them, of course, didn't come back.

BT: These were obviously male classmates?

HW: Of course, at that time. Yet, several of them [female classmates] became nurses that I knew, but none of them … were overseas at that time, because they were filling in billets in the States. There was a regular Army nurse corps and Navy corps that went overseas for those hot, hot miserable fighting, hard fighting days of World War II. So, there I was, and I kept saving my money, but knew that sooner or later that we would be in the war, and I would want to do something then. So what I did was took a job with the British ministry under the sheltering arm of my aunt's introduction, and spent the next two and a half years there, working for them in New York City, of course, which was fascinating. And let me tell you, those fellows were really, they were mostly men from the embassy, embassy staff, and lots of them directly over as civil servants from the UK, and they had left their families behind, and the days of the Blitz were on, and I'm telling you at least three or four men that I knew personally had nervous breakdowns, because they were worried about their families, you know, during the days of the Blitz. And, of course, a large number of the American fellows who worked on the staff were volunteering for this and that. Six or seven of them went into the RAF. One of them came back. One came back, and he settled in Pennsylvania and married his high school sweetheart. His name was Dennis, Dennis Fallon. I knew I'd remember him. And the only reason he survived, I'm convinced, is that he was in bomber command; he was a navigator in the bomber command. Not one of them [the others] came back. Five or six …

KP: Did they enlist before Pearl Harbor or after?

HW: Both. …

KP: They were going to the RAF?

HW: Right. And RCAF, of course. …

BT: I was going to say, a lot of them went to Canada.

HW: Yeah, including one of the lawyers, one of the staff lawyers by the name of James with a half dozen initials [D.N.R. James]. Interesting fellow! I'll tell you about him, because he joined the Navy, the RCN up there. A lawyer, and, of course, with his credentials, a real sharp fellow. Anyway, we all were at that time, we used to come back. We used to have meetings and reunions in the city, trying to catch up, if we had leave or had a pass or got in, we would meet, of course. As we still do, for another reason, for Bell Laboratories, the same thing. But this group from the British ministry met and invariably, including this character, two or three, twice, at least twice I think; the third time I saw him come staggering into the local restaurant and bar where we were having dinner, on crutches. I said, "What happened to you?" "I got thrown out of my bunk." … He was CO, … skipper of a corvette on ASW patrol and he got two broken legs. Fortunately never torpedoed, but two broken legs. [Though in two incidents, one at a time enough!]

BT: And he did this more than once?

HW: Yeah, more than once, twice.

KP: He broke his legs?

HW: Yes, yes. Being hurled around in the North Atlantic on ASW patrol out of, I think they were going out of Halifax, and over to the London area, of course. So these are war stories from people, other people, other than me, but they're an early part of my career. Because that brings me, can I talk on? I may as well, you can edit me.

KP: Keep going.

HW: Because this does flow chronologically, in a sense, because you asked about others during World War II, and my father [in World War I]. Yes, point in time. British Ministry, everybody leaving, the men, and certain of the women, too. And I had gotten to the point where I was doing some interesting work. I'd always been inclined to go back and be a math major, so I began setting up some priority flow-type controls for shipping, for very critically-required machine tools and … repair component parts for the RAF during the Blitz. They were actually flying over packets full of special wrenches and sockets and everything to do the aircraft maintenance during those hard …

BT: That's real neat.

HW: Yeah, it's amazing. It was so critical, they were on the edge, hanging on, with the skin of their teeth.

BT: I knew that, but I didn't know they were actually …

HW: … Yes indeed, they were packing and flying over components, machine components and gages and repair equipment to keep the planes flying.

KP: By your position in the British Ministry, you had a real sense of the course of the war.

HW: Well, of course. We used to get two sets of dispatches a week being brought in intermittently, and some of them in sad shape, by the RN patrols coming into New York City. And they would come in with classified stuff, of course, and they were surface shipped at that time, except for the stuff that flew in. The RAF had a London-to-Lisbon, to the Azores, to Baltimore that used to do the courier stuff in and out of Washington at that time. But most of the heavy stuff and the comprehensive routine-type business mail was carried by … most of the ships they had coming in, the RN ships. And they used to come in twice a week, two deliveries a week, and so I heard a lot of fascinating stories about ASW patrols and the sub-pack activity in the North Atlantic directly from the guys who were literally fending them off. And an interesting thing was that two of the people who came in, an ensign and a couple of the sailors came in one day with a complete set of photographs which they shared with me and a few others, of the sinking of the *Bismark*, which they had taken photographs of. One of them was aboard, I think, the cruiser *Dorsetshire* was it? And the other one was aboard one of the accompanying destroyers. And they had taken, just with brownie cameras or whatever they had, they were taking photographs of it as the whole thing reached a crunch. So, that was another incidental coming together of these kinds of things, which I'm sure everyone experiences, even in the most nominal location.
So that went down, and I'd initiated essentially what would be a linear programming control for optimizing time flows of certain functions. Did that all by hand, not having the math to do it. Not by linear algebra at the time, but knowing the logic that had to flow, I devised a system like that, which was well thought of and I thought, well I'm getting on now, they'll at least consider me, maybe re-label me from executive secretary, which they were carrying me as. I wasn't doing any executive secretary work for about a year and a half, but that was a way of getting me higher salaries, you know?

KP: So, in other words, you were doing, it sounds like you were very quick with very sophisticated managerial work.

HW: Yes, and most of it was math or statistically based, because I had an aptitude for it, I guess, and they were delighted to have me do it. But the crunch came to this: we were in the war and I was thinking of moving on anyway. Fellows were getting to the point of where we're all in this together and there was cooperation breaking out all over, and I felt I had gone … I literally found out that I did indeed go as far as I could. Poor guys, the manager there was turning himself over inside out, and he said, "Helen we tried to get you appointed as staff statistician." You know, which of course, I was doing with three or four other men, and British Civil Services lists

prohibited appointment of women to staff positions, and I could not be given that title. He said, "We'll give you all the money; we'd be delighted to give you big 'rises'" they called them. You know, anything at that time to keep me happy, but they couldn't give me the job title, regardless of what I was doing, because it was a civil service classification, which was limited to men. All of the staff positions, because it was a staff position, were considered a male province at that time. So I said, "Well, that's okay, Tom." Nice guy by the name of Tom Canadine -- I remember him well -- came from Yorkshire, "That's great," and the next month I joined the Navy, and that's how it happened, literally. I knew I'd reached a ceiling, and they were okay, we were all in the war together, and I said, "Time to move on, Helen."

KP: So it sounds like the people in the New York office were very impressed with you.

HW: Well, were all impressed with each other; we were a pretty good group, let's put it that way.

KP: So the promotion was really London's problem?

HW: Oh it was, yes, it was simply a label. I mean, it had nothing to do with the working people; it had nothing to do with them; it was just one of those things that were the system as it existed at that time. And a lot of things were like that, and as I want to make clear, there was an awful lot of knowing how to cope with this, regardless, to make sure that the appropriate things were done, even though there was not, you know, not an overt way of going about it, you know. People did the right thing very frequently, regardless of legalistic restrictions.

KP: Backing up just a little bit, one question. I would be curious to hear what your parents and what you thought of Franklin Roosevelt and the New Deal.

HW: My father, I can tell you, my father was, at first, having a conservative background and everything from way back, was very … skeptical, skeptical, even though we were really, you know, going along with the difficulties of the Depression much better than other people were, because he at least had his job and held it, until, almost the end, when his health broke down, and he was out. But it carried us all the way through the Depression. However, he was very skeptical. My mother's family, being second-generation immigrants and in the city, and, by the way, my grandfather was very active in the church and political affairs … and citizenship affairs, getting everybody to learn English, vote, with that he was very active. This was my, oh my father's father had died in World War I, post-World War I influenza epidemic, so I only had one grandfather left. This was the engineer, from Stevens, who was a consulting engineer, incidentally, which is unusual for those days. He actually ran his own shop as a consulting engineer, rather than, you know, go to any large corporate thing at the time. But, by way of background, they were, of course, staunch Democrats from way back, immigrants in the city working hard to establish a political base for recognition. … Therefore, my mother followed on in that family tradition, so they used to have these great arguments. Not argument-arguments but, you know, … lively discussions about this kind of thing. … Along into the Depression, my father saw what was happening, industrially and with work and everything in the city and he says, "Yeah, well my blank blank blank if somebody can do something, well, maybe we'll give them a chance." So, from then on, he was a skeptical supporter of the New Deal. And, of

course, as things came through, he became more and more a supporter, because my mother, having been in the working force, social security came in. The NRA, … the WPA support for the arts was in. All of that social legislation came along and they decided, "Yeah, the time has come for this."

KP: So your mother was the Democrat in the family.

HW: The traditional Democrat, and my father was the traditional quasi-Republican, often independent. From then on, of course, he voted for whomever he chose and became an independent, as I am. I mean, I know all the people locally and I generally vote Republican, locally. But most of the time, in or out, in the national elections, I will vote Democratic. And I think I find lots of people around here that are like that, that support the local establishment, you know.

BT: Yes, because usually around here, there's no Democrat running.

HW: And anyway … you get to know them, you know, fairly well. So I think a lot of people are reserved-judgment independent, politically, as I am. I think I'm typical, but the national scene, frankly, with all the crazy stuff that's going on, have been largely Democratic, practically, in voting.

BT: I was wondering, backing up also, when you were working at the British Ministry in New York, and there's so much not only with people from the UK … people gone off to serve--

HW: Right.

BT: -- and getting very up-to-date information, basically, have you ever run into people who, in that 1939-1940 period, thought you really should get into the war?

HW: Not where I was, and I wouldn't expect to! No.

BT: I wonder if you went home to talk to friends and said, "But you don't know how desperate the British are and how we should help them." And then they said in reply.

HW: Well, … there was one person I remember from my childhood who was concerned that we never think about getting into the war, meaning automatically on the [British] side, and that was our iceman, who was a German by extraction and who was absolutely heartbroken when Hitler broke upon the public scene. But he was the only one, … and he still remained ardently espousing the German national cause, in spite of Hitler, though not Hitler, you understand. Like all the good Germans say, "Oh, but … we're good Germans and we don't approve of Hitler." He was one of those, classically, but he was the only one in my entire purview of when I was about from twelve years old on through high school, through grammar school, let's get the right order; grammar school, high school, then working for the British Ministry in New York. Then, of course, joining the Navy. He was the only one person I can remember who was not either willing, perfectly willing, to get upset or agitated and concerned that we were not actively doing more. This was within my limited circle, and I'll admit it was pretty pre-conditioned, working

there at a British Ministry and having a family, half of whom came from Scotland and the other half came from Poland that was overrun. I mean, you know, I was coming together from … this background, you would expect that.

BT: Yeah, I guess you would.

KP: Were your parents active at all in the church, growing up?

HW: Not particularly, no. … They were communicants, my father was a convert to Roman Catholicism, but they never fiddled with church organizational affairs, they felt that was church business.

KP: You mentioned your mother was very active. Was she active in any organizations?

HW: No, absolutely. Not joiners, even as I am not a joiner. I mean, she was active independently and on her own, and, of course, my father was, but neither of them, nor from the family from way back, were what I would call joiners.

KP: You mentioned the iceman. Were you aware, was there any other Bund activity that you were aware of in the Dunellen area in the late 1930s and early 1940s?

HW: I suspect there was. I only heard rumors of it. I had no direct information on it at all. But there were conversations, I'd call it, from my aunt and uncle who were more active … in the ethnic [Polish] club activity, which, of course, … my mother and father, and my [Scotch] ancestors, somehow they think they automatically belong everywhere, they don't have to belong anywhere else. I guess, it's a question of cultural security perhaps, coming from that kind of a British background. You don't need to seek beyond it and you don't have any sense of grievance, either. So it would have been very unnatural if they had, I would suspect. But no, I had heard vague third or-fourth-hand rumors, no evidence … of my own knowledge.

KP: Before Pearl Harbor, did you think the United States was going to get involved in the war?

HW: I didn't know that the US was going to go actively fighting, but I had assumed the US would continue the same road it followed during World War I, with at least financial support and interdiction, naval support, which they were doing, of course. So I thought what was going on actually was going on, even before I got to know even more directly that it was going on when I was at the ministry.

KP: Historians later learned how heavily involved the United States was in the war in 1941. For example, in summary interdiction, but the public in 1941 wasn't fully aware. Were you more aware in your position, working at the ministry?

HW: I think I was. … We had naval contacts there, first of all, and we had official embassy bulletins and everything, and the staff were, pretty much being all UK civil service, primarily US staff like I was and civil servants, so they were aware. I mean they got all the letters from home. They saw the military going to and fro three or four times a week and naturally chatted with each

other. So, yes, I would say that I was well aware being near, but I would say it was not contradictory information within the circle of my family and with my friends, who more or less guessed it that more was going on than was officially promulgated in the newspapers. That was a common sense of the people I knew, in what I might call then civilian life on the outside, but it was, of course, far more accurate and more concentrated for me, because I had the particular ties that I did at the time.

KP: You mentioned that you stayed executive secretary the whole time, but when you first worked for the British Ministry, what did you do on a typical day?

HW: I was the stenographer, and I got fleeted up to executive secretary. I took dictation, and I wrote letters from other members of the staff, and within a matter of a couple of weeks, it almost was, I began taking over or doing on my own, certain of the reporting information that was coming in on war procurement tools and scheduling. There was a question of priority scheduling for Lend-Lease, particularly when the Russians and Amtorg … more war stories, their leasing agency, Amtorg Corporation got into the act. Who was that fellow who was in charge of Lend-Lease? … Vannevar Bush was off on the side in a science thing. … A well-known name I've forgotten now, was in charge of Lend-Lease. Well anyway, and … he was certainly not exactly pro-Soviet, but pro-helping the Russians all they could, because Stalingrad was, you know, a real need, truly a real need. So what they used to do is, they used to split up our orders that the British had come through with, for were machine tools and long-term building components and everything, particularly, quite apart from the emergency repair of the equipment-type, keep the planes flying aspect. … They would split our orders and we would get a thing coming in from Washington that said, as of such-and-such a date, contract so-and-so with this machine tool coming from Pratt and Whitney will not be sent to the UK; it will be re-directed to Amtorg Corporation and shipped to Murmansk; put it on the convoy to Murmansk. So the British got to be trying to second-guessing how much of their orders would not be delivered, but would be diverted, so they could catch up to try and keep things going themselves. So I got in the mainstream of juggling all of this, and within three or four months, I was keeping tabs on all of the … procurement tool scheduling and everything, so I began to pile up statistical records, in addition to taking dictation from everybody else and writing letters.
It got to the point after about a year and a half, I started to write my own letters. … It just happened very quickly, it happened over the period of about a year. I went from a stenographer, basically a senior stenographer, to what they called an "executive secretary," who used to keep charge of all these things, and do the scheduling, and the contacting and the expediting on the orders and everything and submitting the reports, and doing all my own correspondence and everything. I had a secretary of my own by that time, … who was also a secretary; we were all secretaries, you understand.

KP: So, your position fully evolved to a managerial job?

HW: Yeah, it really was basically a junior managerial job, yes, but not what I would call a staff-level job, but certainly managerial.

KP: Clearly you were …

HW: I was doing my own work with my own staff under me. I had both a clerk, a young fellow, real nice fellow doing the clerking and the bookkeeping, and my secretary, who … did what I was doing two years ago.

KP: So, by 1942, you were doing managerial work?

HW: Oh sure. But, of course, but you have to realize World War II was on, and anybody who could, did. There were plenty of opportunities.

BT: It's real need-driven.

HW: Oh, absolutely. Definitely a need-driven period in history, no question.

KP: I get the sense that you would take orders, you would sort of think, "Well, this is what we need," and you would match up what was needed with what …

HW: Not quite.

KP: Or would you more schedule when things got shipped off and how they got shipped off?

HW: Well, we couldn't help the scheduling; that was beyond our control. But essentially, basically, the way it'd come in, the Ministry of Supply, it was then headed by Beaverbrook, Lord Beaverbrook. They would formulate the needs immediately over in the UK and it was sent over either by cable or mail, depending upon the priority, with priorities for allocations more or less assessed. Then we would get a hold of it and do our best to lay out the orders, distribute the procurement items as best we could, contingent upon, since Lend-Lease was then an open pocketbook, based upon the priority of delivery. And that would be when I would start getting into the act, tracking the commitment for the purchasing and the delivery sequence, in addition to the side juggling with Amtorg, weaving in and out and sniping at us, Amtorg, or whatever it would be, siphoning off roughly, toward the end of when I left, about two-thirds of the British-placed procurement. So we simply had to cope with that. … I mean it was understood it was equitable and necessary, but the point is, we had to cope with managing the flow.

KP: Which agencies would you deal with?

HW: Agencies. We dealt with the War Production Board down in Washington, with the British Ministry of Supply, whom we were in this country, they called it the British Purchasing Commission, and it was underneath the British Ministry of Supply under Beaverbrook in London and then we would keep track of the contractual orders. I told you about James, who was a lawyer. We did all of our own ordering and setting up of legalistic contract commitments and everything on our own. And we would put the orders out directly to US manufacturers.

BT: Did you have a list, did the War Production Board give you a list of manufacturers?

HW: No. We knew who they were, we would call them up directly.

BT: That's interesting.

HW: Was it part of your responsibilities, contacting manufacturers, saying, "We need a hundred of this."

HW: Yeah, … we have an order with you, I got after the facts [on expected deliveries].

KP: The orders had already been …

HW: The orders had already laid on from the U.K and directly flowed from our contract staff, so they were placed and I would get into it at the point where, here you have this commitment, you got our contract, and things are on-going, now are you going to come through on that? If not, why not, if so, when, and what is it, and how many and when and how can we expect them? Then, the other end of it was how can we get it over there, you see. Particularly with, I mean the shipping losses were incredible. I mean, they would come when someone would walk in with a dispatch saying, "Well, we're going to have to do that all over again, because that convoy, they got X out of Q of the ships we had and our stuff went down and that means we're going to have to scrounge that from somewhere, where can we get it?" That's why the records and … the protocol of the logic to lay your hands on what was coming and what could be relied on and what wasn't, was so critical, because it was really a short time fuse that those things were going on, particularly for the aircraft stuff.

BT: Did that ever put a lot of pressure, when you were doing that?

HW: Pressure? No, we thought it was a joy to be able to do something. I mean, you've got to remember this was the middle of a war. All of us thought that we were grateful to be able to handle such second-hand important, other than the fighting, second-hand important, tool equivalents of keeping the forces going. We were delighted to be able to cope so well with it and do whatever we could and juggle schedules and all of that kind of thing.

BT: It just seems discouraging, you know, when you just did it?

HW: Yeah, bang people over the head, … twist arms, anything under the sun. No, no, indeed not. It was a period of challenge and a period of a great sense of satisfaction. I don't think anybody there would have said that they were stressed. The word would have been alien to them.
----------END SIDE ONE, TAPE ONE----------

HW: That's right. … That's what I'd say. Nobody there would consider themselves stressed, you know, considering what the fighting forces had to put up with at that time. I knew people who had lost relatives in Hong Kong, were in Japanese prison camps from Borneo, and to say nothing of when Pearl Harbor hit ourselves.

KP: Because of your experience in this office, you got to know a certain segment of British society fairly well.

HW: Oh, lots of fun, great fun. Yeah, that came later.

KP: What did you think, what was your feeling of what the people from Britain, what they thought of American society, and how well they dealt with American society, and how they observed American society.

HW: Well, you've got to remember that we were dealing with middle-grade to upper-grade civil servants, and a lot of embassy people. All of them were professional even though they may not have held university degrees. A lot of them held university degrees. One of the junior executives in the place was the first fellow from Cambridge I ever met, and I was one of the few people to understand what he was saying! [laughter] … He dictated about 400 words a minute and have fun with it, and then we would chat about art, literature, … the plays that were going on downtown, and all that kind of thing. … This is not the man-in-the-street type kind of staff, okay? … I think everyone was too busy to worry about their impact on American society and vice-versa. We all worked together marvelously, and they would make a few cracks. … A lot of Irish-Americans, incidently, worked there. And … there was no fighting the Easter Rebellion there at all. In fact, many of the fellows who left … and never came back went to the RAF … were Irish-American fellows. … So, all I'm saying is that at that time, under those circumstances, I sensed no "What do I think of Americans?" over the lunch table, cocktails or anything like that thought, or in reverse. We all got along great and had a lot of fun with each other. So, … you've got to remember the motivating circumstances which were going on at this time, I mean, encounters of that kind work through a special kind of path of their own, I think.

KP: It sounds, almost, that you also became much more committed to the Allied cause after working in this office.

HW: Well, I doubt if I could have been more committed, but yeah, … it consolidated it. It certainly consolidated it, and it reinforced it, and it broadened it, broadened the aspects of which I became aware that were going on that turned out to be critical.

KP: For example, if you had not worked for the British Ministry of Supply, do you think you would have joined the Navy?

HW: Yes. Probably, yes. I might explain, we do come from a military kind of family, I mean we've got colonels … from the Napoleonic Wars, okay, going over and fighting. … My uncle was in the Navy, World War I, and my father was a regular Army officer, so the military was not something our family was not comfortable with, let's put it that way. … Since there were no male members of the family extant, and besides which, I was so much doing my own thing already, that I considered it very natural that I should serve somewhere in the military.

BT: You never considered the Army?

HW: No.

BT: It sounds like you never …

HW: For two reasons.

BT: You knew you were going to join …

HW: No. For two reasons. I mean, the traditions of the family, and the conservative, the Navy was more fun, in every cultural, intellectual, and historic sense, because of its traditions and also because, another real thing-- remember when women were first allowed to serve in the military, other than in the nurse corps, which had been going on historically for well over a hundred years, I believe. The Women's Army Corps wasn't an actual military unit, it was an auxiliary force. And if there was anything that would have turned me off completely, it was that. The Navy had had women serving actively, all through, even in World War I, you know. I knew a couple of people who were yeomanettes, including a daughter of Admiral Ingram, over there in Brooklyn, who had been a yeomanette in World War I. She was a very close friend of my aunt.

BT: At the time, the Navy had a better tradition in terms of using women.

HW: Not only that, but of women, because there's no legal bar to a woman being accepted for service in the Navy, whereas there was in the Army. You remember that. … Who was it? … Josephus Daniels [Navy Secretary in World War I], who was a relative of one of the Navy captains. Then just called him up and said, "Well, there's nothing here that says no, so why don't you, you know, why don't you turn up at my office and we'll swear you in," and that's the way it started. You know Joy Hancock? [later a Captain, USNR in World War II] She was another one, right? [a World War I yeomonette] … So they undid that, by the way, in the middle of when it was all started, because all of us were actually in the Navy, and most people don't realize that, naval reserve, active duty. In the naval reserve, just like all of the fellows who were drafted and who had joined the Navy in World War II, were also active duty in the naval reserve, although their relatives didn't think of it that way. There was no distinction whatsoever. And then they redid that with the Unification Act and everything. And they made all the women services come into line, so they undid everybody and did it [over] again. And we said, "What are you doing this in the Navy for?" There's no … it doesn't need anything, but they insisted that the Unification Act made them all standardized, you know, and we thought it was a big joke. Because the Navy, of all the military [services], actually had this pre-established tradition of not only permitting women to serve directly, but had already set up the procedures, and the know-how to bring it into effect -- because of World War I.

BT: I never thought about that.

HW: I think. I mean, I may rationalize. Hindsight, this is, of course, I'm talking from, but it's conceivable, because all of the apparatus, the procedures and everything were lined up somewhere in some Navy Department file on Constitution Avenue. There was this … ALNAV or something describing how this was done and that all they had to do was dust it off. The Navy never throws anything away and they get … it may go out of sight for 20,000 years, but it never throws anything away! So that's what sent me to the Navy, those two things: the naval traditions and background, and the fact that our family was already a military-orientated family, with nothing averse with a female taking off. My mother was against it only; I mean, you're going to leave home, but my father was all for it. My grandfather was lividly for it, my grandmother was

for it, so I had a lot of support at home, except for Mom, who didn't want me to leave home. She was the last one, right, to complain [about not being housebound]? But anyway, my whole family -- my father, my surviving grandfather -- and that's all there were, and, of course, my aunts. My maiden aunt, my father, and my grandfather were all for it, and even my grandmother, my mother's mother, was all for it, too, which was unusual.

BT: That's terrific.

HW: So, I had a lot of family support, no question.

BT: So you just marched down to recruiting office in New York?

HW: Yes. Well, the British Ministry was right across the street, so all I had to do, … all I did was cross the road, in more ways than one, literally cross the road, which was Wall Street. At that time, they had an office at 37 Wall, and right at the other corner was 90 Church Street, [Com 3 Headquarters] … But the Navy recruiting office at that time, World War II, was at Pine Street, 30 or 33 Pine Street, which was just literally around the corner. But that's what got me into the Navy, instead of the Army-- the traditions and I think what I failed to repeat before was the fact that the Women's Army Corps, when created, was an auxiliary. It was not part of the actual military forces and that turned me off, and I said, "No, it's the real thing or nothing." And that's what did it. There's no point in your making a decision or a commitment unless it's the real thing.

KP: Why such a sticking point? Did you have this vision that maybe you would stay in the Navy past the war?

HW: I would if I could, reasonably well.

KP: Did you have the notion, when joining the Navy, that this might be a career path that you would take?

HW: I thought it would turn into an option for me, at the time. But I did not consciously plan a life-long military career. I thought by the time World War II was over that it would be a viable option, which indeed it was.

KP: But it sounds like the fact that the WACs were an auxiliary, that you did not want to be kicked out of the military automatically at the end of the war.

HW: No, I never thought of that. No, never crossed my mind. Most of us during World War II had no thought of being clever about careers. It was just a question of an authenticated organization versus a non-authenticated organization to me. No, I didn't think of that at all. I didn't think of it coming to an end. We all wanted World War II to come to an end, but I didn't think it would be quick, and I was right.

KP: What did your high school friends and others in the community think of you enlisting in the Navy?

HW: They weren't in the least surprised. Two ex-classmates of mine were in the Navy, actually, before I was, though I didn't know about it at the time. One of them I knew about, one I didn't know about; it didn't make any difference to me. It wouldn't have influenced me at all. I admit, I have never been anyone who had been the least amenable to any kind of peer pressure. I always had fairly clear ideas of deciding where I wanted to go, myself, and it didn't matter whether anyone was with me or not. I couldn't care less.

BT: Because a lot of people did go and join with friends or because friends were already in.

HW: Yeah, you find that's true? …

BT: I don't know. That is one of the things I'd like to find out.

HW: No, I can tell you emphatically, it was not true. It was not true of me.

BT: That was one of the questions I wanted to ask.

HW: That's a good question, I think.

BT: And why did you pick the Navy. Was it because all your friends from the class of whatever, or just because that's what they did and you knew they liked it. I don't know, whether that's a factor at all. But we'll find out.

HW: Well, it wasn't with me.

KP: I've heard a lot of stories about what happened to people after induction. What happened to you after that?

HW: Oh, famous boot camp days, huh?

KP: Yes, you reported and enlisted at Wall Street and how long did you wait before you actually served.

HW: A month.

KP: A month.

HW: A month. Yes, I enlisted and I think, did I give you the dates? I think I can remember, it's a famous date: 8 November 1943. And it happens to be the birthday, by the way, of one of my nephews, so I also remember it for that reason, okay? And then I reported for duty on, I think it was a month later, December 2nd or December 3rd, something like that. And I reported, of course to the boot camp which was then at Hunter College at the Bronx in New York, and they actually had marines training, the drilling, you know. Not the classroom instructions or

anything, but they were still petering out with the marines … running the boot camp drills up there, which is kind of fascinating. But, of course, the marines were part of the naval services, anyway, though most people think of them as being independent, totally.

KP: So you had male marines …

HW: Marine, marines, yes. … But they were male DIs, DIs!

KP: You had regular DIs?

HW: Yeah, yeah … for a while. Then they phased them out, they were all gone, I think, by the time I got through; they switched over. But actually, there were Marine DIs there!

KP: I mean, guys I've interviewed who were marines, they had …

HW: Oh, I'm sure!

KP: Memories of their drill instructors. Were DIs as salty in their language?

HW: Oh, I think so. I mean they weren't bad. I heard … more bad language -- who uses the worst bad language that I've ever heard? I think it was fellows in the Army, mostly. And not enlisted people, usually junior officers trying to possibly assert authority or trying to feel more macho, I don't know. That's a phrase [macho] that came off after the fact, I'm sure it never entered anybody's mind, then. But, no problem with that. In fact, most of the sailors and most of the officers whom we dealt with all the time were most circumspect in their language. Not inhibited, mind you, but.

KP: So you were put to basically, a regular drill?

HW: Yeah, a regular military drill, … you know marching, formation, all that jazz.

KP: And who replaced the Marine DIs?

HW: Shore patrol-type police, you know, sailors.

KP: Sailors.

HW: Yes, mostly chiefs, … most of them would be rated boatswain's mates, chief masters-at-arms rating at that time in the Navy. Yeah, they were replaced by men.

KP: And at boot camp, what was your housing like?

HW: Well it was perfectly fine, it was almost ski-lodge, college dormitory thing. … We were housed in taken-over apartment complexes in the area, in the Bronx, four to six to eight stories high; couldn't use the elevators. We were in great shape by the time we finished boot camp. And we had double-decker bunks, four -- one, two, three, four -- in a room that was maybe

slightly smaller than this [my living room], like second level bedroom-type space in the New York Bronx apartment. And it was very compatible, I mean, standing lockers, no footlockers in the Navy, we had standing lockers. We had to share two, and two and double-decker bunks, and there were just four of us in a room, which was perfectly compatible, and a light and a table for study, and a mixing area down in the lobby area for lounges and stuff of that sort, and where we could meet people. Meet dates, basically.

BT: And it was six weeks?

HW: … Well it ranged, I think it was eight weeks for me, and then they cut it down to six weeks. But that was the ballpark, eight to six weeks.

KP: What was a typical day like?

HW: Well I can tell you one thing, reveille was at 05:00 hours, and this was in December, of course, black outside. … And within a fairly quick time, I think it was something like eight minutes, everybody was supposed to be dressed, tidied up, and muster on the quarter deck, meaning out in the street in front of the building, for muster. And then, once everybody did the thousand [musters], … there were actually sixteen, I think there must have been twenty or 30 musters at assigned stations. Where they thought we were going to wander to anyway, I don't know, but they were forever counting and identifying that everybody was all present and accounted for. Then the squad leader would report to the ensign, the ensign would report to the captain, off would go the company. We would be mustered then marched down to the college area which was about, I'd say, about a mile away, for morning mess; twenty minutes allowed for meals. And, of course, being all young people and being raced around like that from dawn till sunset, everybody ate ravenously, whatever was there. There was no question of the food, good, bad, or indifferent, it was food! And, of course, [in] the Navy, there was always a lot of coffee, very good coffee. Broke everybody into being coffee addicts in the Navy.
So, that would be that, and then we would be mustered again, always counting again, and marched off either in smaller groups, or allowed to proceed independently to our next classroom session. There were a lot of classes in Navy traditions, history, review of the news of the day, regulations, and that was about all. It was general orientation in boot camp. And then, later on, as the six or eight weeks came to a close, orientation of the various available training billets that were available to women, the openings in each, what your background and qualifications were, what you could nominally apply for; you had a choice of three. And of course, anybody who didn't fit into anything was just force-matched, needless to say, to what was needed. But it was essentially a general orientation course, heavy emphasis on Navy regulations, Navy traditions, the rules of getting on the program of what was to be done during the day, looking ahead to assignments, their availability and pros and cons and so forth in discussion groups.

KP: It was clear you were not going to serve on a ship, but …

HW: Yes, it was not legal then, or even overseas.

KP: Yes, because one of the stories that people remember, all the guys I interview about boot camp, is fire-fighting school.

HW: Oh that, oh gosh, how could I have forgotten that?

KP: So you did have that?

HW: Yes, we had all the required drills, … we had to learn how to swim, pushed off the end of the pool if you didn't make it, that kind of thing. Not really that bad, but several people took active persuading. Yes, and the fire-fighting drills, and knot tying, heaven forbid! And, of course, we used to have these drills in the apartments all the time, anyway. We would have an evacuation drill usually three or four times a week, at the very least. And you're right about the fire-fighting stuff, that was horrendous.

KP: So you had to put out a fire?

HW: Yeah, I remember once or twice doing a real little bonfire act, with the hoses and … the foam bit. … Up-ending the stuff, and everybody having fun … knocking each over and getting all wet.

BT: I didn't realize the WAVES did that.

HW: Oh gosh yes. … He's right, we did go through all that, in fact, so it was such a routine [part] of what went on during the day that I had almost forgot about it.

KP: So much of your basic training was very similar to seamen.

HW: Oh yeah, oh yeah. I'm sure the courses were totally similar. I mean, when they were getting us into knot tying, it was so funny, it was hysterical. Amusing thing, I stayed in the reserve many years later and went into Brooklyn Navy Yard for my two-week stuff, two weeks of active duty for training was mandatory for the post-war peacetime reserve. And one of the things I did, because nobody was doing it, I wound up instructing the class in knot tying! And, of course, these were the sailors that were just being drafted in, and it was funny. I said to myself, "Oh no." And I thought, "What did they spend all this time for [with me]?" … But, I tell you, when I tie up my cardboard cartons … and the newspapers for reclamation or anything, those knots don't slip, … I never forgot how to tie a square knot the right way. Ridiculous, the way these things trickle down.

KP: The women who you saw in boot camp in training, what were their backgrounds and where did they come from, particularly people who you got to know?

HW: Well, it depends on how you were pulled up and ordered up in your draft. I mean, how many warm bodies they called in for this class worth at Hunter, but most of the people I was associated with at that time came from the Midwest -- the Midwest and the West Coast. A couple of them from New England, but mostly from the Midwest. And their backgrounds were typical, coming straight out of high school or two years of college, or interrupting their education. … Lots of them came from farming families, not huge, big farms, but family farms like dairy farms in Michigan and Minnesota and places like that. … Yeah, typical, middle-class

America, most of them Bible Belt people. I met more Methodists there than I'd ever met in my life. … But all people with a commonality of background and interests. See, what else can I say about them generally, except that I have the impression that almost all of our particular company came from the Midwest.

KP: What did they think of New York? I mean, they were in the big city, this was nothing new to you.

HW: Well, I have news for you, you've never been in boot camp anywhere because believe me, nobody saw New York, that's one thing I can tell you. We were allowed one pass a month; in fact, I think it was one period that we were allowed something like an eight-hour pass to leave Hunter, to leave the Naval Training Station, Bronx, New York, one eight-hour pass, or was it a twelve-hour pass to do anything you want? Within a 30-mile radius -- that was another restriction. … So nobody, believe me, was seeing the sights of the big city because from 05:00 hours when they had reveille, to taps, I think it was ten o'clock at night, but you had to be in, you had to be in. I mean, besides which, … everybody was in, in the fullest sense of the term [exhausted]. By the time we got back from evening mess, it was something like six or so, and then there was study hour, there two hours for study, and then the lights were dimmed and there was an hour break for doing laundry and getting ready for captain's inspection -- folding all the clothes up very neatly and getting everything arranged, except what you're gingerly sleeping in for the night, … to get ready [for inspection next day] … when the alarm went for taps. Oh, by the way, reveille was with the fire alarms they used inside the buildings. So, of course, this huge clanging thing would go off two inches from your ear. That's what they used for a wake-up call. Couldn't be missed! And taps, I think, were ten o'clock. Ten o'clock were lights out. …

KP: What did you learn during your basic that stuck with you?

HW: Apart from knot tying? [laughter]

KP: I mean in terms of when you actually got into the Navy, what stuck with you that you said, "I am glad I learned this?"

HW: You mean the Navy at large, or at boot camp? Well, it started off with getting to know and to work cooperatively with other people that had … . Well, I didn't think they were very different than me at all, as a matter of fact, I mean, though lots of people from the Midwest and the West Coast somehow thought people from the East Coast were different from them. And they were a little bit shocked to find out we were literally speaking the same language and had the same kind of "important things in my life versus important things in your life and what did your father do and what are your brothers doing?" and so forth. It was a far greater, higher level of commonality that all of us suddenly became aware of when we were brought together. And, of course, there would have been nothing that would have brought us together at all, really, except for a war. Everybody got stirred up, uprooted, planked down somewhere else, and coped, and … we were part of that process. But I think we were surprised to find out how much alike we were.

BT: I think particularly, maybe in those days, when people did not travel as much and move around.

HW: Well, that's right. You've got to remember, this was 1943, and I mean either under financial constraints, and because of the transportation system, I mean, there was no … up and going air travel, and trains were slow and restrictive, and then during wartime, of course, the point of any kind of long-distance travel with gas rationing, people just literally had not gotten around. And they were all so busy trying to cope with their own family hanging together during the Depression days which was another big deterrent, other than people who had to pull up stakes and literally move, for instance, … out of the Midwest and the Dust Bowl areas. I guess that was so, so we were surprised to find out just how alike we were, I think. That was my impression, that may be wrong or … I wouldn't say it's wrong, it can't be wrong because it's what was, but, it may not be particularly typical, but that was my impression.

KP: Had you travelled much before the war?

HW: Well, physically, no, aside from going into the city and the museums and going to plays once in a while and stuff of that sort. No, not really, but … let's put it this way: at that time, I didn't think that I didn't travel. … I was pretty typical, visiting relatives as far as Connecticut, or down to Atlantic City, or up New York State somewhere, or on a short vacation like out to Pennsylvania. Going coast-to-coast was an expedition in those days, and costly. So, I suppose, no, certainly not the way I broke out of everything as everyone else did [after the war]. … Not unusual, no. … I didn't think I wasn't travelling because I think that was pretty much the norm. My experiences must have been pretty typical.

KP: When you joined the Navy and in basic training, what branch of the Navy did you think you wanted to serve in?

HW: Didn't think of it at all. I was wide open to anything.

KP: And when you got there, what were your options? When you heard what you could do, what did you think you wanted to do?

HW: … Of course, they had a [need for] complete office, administrative background -- typing, stenography, executive, … statistical clerk, the works. So I knew I was best qualified for doing administrative or office work. And, of course, not everybody necessarily wanted to do that. So I thought one of the things I thought I might like to try for was a Aerographer's Mate, which was meteorological observations, which was then part of the naval aviation effort, and get into one of the Navy's interesting technical-type things. So I put in for Aerographer's Mate. And then, your duty stations, you know, so I put wherever the training was, I think somewhere in Massachusetts -- that naval district was then Com. 1 up in Boston; Com. 3 was in New York, or assignment to one of the Pacific commands. I believe Com. 11 was down in San Diego. That's the way that the Navy was structurally organized inside the United States at that time. They then went to another command structure after the war, but that was what it was like. So you could kind of have geographic plugs, so I put in for the West Coast, Washington, a Aerographer's Mate, … and, of course, more Navy training.

So what I got, was my first training, went up in yeoman's school at Iowa State Teacher's College. Of course, good old Waterloo, right? Waterloo, Iowa. So I went to yeoman's school, and I was rated out of school, which the Navy was beginning to cut down on, too. The glorious fifteen bucks a month I got as an Apprentice Seaman leaped up to somewhere around thirty-eight when I was rated Yeoman 3rd Class out of training school, which was at Iowa State. And the duty assignments and the geographic locations came up, and I was still trying to strike for something in the technical applications field, but I was wise enough by that time to recognize that naval aviation, like the Air Force, US Army Air Force, was kind of a sub-class of itself, so I decided to keep away from that, because once you got that kind of assignment, you would be kind of locked into it. It was wide open, the aviation-oriented fields, [demand for people was high]. Classmates of mine from the Midwest went to Norman, Oklahoma in the aircraft mechanics school. They all got interesting assignments, one of them became a link-trainer operator. Another one was a Navy photographer, who had gotten into that kind of thing as a hobby. And I got my first choice on the list, which was assignment to the US Navy Hydrographic Office, in Suitland, Maryland. And, of course, half of the people didn't know what that was and I said, "I know what that is; that's where they do all the ocean measurements and make all the Navy charts." And that's where I went as my first duty assignment and ended the war at the Navy oceanographic office. And there were famous people there, that I may have mentioned in my list, Mary Sears, the marine biologist, and Sverdrup, the fellow who wrote the first text on the oceans, … and Commander Ellsberg, with the Greenland exploration business. And Byrd did his first two High Jump expeditions staffed by the people we put aboard, … in fact me personally, a little bit which I got into was the position of selecting the crews from the auxiliary training that went in those Antarctic polar expeditions after World War II. So that was an interesting place to be. And that was where I kind of got the overlying [impression] that I would start civilian work with oceanographic material, … because that was where I was in World War II, up until Admiral Arleigh Burke plucked me out for special duty assignment.

KP: You went to Waterloo, Iowa, and you had not really traveled much outside the New York area. I assume you traveled in a train.

HW: Right, we went up and over Niagara Falls, not in a barrel, but in a Pullman car, and then dipped down into Michigan, and wound up in Iowa.

KP: Did you travel in a group?

HW: Yes, the Navy always had people traveling with a group. They called them "drafts," and you would have about ten, twenty people in a draft with a certain duty assignment, and there'd be some form of petty officer, or commissioned officer in charge of the draft, and you would travel in a group, correct.

KP: Were you all women traveling in a group?

HW: Yes, … nothing mixed at that time, no unisex dormitories!

KP: What did you think of the country you were seeing, and particularly Iowa?

HW: Well, it was flatter than New Jersey, but one cornfield looks like another cornfield. And there was a river, … what's the name of that river, is that the Black River that runs through there?

BT: I don't know.

HW: Anyway, Cedar Falls had a river going through it, and that cut up the country a little bit. And it was … non-flat for enough around that to make it interesting, even in mid-winter. And I carried on with my riding there; they had a riding academy. The poor horses were eating their heads off in the barn with nobody to exercise them, so, my four hours off a week that I could get, I would head for the river and the riding school there and exercise the horses during the winter. Winter in Iowa, you can imagine the snow, I mean those poor things used to plow through a minimum of a foot and a half, but they would love to get out. So … I was doing something pretty much familiar to me, and comfortable to me there. Except that the country was flat and they would never let us out that much. As I said, we only had two-hour passes and four-hour passes once a week, and I was there for about three months. And as I say, it was winter in Iowa. I can tell you, one thing I do remember is the marvelous day -- I was just telling my sister about it -- when I experienced my coldest temperature yet, 27 degrees below zero, out on the drill field. Minus 27 below, and everyone was glad to move to keep warm.

KP: What was a typical day like in yeoman school?

HW: Mostly class work, but the usual kind of mustering on the [gym basketball] court indoors. Of course, you know, that all the buildings are inter-connected there. The college buildings, the dorms and everything have tunnels connecting most of them because the weather's pretty severe out there, I guess. I mean, if the 27 below was any sample of the winter, I can vouch for that. But it started out with the typical morning muster, bell ringing off in your ear, muster on the quarter deck, then the orders of the day were formally read, and you were dismissed to your classes after you went to the mess hall, had morning mess, classes, call, noon mess, which is the main meal, by the way. In the Navy, everyone gets fed their dinner at noon, or whenever it is, eleven sometimes, but mostly noon, and then kind of a light supper in the evening. By the time we got through that mess three times a day, and the drilling continued, and PT continued, although there were a lot more sports associated with it. We had a little bit of indoor tennis, soccer, volleyball, stuff of that sort, as much as the weather would permit. Everything had to be indoors. So there was a lot of controlled sport activity, more so than there was in boot camp, where there was more concentration on sort of regimentation games. And the classroom stuff, I mean on how were Navy records kept, service manuals, how are communications manifested through the Navy; a lot about Navy communication systems, too, in addition to its administrative and personnel systems, right. So there were primarily classes, but with no letting up in the drills, and the formalization, and the mustering, and a little bit more emphasis from mere regimentation to kind of organized sports. That was it; that was about the only difference. And at that time, the Navy was cutting back on granting everyone the munificent position of being a third-class petty officer. Only about one-third of the people were rated who were then going through what they called a class C training school -- which was one you got a rating out of. There are class-A and B schools, which are essentially re-orientation and new technical stuff, where you don't automatically get an upgrading or a rating change.

And so, of course, I was rated, naturally, and left for the hydrographic office, as I mentioned earlier. It was a great time to be there, and it was a fascinating place to be. The whole process of chart production was a fascinating physical process: lithographic printing and flatbed color printing and correcting all those beautiful British Admiralty charts that they had stored away. It was literally coming off the *Challenger* data. I saw some of them were dated 1840 and 1841. They had this beautiful copper engraving of--- oh essentially landfall sightings for recognition. You'd be cruising into the Harbor of Horta over in the Azores, and you would have a little engraved, "This is what the shoreline looks like." They used to have these on the edges of all, particularly British Admiralty charts, and, of course, our charts, too, which copied them. What does it look like when you sail, so you know you're in the right place? Keep away from this spot, the shoals are over here. All of this was in little profile drawings along the edges of the charts. They were beautiful things, beautiful pieces of engravers' art. We kept track of those, too.

BT: Where was the your office located?

HW: It's where one of the naval intelligence [Naustic] analysis things are now. In Suitland, you know, where the Census Bureau is, southeast from Washington.

BT: Yeah, I know where Suitland is; I go to the Federal Records Center all the time.

HW: It might be, it might be, yeah … there were two big main buildings there, right?

BT: There's a lot of stuff there.

HW: They moved, … the Hydrographic Office became the Naval Oceanographic Office about 15-20 years or so ago, and they moved, and they split it up. And some of it went down to the gun club, the Navy Yard at Anacostia Gun Club. Most of it went to Bay St. Louis where the old redstone missile base was. Now the Naval Oceanographic Office is mostly down there. I had a fairly active liaison with that, because that's where all the classified work on cartography and ocean surveys that we did at Bell Laboratories went, wound up at the same place, so that we were very familiar with that. "Oh you worked at the hydrographic office? Yes. We don't have to tell you about this place." It was a lot of fun having lived three lives at once: British Ministry, Navy and Bell Labs and have it still come back at you, which has been kind of interesting about the kind of work that I've done. It still happens, of course. … Where did I lead you astray from?

KP: What were your initial duties at the hydrographic office?

HW: Okay, … another lawyer … I wound up working for another lawyer, who was a lieutenant commander from Fordham where he got his law degree. But he was in charge of the lithographic printing division. And I did all of the office work for him, meaning personnel work and training work, rating training qualifications, personnel work, and the business of handling and reporting to the Navy on the status of the chart production. And also, of course everybody was doing everything in those days. I became aware of what the printing and the photographic procedures were, in a technical sense, because I had to know about them, because, at that time, these were new jobs for the Navy, which they were attempting to expand their rating structure to cover.

Like, they had a Navy printer, but they didn't have a lithographic printer, photogrammetry work, stuff of this sort. So I had to become familiar with those tasks and in the process, I used to have fun leading the VIP tours. And the admirals would come by. They would call me up. "Chief!" {I was the "chief."} "Get over here, … can you take this tour through the facilities?" And I would immediately expound on "This is the negative re-touching room" or "This is the … photogrametric projection resolution for chart accuracy," and all that jazz. So I had a lot of fun doing that. I was a quasi-technical guide, and overall duty yeoman for the division.

BT: Where did you live?

HW: Lived in barracks. Barracks B, right there at the hydrographic office. They were a little, low-lying motel complex, very comfortable. We had our own rooms.

BT: It sounds like Washington during the war …

HW: No, it was fine. We had our own place right there, about 200 yards away from the hydrographic office. And it was great because we could pull out into the country. It was out toward, you know where it is, Andrews Air Force Base.

BT: Yes.

HW: And they hadn't built that highway yet, and that highway was a boon because they leveled this vast, marvelous stretch of what was to become a two-lane divided highway out there. And everything was all level and planted with grass and everything, and did I go back to my riding then, out galloping up and down that stretch. People there during the war, of course, owned their own horses down at a couple of the stables there, who were in the Maryland Hunt Cup Race. I rode one of the horses that, later, was competing there at the Maryland Hunt Cup. If you're a "horsie" from this area, you'll know that's a pretty well known point-to-point race. … So it was a lot of fun doing that out there, and I kept up with that.

BT: Seems like it was obviously much more rural there, than now.

HW: It was indeed. … And now it's wall to wall …

BT: Lots of little brick-red houses.

HW: That's right, redbrick houses, and a lot of garden apartments. Wall-to-wall garden apartments out there. And, of course, close aboard at Suitland we had the research department, which I worked for, doing calculations, incidentally. They were doing the calculations on the Manhattan Project, and they were developing the Loran-C navigation system. Of course, that was hand-in-glove with the charts, because we printed the Loran-C later on when the system was devised. We printed the charts, the navigation charts for Loran navigation. And they were also beginning to work on the inertial navigation systems for the Polaris command boats at that time. I was on active duty through '48, I might explain. And so, they were already into that. And when I was aware of that aspect of things, when I later got downtown, I passed briefly through Navy public relations, after the hydrographic office. Oh, incidentally, I believe I was the last war

billet complement person on duty at the hydrographic office, aside from Admiral George S. Bryan and Captain Jacobs. I might explain that there was this dual-command structure for all these government-navy associated places, where they have a military, a naval commanding officer, and sort of executive officer, and maybe a few staff billets, but the rest is government civil service. And so the admiral and the captain were left, and I signed off and left.
And so I was the last person to sign out of the hydrographic office, and reported downtown to Navy public relations, where there were, of course, an equally vivid group of characters there on duty then. I mean, we were in what were called "civil liaison," which was the Navy office which dealt with liaison with Capitol Hill and the White House, so we had famous bodies coming to and fro! I was terribly lucky with my Navy assignments, I really was, I think, I really was. So, we got to know people who wrote books, like Bill Lederer and people who ran the news bureaus, and one of the Navy captains was the brother-in-law of Drew Pearson, so Drew Pearson was haranguing us on the phone every day and I would, of course, keep him away. That was my prime responsibility. And … from that, the General Board put out a call for highly qualified yeomen for a study of the General Board. And that was … when Admiral Burke and I got together. He came down and literally fetched me out of my office. He and one of the sailors walked in and said, "You're chief so-and so, and we've looked it over, and I've talked with you over the phone, and I think we want you upstairs." It was a classified wing, you know, marine guards. Nobody could get in or out, because we were starting this then top-secret study, and they were just handpicking people to get in on it. If he approved of you, it was yes or no. Even what Burke had to say then, after he came back from the Pacific, with his campaign record, whatever he wanted, he got. If he said, "I want you," it was this minute. So that's literally what it was. I had just come back from lunch, I remember those things well, because it was an important position, a turning point in my life. And he walked in and said, "Chief, we're going to get you upstairs. Who's on duty here?" I said, "Well, there's so-and-so, one of the sailors," and he said, "Have him in here." Then, "You take that end of the desk, I'll take this end," and they literally carried my desk out of the room and put it on the elevator, which was just across the hall, to take it up to the classified area. So, I was moved in instantly. Had to put a call down to my other captain and the commodore, saying, "I'm up here now!" That was fun, and that was how … I began my association with Admiral Burke.

BT: And this project at the time was?

HW: It was a famous project; it was Project 129, which has since been, I suppose, completely de-classified, except for its other findings. But essentially it was a review of the Russian problem-- political, economic, and military strategies to cope with the USSR in the post-war years. It was a special assignment from James Forrestal, who then had become [the first] Secretary of Defense, who was a very close friend of Burke's, a personal friend. So, that was the problem we worked on, and it was my last official Navy project. Burke took his cruiser command, which meant he was automatically going to get back and be DCNO and eventually CNO. He took a cruiser command and sailed off into the South Atlantic. He was working his way up then; it was inevitable. So he went off on his cruiser command and I went back to Douglass. That was August of 1948. And from all that time in-between then, I worked on that project.

KP: What was your role and what contributions did you make to the study?

----------END TAPE ONE, SIDE TWO----------

KP: This continues an interview with Helen M. Walkinshaw on June 13, 1996 in Peapack, New Jersey with Kurt Piehler, and

BT: Barbara Tomblin.

KP: Since we are on this point, what were your specific duties with the special study and your relationship with Admiral Burke?

HW: Right. Special study, Problem 129, I was Admiral Burke's duty yeoman, at the time, which meant I was the ranking enlisted personnel in the office. This was a closed area of the Navy Department, the old Navy Department on Constitution Avenue, and it was a closed area because of the nature of the work and the documents, which we would be dealing with at the time. And we had marine guards 24 hours a day and an in-board mess complete with both hot and cold running meals and mess cooks, that would, if we were starving or needed a cup of coffee or a cup of tea, were available for us. Now that's kind of the background. I worked physically in an office about the size of my living room here, directly with Admiral Burke. He insisted on, and I was delighted with, the fact that he simply moved in and abutted our desks together. So, he was there and I was here all of the time, as this project progressed. And, specifically, I did anything he wanted me to, by way of coping with the logistics of setting up the study programs. And the way this was done was that it had two phases. They were in a position to kind of commandeer or request the appearance of anybody they chose to take a deposition from, or to take statements from, or to offer an opinion to. And this involved experts all over in the field, and a lot of people from the Brookings Institution, whom he knew anyway. In fact, I think he went there after the war a little bit, but that's not relevant.
People from the think tanks of the area, people from Congress, people in the military establishment, and, of course, people from the various branches of intelligence feeding into that part of the study program. That was the personal interview and deposition phase, and I would take the dictation from that verbatim. They did not want recordings made. I don't know whether this was personal wishes for most of the people who did not want a literal record of what they said or what their voices sounded like or not, but it was agreed that there would be dictated comments and testimony before this board. And I would take down those notes. I was that good at my shorthand, even then, where I would be able to still take verbatim dictation. And so I did, and as these people appeared before the board, we would sit around the conference table, and I would be off on the side and I would do my thing. And then, again, before the next meeting -- this was daily -- and before the next meeting the following day, I should say, which was around 10 or 11 o'clock, usually just before lunch, I would have to have all of that typed and ready, for not only Burke's view-through, but for editing by the people who had appeared before the board, for if they had wanted to take something back, or whether they claimed I was misinterpreting from my notes. It always gave them, you understand, … the technique of having verbatim dictation by a Navy yeoman under the gun there, taking the records, was that they could always have an easy out. In a sense, … it was a mutually-understood buffer I think, between what they had said in conference, and sometimes they broke out and really made some remarks that really made you think: "Jean Leclerc is waiting around the corner for you," -- type thing, you know.

All sorts of personal implications and druthers in this testimony, so that they could edit it, and take second thoughts, and have a little bit more cogent and … not more reasoned, because these were perfectly professional people who were thoroughly aware of what they were saying, but to take a second look and make a second judgment about … what they [had] just talked about the morning before. Let's put it that way. So that was a good buffer and, besides which, it got me in there, and I was fascinated by all of this going on around me anyway. And Burke would always look over to my notes first when I took them and never questioned anything. I mean, if I said it was like that then he agreed with me, and he had a good memory, too. So that was one of the major things I did.

The rest was doing library "research." Of course, getting on to my other career [at Bell Labs]. I don't call looking up library records "research," but that's what I did. I became an expert at the minor subject matters that the board necessarily had to consider, particularly from an economic standpoint, and so I became an expert on South American labor unions, potential for training and technical capability of Third World nations -- they didn't call it that then -- Third World nations -- following post-war development, the status of the world economic situation. Forrestal was very interested, by the way, in the functionings and what he thought were the limitations of the World Bank, and the functionings of the World Bank as a political arm for feeding, you know, financial aid to where it might be politically construed as desirable or undesirable and so forth. So he was conscious, very much conscious of the economic aspects and the financial aspects of post-World War II world problems, particularly vis-à-vis the Russians who, by the way, were still sitting on their vast pile of gold over there, but economic pressure was foreseen. It was fascinating what was foreseen by that study. Economic pressure on the Russians, I should say, on the Soviet Government, inevitably coming to bear. The technological breakthroughs which were just over the horizon with the Polaris submarine development. We got reports I remember from the Arco, Idaho testing of the nuclear power plants, of the first submarine power designs at that time. It was things of that sort; it was a fascinating thing. It pulled in the technological, scientific, political, economic, … well under economic, but branching into politics and economy, the sociological aspects of workforce activity, feeding into what the patterns might be [in] twenty years. … This was a twenty-year projection-type study. So I did the minor fringes of this from the library, reading all the library files, getting to know, particularly, about the fringe aspects of union development activity, Third World activity, South America, in particular, … and Central America area and the Canal Zone. And so I did those little parts of the report myself simply because other people were doing far more important and critical things, and it was fun for me to do. I hope I did a good job. All of that flowed into the report.

The report got wound up, and, oh yes, speaking of economics, how could I have missed the whole oil bit? It's remarkable how prescient they were in their judgments about oil and the oil crises developing in the Middle East post-World War II. It's fascinating the way … they called the shots on that right smack down the alley with the Israeli return and developmental area as a counter-force. And it's happening now, to the people who were extremist in politics and the deterioration of India as a viable political force once the British left and would take a long time building up, but it would build up. Lots of these things were touched upon, which I'm now seeing go down on the evening news, bits on TV, and that was fascinating.

KP: What about the role of Japan and Germany? What were you thinking?

HW: We hardly touched on that. That was past, except for the economic. Everybody expected Germany to resurge instantly. And it was a question of the Soviet situation vis-à-vis the German resurgence, as to what that would do. That was a big question mark, and that was considered to be the European political item of the future, which was true, really. And Japan, they didn't think Japan would be any problem. They were still concerned about penetrations into China and/or by China and Korea. It was interesting that after a while, Burke became one of the peace negotiators at Panmunjom, you know.

BT: Yes.

HW: I mean, he was right smack in the middle of that. And I went back to visit him a couple of times; that was when he was DCNO, at that time, that he was pulled off on the Panmunjom talks, before he became CNO. So that was another aspect of his career that floated directly in. And he had been, incidentally, a very active, early China hand. At least I got that impression from him personally. And he used to come in with-- friends of his would send him these exotic kinds of teas, and stuff like that; … still from China, you know, people he knew then. And, of course, I was a tea drinker from way back, so we would sip in the afternoon and have tea and Willis, the mess boy, would come in and brew us up stuff and bring in cake and stuff, and we would /have a snack in the afternoon, then go on and work far into the night on transcribing my notes from the day, and if I had any questions he'd be there, you know, to query about them, "How I should approach this, capting?" I always called him "capting."

KP: It seems like you enjoyed working with him a great bit.

HW: He's a fantastic man, a fantastic man, absolutely.

BT: Yeah, I'd really like to hear about him.

HW: Well okay. He was married, they had no children. They had a couple of Great Danes who used to tear up the furniture. He was really a fine … union corporate adjudicator, arbitrator. Apparently he was in charge of managing the labor relations at the gun club down at Anacostia when they were still making six-inch guns. He made his early reputation at his shore assignments in the Navy as, I suppose, as a kind of a peacemaker, as a labor-negotiator, morale building force … between union management and contract liaisons with the government. He was an astute negotiator and really a fine man. I think if I had to, aside from a couple of my personal friends at Bell Labs, I'd say he was the first man I ever met in public life, second hand or first hand, that had total integrity, total personal integrity.

BT: That's what I gathered. I mean, there was never even a rumor or anything.

HW: Oh absolutely, … not a thing. Total personal integrity, a fine man. Exquisitely sensitive to the whole mix of people, what makes people work, what makes them want to work, what makes them feel comfortable, how to deal with them so that you can feel comfortable with them, and them with you. He was an absolutely masterful leader in that positive sense than, I think, I have ever encountered in my life. Terrific guy, terrific guy, and did it all. I mean, cheek by jowl, two feet away all day long. I mean, he wouldn't turn-on or turn-off when someone important walked

in, or when James Forrestal was on the phone, and I would pick up the phone, often, Forrestal would pick up the phone and dial him directly. Sometimes on picking up, I would get a secretary, but most of the time he would be on the phone himself, "Can I speak with Arleigh?" "Who is this, sir?" And I recognized his voice. … "This is Mr. Forrestal." … So I'd hand him the thing. So … he was alike to everybody, as is a sure gauge of genuine character. He didn't turn himself on and off for somebody important, unimportant or somebody he was too busy for or wasn't too busy for. Always there, always uncomplicated, always direct, very firm; Navy man from way back. Originally from the Colorado School of Mines, I believe. His background training is in engineering, and then he went to Annapolis. … You guys might know that from other sources, but that's what I remember. What else? …

BT: Did he have a sense of humor?

HW: Oh, of course. … He would always come in with a little joke in the morning. Very sensitive about what was important with other people, too. Would write, you know, after I came off active duty. He'd always send me a card at Christmas or a letter. I kept most of them; some I tossed out when they were more frequent, but towards the end, there, I began keeping a few of them just for nostalgia's sake. So, yes, he was a very good follow-through man, too. Not only was he thorough and quite incisive for such a quiet man, he was basically a very quiet man, smoked a pipe all the time, of course. Quiet man, but very incisive. Impressive seeing him operating at a table full of highly-charged political people in D.C. Saying the right thing, or knowing where to diffuse the incipient outbreak. Marvelous at handling people, simply because he was so totally straightforward and uncomplicated. Extremely uncomplicated man.

BT: Yeah, that's what I've heard.

HW: Very, very uncomplicated, very direct, and a great guy to work for, no question about it.

BT: And I think all of his life, a very hard worker.

HW: Oh, Lord, yes, yes. Not only that, … if you had no time and he had the time, he would do it. … I'd be there from 8:00 in the morning until legally 4:00 in the afternoon, but, of course, whatever time. I said, never mind that, captain, I'll go when I'm finished. He said, "Fine, I'd like that." You know, he was always clear, very clear and concise about orders. What he wanted done, you would know clearly. There was no, you had to second-guess anything about him. My years of AT&T made me a master of second-guessing. When Bell Laboratories no longer was Bell Laboratories and was taken over by AT&T, one had to develop being, {we and all of the technical staff}, had to develop being great second-guessers because this, unfortunately, was the corporate game which was then going on and which I, mercifully, never, never, never ran into with the Navy. And Burke, in particular, of course, was a perfect example of that directness and clarity, and self-assured competence that I never met again in civilian life, except with a few teachers and a few colleagues, on an individual basis. … Never in an organization. With all of its terrible faults, of course, the Navy has some horrible, terrible faults, right? But it also has an extraordinary, highly toned, rigidly maintained standard. It has an ideal standard that it tries to live up to, I think. And it's remarkable how many succeed. At least, it doesn't cut itself down to being a compromising amorphous mass, like most corporate management systems do today. It

knows what it's supposed be doing even if it may not be doing it, right? But it knows where it is, and where it's coming from and where it's going. And that kind of clarity of approach is very assuring in today's world. I would suspect it would be, particularly so, to young people who wonder what's going down next, and who haven't the maturity nor the years behind them to cope with this kind of, well, what word shall I use? I might almost call it … amorphous managerial style of corporate America, today. But let's not get negative. That's another reason why my memories of the Navy are so positive. Primarily because of the people.

KP: You were in Washington in a crucial time for both the country and the Navy.

HW: And in this country and in the middle of a political swim, too, because we were sitting there with congressmen going to and fro, and Harry Truman walking around the corner of the White House, and, of course, Roosevelt died in office while I was changing over from the hydrographic office to downtown, right.

KP: What was the thinking in terms of the Soviet threat, and what were clashes that were going on?

HW: You mean then?

KP: Yeah, then. During the drafting of this report.

HW: Well, it was recognized that the Soviets were single-minded in their dedication to continuing their political system and aggressively seeing to its survival by active political promulgation in other parts of the world that they did not hesitate to use their particular selective economic clout to do better. I think Forrestal viewed, and I think that the report kind of came to the conclusion -- I don't know what the final paragraphs were because I've forgotten, although I read it all over 20 times -- was that essentially the way to contain the Russian threat, and it was a real threat -- and it was, indeed, a real threat at that time because anyone who fought on the ground in Europe or who dealt with the military end of it had enough personal examples and/or official examples of encounters to recognize that at that time -- post World War II -- it was an extremely real threat. And, after all, they were there sitting in Berlin, you know, it was an eyeball-to-eyeball encounter. And on the high seas, then, and later on, and through my Bell Laboratories years, it was an eyeball-to-eyeball encounter above and below. The naval element and the sea, which was kind of an interesting rounding-off of that aspect of things, in my opinion. Yes it was a real threat, a military threat, that would probably not be directly overcome, but which was going to be actively promulgated probably largely by economic means, which they had at that time, sitting on the world's gold supply. They were a strong influence in the Near East on the oil supplies, and being a big oil supplier themselves, being capable of containing and probably moving into the Japanese military vacuum, which it did. It did through Korea, right? I mean, that was not long, and then down into Vietnam. … That was the true call of the shots, the economic and geographic expansion, with the economic edge with the political push … where economics was not a question. Economics in the Near East and on the Polish-German border, East Germany, and economically and politically over on the other side. And that was what the problem decided and that was the way the Russians were viewed -- and I think it was an accurate assessment at the time. Their projection of the way it would manifest itself also

seems to be, in the light of hindsight, to have been an accurate assessment, which is interesting, though they were probably quibbling with generalities. This was kind of a safe conclusion to make, but as it happened … it was a properly directed safe conclusion to make. It's interesting the way those things fall into place. Perhaps we all developed an instinct after World War II for quick and accurate assessments of situations, because things had to be decided in a hurry in those days.

KP: You being in the Navy, there was quite a bit of jostling between the various services for resources, and these various services perceived how to deal with the Soviet threat differently. Also, you have this historic shift in the way that the services are organized. I mean, the Navy and the Army lose their traditional roles.

HW: … Yes, yes. Well, the coming of the Air Force as a separate entity. Burke was also a personal friend of John Cromellin, Navy Captain Cromellin who led that anti-big bomber crusade within the Navy. And I remember the times, with Burke talking to him over the phone, saying, "John, you don't want to say anything like that, you know, we're going to move beyond this point very quickly, don't …" But it wrecked Cromellin's Navy career, of course. And I remember Burke on two or three occasions just telling him over the phone, "This is not the way to go about this. This will work itself out by way of history and by way of industrial overreach." Which it really did in the end, when the whole rocket effort came in, the whole ICBM versus rocket propulsion versus supersonic. The whole thing was overreached. All of those problems were largely pre-empted by the advancing technology of the time. But I remember Cromellin being vitally concerned that the Navy air arm was going to be swallowed up, and, said Burke, "Don't think of it like that, it will never happen." And, of course, Burke finished his career in the Pacific as a Chief of Staff to Mitscher with the Carrier Task Forces, you understand. I think I mentioned him developing the protocol for battle combat and strategies on deployments of forces and air cover techniques, that kind of thing; he did that too. He was a great military tactician. Tactician is the right proper word for it, I think, in direct fleet operations, in addition to being a pretty shrewd guy for figuring himself a way around the strategic scene in Washington, as well as other places. Notably by keeping himself totally free of it. Because once you touch it, I think … you're just drawn in. It's the vacuum, the big vacuum, the nature abhors that everyone's pushed into in Washington. Touch the scene in Washington in politics and you're sucked in.

KP: Is there anyone else you remember? You got to know Arleigh Burke really well. Is there anyone else that you got to know fairly well in working on Problem 129?

HW: No, not personally, because he was Chairman of the Board, and I worked directly for him. … There were thirteen admirals reporting to that board, and I got to know three or four of them rather well. I think Chester McMorris was one of them who came, who was a naval aviator, and who later left and became, what would his title be? He was in charge of the fleet in the Mediterranean, the Sixth Fleet. I guess he was Commander, Sixth Fleet, Mediterranean Operations, okay. And he was a real nice guy, and, of course, all of the naval aviators were fairly young guys anyway. And Burke wasn't aged, either, very much. But they were all a younger group. And he was a rear admiral, only a rear admiral! We had two vice-admirals and Burke, and about nine or ten rear admirals. And he and one of the other fellows I got to know fairly well. But they were the only ones. The ones I worked with, I mean, there's no time for

doing anything when you're immersed in this, you have your personal life and recreation on the side.
Then, running around taking courses at night in Washington, and seeing all of the museums and knowing what's going down and meeting with your friends, and taking 64-hour passes once a month. The Navy didn't loosen up on the strings that kept people tight. We had one 64-hour pass a month, and we had to get special permission to leave. I had to work out leave papers to come home on my one 64-hour pass a month, incidentally. That's talking about … naval regulations in wartime. But, no, I never got to know any of them very well personally, except Burke because I worked with him intimately ten to twelve hours a day everyday, and sometimes over the weekend, in fact, often into the weekend. And the other admirals, of which there were a total of thirteen, which was ridiculous. I said, "We've got a lot of brass here!" Two chiefs and thirteen admirals, we were really getting there. And, of course, a whole host of highly competent civil service secretarial staff. But they kept the problem a Navy thing with Navy control over it. They wanted military personnel there. They didn't want any of the civilians having anything to do with the final reporting or anything, but they were a support. A lot of first-rate people and secretarial staff. But they were strictly … outside, beyond the marine sentries, let's put it that way. … No, I didn't get to know any of them very well because we were just directly and intimately working with each other. And he, [Burke] was Chairman of the Board, and a great deal of his time was spent setting up and personally talking with the people who came in for interviews, or people whom he knew in the Washington scene. And, of course, he knew everybody whom he had to know to head and chair that project.

KP: Of the testimony you took, who among the people who testified do you remember?

HW: Well, I remember one friend who was a kind of a counterpart to Alger Hiss, and I've forgotten his name. He had a kind of a Polish name. But he was an atomic energy expert. And he was one I particularly followed the results of his testimony. I don't remember his name, but I remember him coming back several times and coming up with some fascinating information about the potential for atomic energy development in a civilian sense. For power plants, nuclear reactors, … the whole submarine weapon bit came in then with the work going at Arco at that time. So him I remember. And a couple of people from the Brookings Institution who came down with economic and social-type background material on the Third World. Other than the NATO association, there was kind of the British-American alliance, allied alliance and there was NATO with a few other fringe countries on the outside like Norway. Who are the other ones in NATO? The Norwegians were the ones I principally remember, simply because I kept up with them for other reasons, too, later on. But they handled kind of what would be the other than US-UK-Canada kind of social and economic input to the board with their testimony. And I didn't sit in on the board meetings all of the time. So the people I was with, I remembered, and I remember the important political and technical things. I suppose I was thinking about that because I had that kind of orientation myself. And the rest of the economic stuff I either did my library research with, or I took down as kind of blind, not paying much attention to testimony. Then regurgitated it for review without thinking of it too seriously, because I thought it was a fringe effort. And I would like to see the [review], conclusions that the board made. And the board itself were the admirals. They were the board. And the people came in and testified, and Burke and I mostly wrote the reports with two or three other of the Navy brass there, and about six people did the whole thing: myself, Burke, the two other admirals I mentioned, a field

chairman who kept coming in and out, and one other Navy chief and a first class yeoman, I believe. And we did the whole thing. But, of course, these important people were coming in and out. What was his name? It wasn't (---------?) I'm trying to think of the name of the fellow who was testifying.

KP: Well, that would be something you could edit into the transcript.

HW: Well, there's nowhere I could look it up, if I don't remember it now. … It might be … Leo Pasvolsky, and he had a lot to say about, not a lot to say, but he made comments in parting … on the pressure on the scientific community at the time and their very real concerns about atomic energy getting out of control, and being either subverted or put to uses that no one would ever like to see. He was very much concerned about that. He said, he sympathized with him and his company at the time, recognizing the pressures they were under, there at Alamogordo and at the White Sands, I guess it was at that time, right. Is everybody at White Sands, now? I wonder who was working? I know a fellow out there who's a naval oceanographer I met up at the Acoustical Society meeting at MIT that was chairman of the thing that I was giving a presentation at, last fall. And, he's out at White Sands. I said, "What are you doing at White Sands, you're an oceanographer?" He's got his doctorate in physical oceanography. He said, "An awful lot of us drifted in and around to the various government labs, you know." He has a government lab assignment. Strange, but once upon a time, White Sands and Alamogordo were things that everyone was concerned about. And I believe that was the motivation for this one fellow's side comments about having been acquainted with them. And who is the other one? Oppenheimer, too, considering that the validity of their real concerns, however misdirected or properly directed you might think that they were, went on from there. They were very real concerns at the time. And at this time, remember this was 1945, people were still very much concerned. But he, Pasvolsky, was the one I remembered, mostly because of his involvement in the whole atomic development or at least cognizant of it, if he wasn't working on it directly, cognizant of the atomic energy development. And how, what a major area for future concern it necessarily would have to be and he was concerned that a proper background was laid right now to be able to take cognizance of whatever aberrational shoots should spring therefrom.

KP: You were an enlisted person, but you were at sort of the heart of one of the crucial sort of strategic planning sessions.

HW: Yes. … I had top secret and more clearance. But I was lucky. As I said, in my Navy assignments I was very, very fortunate.

KP: Well, how would you compare your assignment to other women who enlisted at the same time?

HW: Well, I'd say that an awful lot of them had fascinating and interesting work. Those of us who knew each other in Washington all seemed to be doing awfully interesting things. And I don't know whether we naturally congregated together or what. I don't know this was at all typical. But the ones I remember; one of them was Admiral Byrd's duty yeoman, for instance. And … he was the original Navy workaholic. She actually didn't renew her enlistment after the war and took a civil service job and got over to Japan as a part of the National Aeronautics

Administration. Because she wanted to get away from him, because she said, "I can't stand him, Helen, I can't stand him!" She says, "I'm here in the office until 3 or 4 o'clock in the morning every day and I don't get any sleep." That was Admiral Byrd. Dictating his memoirs and his notes and his plans before and after Highjump 1 and 2, until 3 or 4 o'clock in the morning. So, that's one example, that's another friend of mine whom I still write with, incidentally. She's retired and she's down in Florida. And what else? I had another duty yeoman in the office with me who shared my duties at the Hydrographic Office. She took over all of the office work and I used to do the Cook's Tours and learn all about photogrammetry and chart engraving and lithographic printing. So I used to like to do that and she used to take care of the personnel work. So, … we were marvelously complementary to each other.

Who else can I remember? I remember … Mavis, Mavis Carver. In the Seventh Wing of Navy communications, top secret annex down below, and at the Naval Observatory all through the war and later became head of a section of the civil service after she came out of the Navy. And little dribs and drabs of this are coming over public TV on the Enigma Solution and all of that kind of thing. So she was right up to her ears in all of that Navy communications. Again, an enlisted Navy chief. So she was in that aspect of it.

… We had the Navy photographer at the hydrographic office who stayed a photographer and now lives out at Pebble Beach. She's a Californian, and she returned there. I don't know what she did after she left hydro, but she was an interesting character. Used to ride with Victor McLaughlin's light horse troop, … a great rider. That's how I got to know her. We used to go riding all over the Maryland countryside. So they were all interesting characters. I mean, these were women who were clearly not going to go home and knit, you know, in any sense. And they didn't, and they didn't. A couple of them became medical doctors. A lot of them went into technical work. Interesting, interesting careers.

KP: Why did you stay in the service after V-J Day? Had you thought of leaving the service?

HW: Oh, no. I had no intentions of getting out immediately at V-J Day. I was still saving up my money for college, was taking night courses out at G[eorge] W[ashington], and all sorts of odds and ends like this, and I had this assignment with Admiral Burke, and the study went on after V-J Day. So, of course, I stayed on with it, and stayed on until August 1948.

BT: I was trying to figure out how long this study lasted.

HW: It only lasted about a year and a half, less than two years, okay? But it bracketed after 1945, and, of course, at the hydrographic office I was involved in all of the-- what is now called downsizing, the release … and the conversion of the military establishment to the peacetime establishment at the naval oceanographic office; right.

BT: So a lot of people did that.

HW: Oh, yeah. Most of the fellows, … of course, they were dumping off ships and were glad to see the end of it. We were all glad to see the end of it, but particularly, they were not averse to returning home after knocking around the Pacific for more time than they'd ever dreamed in their worst nightmares. That's ungrammatical, but I think fairly accurate.

KP: You spent some time with the public relations office.

HW: Yes. That is what I told you about: civil liaison office of public relations.

KP: What were your duties there in the specific sense?

HW: I was the duty yeoman attached to the deputy director. There was a commodore, Commodore Glass, who incidentally was Drew Pearson's brother-in-law. He's the one I mentioned earlier and the captain, I was assigned to his name was Winston Folk. I think he just died recently up in Lyme, Connecticut. He must've lived to about 95 or 96. But I used to handle his correspondence and generating the correspondence to contain responses from civil organizations; our contacts were with civil organizations, which included Congress. So … we would be busy setting up naval orientation VIP courses and cruises for people in industry and politics and Congress, and people in civil life, too, civic leaders and others. It was kind of a middle to upper bracket thing, and, again, this was the brainstorm of Forrestal, who was personally committed to this program, too. So we would carry on the whole protocol; setting up, contacting, interviewing with people of this sort. Then we'd get a group together, or whatever was coming down from the Navy and send them off or visit Congress, or again, have conference discussions where we would reach a certain, hopefully pro-navy or kindly-look-upon-the-navy type liaisons. For instance, we handled the liaisons with the Navy League in Norfolk, chambers of commerce all over, universities all over the place, large commercial entities; everything from big department stores to General Motors, like that, carrying on that liaison.
We had a fascinating … literary kind of staff. I told you about Bill Lederer who was a correspondent for the *Saturday Evening Post*, who then started book writing. And Walter Karig, who wrote kids' science fiction type post-war stories and Edmund Beach kept floating in and out with his submarine stuff. We had quite a few submariners, back really from R&R who were fascinating characters, some of whom were really on the verge of having cracked up. One of them was the skipper of the *Tang* who was the one who, the {The *Illustrious Tang*}, who put the torpedo into the Japanese battleship coming out of harbor when it was launched, the *Yamamoto*. Those guys were all back, and we had fascinating Navy characters there. A lot of them were assigned to that, which was kind of a nice quiet R&R billet in Washington, to, frankly just get themselves back in one piece after that kind of wartime activity in the Pacific, really. So I got to know quite a few of them. A skipper of one of the cruisers off the Aleutians that had that abortive battle with the Japs in the dark off the Aleutians. His name was Macondry, you know, a fine man. They're all regular Navy guys. So … we used to have these famous war heroes there. Capt. Bob Craighill, who had two Navy Crosses from having a couple of destroyers shot out from underneath him at Okinawa. These were the kind of people that you worked with every day. And two-thirds of them were there not to really carry on with the work, but to kind of lend some prestige and appropriate postwar naval distinction to the place and to get themselves properly taken care of, now that it was all over.

KP: It sounds like from your stint in Washington, especially at civil liaison, and all from your experiences with your father, you had a pure sense as to how that battle took a real toll on people.

HW: Well, yes, … not only from my father, my first early instance, but from the people I got to know and like and work with. I mean, it was constant. We saw them coming back and forth, you know. They were in and out, and we used to get the combat reports. I mean, all of the liaisons in Washington would come in to the command level, which was then behind the CNO's desk, which was then at 1800 Constitutional Avenue. They had a war room across the hall, which we could check up on. Because of my classified level, I was in there, not too often, but whenever I had a reason to be there, particularly when I went in with the general board, because we were constantly checking on military protocol; where the fleets were deployed, whether certain things were working out, whether what somebody said in that report was the way that Burke remembered it and so forth, and I would be in and out of there, validating things and checking up … on status, current status. So, yeah, I had access to all that kind of thing. And that official view of what had gone down contrasted with or perhaps mostly agreeing with talking with the guys who were coming back off the ships, which we did, of course, all the time because we knew them personally in the barracks. At that time I had shifted from Suitland down to a downtown quarters, B barracks, on Potomac Park. And there were quarters K across the river, and quarters B, and there was a military barracks there for sailors as well, in the Potomac River Naval Command Personnel Reassignment. So they would all be coming in there for reassignment, so we would see them in the mess hall. I mean, in the chief's mess, at the time but rank bars were a formality we did when we were on duty, but other than that, it didn't exist in the wartime Navy.

KP: When you say that rank bars did not exist off duty, what do you mean?

HW: Except officially, on duty. You know, on duty, in the office. Then it was always Admiral, Captain, Chief, this and that.

KP: Let's say that you walked across the street to get a cup of coffee, then rank meant …

HW: Nothing. Oh yeah, Burke, talking about his sensitivity to people, it depends on who was busy. When I or the other chief would be busy in the office, he says "Chief, I'd love to have you finish that, … we're getting him back in the morning to continue the testimony, and I'd really like to review all of that ahead of time so that we could come in and start right off tomorrow. Do you think you could finish that for me?" I'd say, "Sure." And I'd be bashing away and doing my notes, and he'd say, "You still at it?" And I'd say, "Yeah." And he would say, "You want a cup of coffee?" "Yes, thanks, I'd like that, sugar only." He would say, "Yes, I know that." He would go out and get it himself, always. Or he'd run errands for me. You know, if I said that I had to pick up a post office thing from my mother, it's my birthday, he would say, "Don't worry about that, I'll attend to it." And he'd either send somebody or he'd walk down to the Navy post office and bring it back himself; very much so. If he had a break, you didn't have a break, and he wanted you to attend to what you were attending to, because it was important to him, he'd fill the gap; if it came anywhere from buying stamps to bringing you a cup of coffee, or sending in a package of imported tea that one of his friends sent him through the grapevine from the China radio stations. Of course, the Navy manned all of those inland, internal Chinese radio stations because of the aircraft direction bombing, you know. We knew a couple of those fellows, too, who came back. You see, being in a position of a command center like that, and at that kind of a level, if these people were pulled in for reviews and downloading of their information or

debriefing, as the official word is, I would inevitably either be in on it either first hand or second hand. So this was kind of, you know, everything flowed through the official channels, and I was just a minor cog looking in from, … but along, the channel.

KP: But you are in a rare position because a lot of people …

HW: It was just fortunate, that's all. I was lucky.

KP: A lot of people who might be not a senior officer, but just below that and know very little.

HW: No, it's true. The liaison lines were very strictly drawn, and if you were in the stream, you were in it, and if you were outside, … the walls were not permeable, let me put it that way, okay? You were either in or out, and I was lucky enough to have floated into these, or to have been pulled into these particular commands the way I was just through sheer being there and being, of course, adequately qualified. Naturally, that goes without saying, but in those days it was rare that you'd find anyone that wasn't really on top of it. At least I didn't find anyone, but perhaps … that was the swim we were in at the time, I don't know. … It was an extraordinary time.

KP: Given your career path and the war, how would it have been different if you had been a man? Did you ever give any thought to that?

HW: Well, I would probably …

KP: For example, would you have stayed in the Navy?

HW: Yeah, … I probably would have been in sooner. And, of course, I would have immediately accepted and opted for a commission and may have stayed in, may have, may have. But I had always planned to complete and continue my education, so I mean, I would have done that one way or another, in or out. But in the Navy you could do that, you know. I mean, most of my friends had gone through the War College, and out in the Naval PG School out in Monterey, which I got to know fairly well from Bell Labs anyway. I was in and out the doors. It was strange in a way, all of that seems so familiar, which was why my working career was so satisfying, too. I had never really left the Navy, and yet I was acquiring all of this new upper-bracket professional experience and technical qualification, … which was living the best of two worlds. At least two worlds, maybe more.

----------END OF TAPE TWO, SIDE ONE----------

KP: Before leaving the Navy, I want ask about the social life and living in wartime and postwar Washington. What were you and your other colleagues' opportunities for friendship and dating?

HW: Yeah, all the time. I mean, everybody talked about the shortage of available men in Washington, and most of us were beating them off with a club, I tell you, no kidding. I mean, no, really. Yes, we used to date, and normally it was in groups, though. Rarely one on one type dating. It was a two or three kind of thing. … And indiscriminately, of course. … Mostly commissioned officers or upper ranks, and/or professional civil service, a lot of the people from

NRL, physicists from the staff, and a lot of the sailors from the area, too. Totally indiscriminating, except on a personally selective basis, and rarely one on one, sometimes a couple. Two of us would say, "Gee, I met this interesting guy. You know, I'd like you to meet him too; have him bring a friend." You know, that kind of thing. And that went on incessantly. Well, a great deal of it, and we just never thought of it as being anything but kind of routine. [laughter] Let's put it that way, no problem.

KP: What were the regulations on who you could date, and how did they actually get played out?

HW: Well, … to the best of my knowledge, they were never officially promulgated at all by the Navy, when somebody would make the remark in boot camp or training school that you weren't encouraged to fraternize with officer personnel. But, of course, that's what they said, and, of course, in practice it turned out to be a non-player entirely, except in an official capacity. I mean, when you are on duty, and when the barracks had do be policed, or when you were making your duty report or something like that, everything was strictly by the Navy book that was written many generations before any of us. But beyond that, … it was a totally free movement. At least, it was so perceived by me.

KP: So in other words you were …

HW: It certainly didn't stop me from going anywhere or dating anybody or seeing anybody.

KP: So, in other words, it was common for women in the Navy to date officers?

HW: Always, and vice versa, yeah absolutely. In fact, it was chronic. … It was the pattern, in Washington, anyway. … All I can speak of is in Washington, but that was the usual pattern, all the time. [laughter]

KP: I am awfully curious, you mentioned that after working hours the bars often came down and separation between enlisted and officer.

HW: Well, the formality was at an end.

KP: What about between an enlisted male personnel and the officers? Were they part of this circle or was it strictly in a sense between enlisted women and male officers?

HW: Not as much. The women moved freely, much more freely than the men did, but it also was fairly flexible with the men, too. They would often get involved, for instance, … in a lot of teams, playing golf together, on the softball team, stuff like that.

KP: So, in other words, you could have a softball squad with officers and enlisted men?

HW: Oh, yeah, oh sure. The captain would be getting up to bat along with a seaman. … As long as they were socially blessed, as it were, activities. Anything athletic, of course, automatically had that kind of approval on it, okay? Particularly amongst the men.

KP: The reason why I ask …

HW: Team sports in particular. Yeah, we always had mixed teams.

KP: The reason why I sort of asked these questions is because aboard the Navy ships there was often a fetish of separating officers and enlisted personnel.

HW: Well, it wasn't a fetish, it was the regulation, and that's on board ship. I mean, things are strict on board ship necessarily. [Even beyond war, operating at sea is just too hazardous to be managed like a debating society.]

KP: Yes, but Navy is much stricter than either the Army or Army Air Corps. I mean, the Air Corps and the Army, are much looser about officer-enlisted men distinctions.

HW: Yeah, that's true. I think part of that stems from the tradition of sea command, which antedates anything in World War II by many, many hundreds of years, and that tradition is continued and it is a heck of a lot stiffer, a lot more formal, a lot more … clearly segregated, and rigidly maintained aboard ship.
And that's been my second hand experience from everybody I've known who has served aboard ship. An interesting incident of this sort: When I was still at my Bell Laboratories sea-going career, my last major trip for Bell Laboratories was going aboard one of the USNS vessels which had been instrumented with special underwater charting equipment, then being installed and checked out for the first time. And as part of their checkout, we gratuitously had them work on part of our projects in the Philippine Sea. The Philippine Sea, Japan, that big diamond shaped ocean, … Okinawa is here, Guam is at the end, okay, and the Philippines are over here, Philippine Sea. She, the ship, had been doing that survey work in the Philippine Sea and I went out there to go aboard for three days and to check out the data and the system and to make some technical judgments of the material … and do some analysis on board, and do my thing and fly back to Bell Labs. Okay, so I did, but while there--this is a USNS ship--with a Navy crew, Western Electric Survey Crew on board, engineers on board, effectively as supernumeraries. They had one woman in the crew. A third class boatswain's mate. It used to be called coxswain, now it's called a third class boatswain's mate. And the captain was very austerely correct in formally meeting me and my colleague, welcoming us aboard, and all of that kind of thing, then broke down completely and had coffee in the mess room and everything, hail fellow, well met. But he went through this formality while getting aboard and going off, and checking quarantine when he came into the NOB in Guam, and all that jazz, as usual. And the word had gotten around, and the engineering staff who were there were expecting me, and had kind of let them know that, "Yeah, there's somebody coming here, who's kind of interesting for you to meet. This is one of the people from Bell Laboratories." Me. And that surprised a lot of the crew, and also the one woman in the crew, I guess, got to know about it. The point is, where I spent my time for those three days aboard and where she was working, {because she was a deck rating}, "Never the twain shall meet." But I kind of sensed that she was aboard. And lots of the sailors mentioned it to me. Sailors came up to me saying, "But we have our own woman aboard here, you know. We saw you coming aboard with Mr. Ravenel, and we knew about you, … but we have somebody aboard the ship, and the captain's giving her a hard time. We're all agreed that

she should be promoted right away, and she's passed all of her qualifications, but he's dragging his feet on giving her a PO second class promotion." Which is in his hands, even though she's qualified; unless the captain writes off yes, nobody's going to get promoted aboard a ship. And they said, "He's giving her a hard time. Maybe you being here, will help out." The guys were highly supportive. These were the fellows, the sailors, whom I only talked to a few of, but the ones I talked to were highly supportive. And it went back and forth and back and forth like that. And she and I would pass each other and she would sometimes rig the brow, the gangway, for us to come on board. And all we would do is, I would look at her and she would look at me and she'd smile as I went past and gave me a salute. [laughter] And so, this went on, and it was so funny, and I never said two words to her, but it was clear that she was perfectly happy with what she was doing, bent on making a permanent career out of the Navy, the fellows so told me. Her fellow seamen told me. And it was interesting; there was this little incident, now, and this was just a couple of years ago; when I tell you how time moves on! An interesting ship, the USNS *Wilkes*, in the Phil Sea, and I was doing my Bell Labs bit there and came home through Tokyo. I figured they owed me a trip to Japan, putting up with all of that, so I came home via Tokyo. Oh dear. But, speaking of women in the Navy and strict protocol on ship; it still goes on very much so, but it goes on … in I think a comfortable way. Where it's working it's happy, where it's not working, nothing is going to make it work, except the people who are involved who may or may not have an adequate commitment to making it come out right. And that's the way it is, I mean, that's the way you'd do it yourself, and that's the way you'd expect it's still going on. And I expect it is, both from that little intimate, one and only experience with it, on shipboard when I was there in an entirely different capacity and therefore removed from it myself, but, of course, the sailors would arm you going into the mess room or something, to talk. … [laughter] These passageway conferences, {of course, we developed hallway conferences to a fine art at Bell Labs anyway, so …} it's the way the world gets to share its information, I suspect, have that meeting in the hallway.

KP: You mentioned you viewed the Navy partly as a way to get the necessary money for an education.

HW: Yes, well, I wanted to be a part of the war. No, I never thought about it ever coming to a GI Bill of Rights or anything, that was just kind of the cherry on the top of the whipped cream on the top of the sundae.

KP: When did you learn about the GI Bill and when did you sort of all of a sudden realize that, "I don't have to worry about college?"

HW: I knew about the GI Bill kind of directly from the inside. I was still in naval civil liaison when they were working on the legislation in Congress, which we were maintaining our liaison with. So, in fact, we were called upon to develop some ideas about how it should take place, and what the requirements should be. We were also directly involved in the reformulation of the naval reserve which was part of that same thing, post World War [II] Unification Act, and reformulation and restructuring of the naval reserve, and all of the other military branches, of course. And the final formulation of the context and the provisions of the GI Bill. So we were sitting there in that liaison office, and I knew about it happening even as I was still in the Navy and I had another two years to go, and I said, well that's great. I'll still keep saving my money

and we'll be ahead of ourselves. When I came off active duty and went back to Douglass, and stayed in the reserve, of course, I simply bought myself a car and decided I was going to commute instead of living on campus. I figured after five years in the Navy, living in barracks and government quarters, living in a college dormitory was going to be no source of education that I really hadn't had thoroughly worked over in communal living by that time. [laughter]

KP: You mentioned that you had taken courses at George Washington University?

HW: College entrance requirements. Brushing up on my languages, and the few science requirements, I didn't have [in order that I could] start majoring in math, let's put it that way. So I was just picking up qualification courses, language and chemistry, and physics, that kind of thing.

KP: Had you thought of staying in the Washington area or did you want to come back?

HW: No. It was a great place, and I knew I had my friends there, and I went visiting back and forth there for twenty years, and it's close enough aboard. So, no. I didn't think of remaining in Washington.

KP: Did you want to come back to Jersey to be close to family?

HW: Not really, but I wanted to have a home operating base and there certainly wasn't anything wrong with my family, so I yes, certainly, did look forward to coming home and coming to a quiet, well recommended, liberal arts women's college. I didn't mind whether it was co-educational or not, but I didn't mind it being otherwise, either. It was close, convenient, and academically well spoken for, so I said, this is the place for me. Liberal arts major, too, that's important. I think every scientist should have a liberal arts background simply because you can't specialize in anything today before you get to graduate school anymore. I mean, you take a few courses in your junior or senior year, but you really can't technically specialize in anything in a broad sense at an undergraduate level, at all. It's just a foundation, it may as well be as broad as possible.

BT: So, you had heard good things about Douglass?

HW: Yes, and I looked it up, and at that time it was highly recommended academically, yes. I didn't know anybody at Douglass, by the way. It turned out that, I didn't *think* I knew anybody at Douglass. As it turned out, after I was all through with Douglass, it turned out that I knew someone at Douglass very well, because, … Dr. Johnson, was head of the minuscule little physics department over at Douglass at that time, and she happened to be the wife of the Director at Bell Telephone Laboratories who was head of the Underwater Research Department and never let me know. I never knew, until she was in his office one day and he said, "By the way, I'd like you to meet Mrs. Wiebush, my wife, Dr. Johnson." [laugher] And I said, "Oh." So they had all of the inside scoop on my physics courses and my math courses from Douglass. It was funny, but I never knew I had a friend at Douglass until after I had been at Bell Laboratories for a couple of years. It was kind of funny.

KP: What was it like going back to college? You mentioned it was much easier than what you were used to.

HW: Well, it was much easier than the Navy. Intellectually, it was fine. It was just a romp, and I was ready for it and I was ready to relax, and spread myself over things like that. I think I never opened a book, even a math book, until my senior year. I mean, all I did was take my class notes and riffle through. I didn't have to study at all. No, it was true. Most people who came through World War II had such a mature vision about things and who particularly knew how to organize their time efficiently, that they had such a terrific head start on anyone who was coming out of high school, you know, that of course it was easy for most of us. It was just a romp. … I never even cracked a book, except that I'd read over my math text before an exam. That is what I would do. I'd read all over my notes the night before, close the book and say "No, Helen, don't cram, don't think about it. Just play it cool." That was it.

KP: When I interview people over at Rutgers College, there's a real chasm, although they don't quite admit it, between the GIs coming back and the 18 year old students fresh out of high school.

HW: Oh yeah, sure.

KP: What did you notice at NJC? Was there a group of you that had been off in the military?

HW: No, there was only me and I only got to know my fellow marine when we went riding together down to Princeton; again, the horse factor. And she was in a class below me, and wasn't a math major. I forgot what she was majoring in, but I'm sure it wasn't math or physics, okay? And she was fine, and we were delighted to find each other. [laughter] She from the Marine Corps and me from the Navy, and we were the only, two of us that I knew at the time. I kind of shocked an awful lot of people advising them to have some fun and join the NROTC if they could, you know, to have a couple of graduate school years paid for and to get a commission automatically, and maybe enjoy themselves, and think seriously about doing something a little bit different. Because it couldn't help but broaden their aspects and their attitudes towards things. It couldn't possibly have anything but that kind of an effect, and I thought that was always a positive effect. I certainly found it very positive from my own point of view. And what I thought was good for me, anybody normal or usual should, too. I don't think of myself as being unusual or exceptional or anything like that at all; reasonably average or above mental capacity, surely, but just an average person and what I enjoyed and experienced and found useful anybody else ought to, right? And so, with that in mind, I would go ahead and recommend it to them. But there was just she and I: I wish I could remember her name. She got married so she has a different name, we were the only two of us that I was aware of at the time, and I didn't mind that in the least, being alone. Everybody welcomed us. In fact, unless I mentioned it, very few of them were aware that I spent five years in the Navy, you know, and had that big an age gap with them.

KP: So you were not isolated and in a sense off to a corner?

HW: Oh, Lord no. Oh, dear no, very much not. I don't know whether people looked older than they were in that age, or whether I looked younger than average, or what. But there was no perceptible gap in anything. I mean, it particularly became evident in my junior and senior year when we began honors working, and on special seminar projects and stuff like that, and began intellectually screwing around in each other's minds. Particularly math majors have to do that kind of thing … and we developed very much a group of five or six of us; a study kind of group, and there was no distinction whatsoever. They never thought of me as not being a contemporary, and I never did, of course, either. Which, of course, I think is nine-tenths of the battle. If you see yourself as apart, you'll remain apart. If you charge in and give it your best, usually the barriers break down, sometimes they take longer than other times. At Bell Labs they took longer than I'd hoped, but they broke down, too, so eventually, I found that it generally works out well; I sensed that.
You mentioned that [there was a gap] among the men. I took a couple of courses downtown, mostly in geophysics and geology. I was interested in that kind of thing, too, on the side. And I would get this frat-house-philosophy-type-group sitting in, and they were very immature, of course, noticeably, terribly immature. I mean, the difference in the age gap between males and females of the same age, calendar age is quite marked at a college beginning, I think. It was in what I saw of them. And then there were the three or four fellows who were going under the GI Bill who turned up in the class. I was a hail, fellow, well-met kindred soul to them, even though I was a woman, because I and they knew where we were coming from with military experience behind us and the other kids did not. Nor did they care to, apparently. It was at the age of scoffing.

KP: So you had a good relationship with the GIs at Rutgers College.

HW: Fine, the few that I encountered.

KP: There was a natural rapport because you had been in the military.

HW: Exactly, we had that common bond, yes. … But I understand that the cleavage could exist with them where I found none at Douglass. First of all, the school was much smaller. …

BT: It is interesting, because sometimes I think of freshman and sophomore girls in the colleges being a little immature. A little into lots of social things, and I don't know what they were like in 1948.

HW: Oh sure they are, oh sure, sure. But it didn't particularly disturb me. I mean, I didn't mind that.

KP: So you felt that there was a real difference in the Rutgers College class?

HW: Definitely, definitely. … The men's college courses which I took as opposed to the courses I took at Douglass was very different. Of course, I was also taking graduate level courses at Rutgers, mostly in the university and in the Ag College. I had wanted to be an Aerographer's mate once upon a time, so I took a couple of courses in graduate climatology and meteorology over at Rutgers. And at the graduate school level, we were beginning to get an

influx of foreign students there. They were all men, however, but foreign students getting mixed in with the graduate level work, and the atmosphere there was entirely different, but the downtown courses that I took at a junior/senior level at Rutgers College -- very much so. And I understand, from this brief experience of my own, I would say that they were 100 percent right in saying that that cleavage did exist. Noticeably. It was perceptible to me, even though I sat there three days a week maybe for one course a semester, in those courses. Not in the graduate school courses.

KP: Since we are on the subject of Rutgers College and Douglass College, what was the relationship that you observed during that era?

HW: Oh, it was just kind of used as a dating pool more than anything else. Otherwise there was no association. There were no men students who came up to Douglass to take anything, anything at all.

BT: But some women …

HW: Well, I did. Very few of us did, but I did, but I was …

BT: But not a lot. Now, of course …

HW: Yeah, it's back and forth and there's a great mix. But I was doing certain specific things. I mean, those were my relaxation courses, my courses in geology, and geophysics, and meteorology were sort of my relaxing courses.

KP: What about the social world of Douglass? What activities did you participate in?

HW: Very little. I had my own circle of friends established by that time, and so I socialized with them. I didn't live on campus.

BT: So you were a commuter. And sometimes there can be a gap, not a big gap, but there can be a gap between commuters and residents.

HW: … Right, right. … And that was deliberately chosen by me, because as I say, five years of living in Navy quarters, … community campus living wasn't going to teach me anything. And it would interfere with my own social life, too, that's another thing. It would interfere with my keeping up with my own circle of friends, who were distinct, at that time, from the college group; the undergraduate college group.

BT: So when you came back from the Navy, you had friends with whom you had been friends before the Navy?

HW: Before and with the people in Washington. I would visit down in Washington, very frequently, as much as maybe once a month. Certainly once every other month, all the time, so that was continuous. That was my social ring of contacts that was pretty steady.

KP: Were you at all concerned that living on campus would, now you mentioned that you had gotten enough communal living, but, I mean, you would have gone back to college, and have to keep curfew, for example. Was that a part of it?

HW: I'd never even thought of that. I thought I just I didn't want to be bothered with Mother Hen-ing younger kids. … May I put it bluntly? I was not in the mood for that. I went back to college to do my own thing, … admittedly not in any kind of a social function other than I didn't pick and choose for on my own level with my own friends which had already been a pretty well established group. I'd already had a kind of social milieu that I had inherited from my five years away in Washington and in other places in the Navy, mostly on the west coast, west coast and Washington, primarily, that I had more than enough to take care of with myself socially and I wasn't looking forward to … or anticipating anything that would interfere with that because frankly, I was enjoying it too much. It had come about naturally during a period when enduring contacts and friendships were going to be made, and I wasn't in any need of nor frame of mind to willingly much accept anything else. It's kind of interesting that you mention that social background that you meet. Of the people I knew in college and even graduate school versus Bell Laboratories later on, with its double whammy with the Navy associations as well, and the professional field, technical field, and the people I knew in the Navy, there are at least six close friends, colleagues at Bell Laboratories, {or their surviving widows}; most of whom were men, of course. And at least a dozen friends in the Navy. And two people I met at college and graduate school, Rutgers. Because I had already … met the formative years of my life and spent them elsewhere, and they were not rigidly set. Bell Laboratories proves that, because that came after college, but they were already pretty well established. And it's interesting that you find you have a dozen close acquaintances in the Navy, five or six intimate friends, professional colleagues from Bell Laboratories, and two people, all of my college years, which is about six, somewhere between six and seven, maybe eight.

BT: But I think that typical, I have virtually no friends from Rutgers graduate school, other than Kurt.

HW: Isn't that true?

BT: And Kurt and I are not really close friends. We did not live on campus, so it was like you took your class and you left.

HW: … That's right. … But … you go through a certain formative period in your life, I think, where you make these decisions and you make these selections, and it's not necessarily rigid, as I say, but you essentially come into a situation where you're already pre-formed … in a position to be able to make judgments and to choose. Young kids coming out for the first time don't have that basis of judgment. Personally, they have certain family protocols and social background and mores that they're a part of the culture of, but they themselves individually have not been formed yet, I don't think, and, of course, anybody who went through World War II got formed in a hurry, willingly or unwillingly, right? And that's why it was such an important impress, I think, on our personalities, but then I kind of came home again when I went to Bell Laboratories, getting into the underwater research when it was just like, "Boy I never left this," and I was off and running again for another glorious 40 some-odd years right?

BT: You mentioned that Professor Nelson was your favorite professor, right?

HW: Cyril Nelson, right.

BT: Yeah, what stands out about him?

HW: Well, the fact that I felt comfortable with him, he had couple of sons in the Marine Corps, he was all over me, "Oh, here is somebody from the Navy." I guess he somehow approved of me. He was also the head of the Math department, of course, and for that reason I had rather closer liaisons with him. And Grace Hazard, Grace Hazard who is still somewhere off in Pennsylvania, excellent teacher, best math teacher I ever had.

BT: It sounds like you were very pleased with the education you had at Douglass.

HW: Well that's because I was able to hit it myself, and had a rapport, I think, with Nelson and with Hazard, I mean Douglass is such a small school. Math majors there used to be eight to eleven of us in a class; in physics lab, three. So you see that anything that was available to be learned was available to be learned without any obstruction, and if you put yourself into it, I found nothing wrong with it. I would have liked possibly going to a more academic, for graduate school work anyway, a more academically prestigious location, but I find it didn't do me any harm, because an interesting fact, a play on the male/female bit, I knew that if I would put myself into it, and do the right thing and do decent work, and I could with proper guidance, I think, was capable of doing decent work, and Nelson and certainly Grace Hazard provided that for me, which was more than enough for me to be able to fill in everything I wanted to do myself. And I'm caught in another long sentence; what was I trying to say by that? No, it wasn't any limitation to me going to Douglass as an undergraduate school at all, the fact that it was small, that it was personally directed, that the time was right for me and for them to have a hospitable welcoming and to have a small enough class that you got whatever special attention you needed, without having to worry about the educational mill grinding on over you, but that had an interesting feedback later on when I went to Bell Laboratories and began recognizing that it was going to be tough sledding from the ground up again trying to get professional status. All women were hired at the time, I might explain, at Bell Laboratories, I don't know anyone who wasn't, although they'll loudly proclaim to the contrary now, who wasn't hired as some level of technician, either a low-grade, or a middle-grade, or a high-grade technician. I've known people who walked in there, whom I later began to interview, who held Ph.D. degrees in physics, and they were offered jobs as associate members of technical staff. I remember once the director, a fine woman, extremely personable, who was tired of civil service, and she was Director of the naval testing laboratory at Orlando, Florida. Now mind you, this is not somebody working even on a scientific level, but the director of that laboratory. They offered her a position, and I interviewed her. My closing words to her were, "Well I don't know why you're coming here, because I don't think you will be accorded the professional recognition that you think, coming here. But if you come to Ocean Systems, it's a great place to work. You'll be at the forefront of your technical field. We're the ones who are going to write the books on it in the next twenty years. It's a great place to work for a scientific career, but I don't think that you're going to get the official recognition that you're going to get in civil service, because there, you

are a laboratory director." I said, "You're not going to be anything remotely like that here." They offered her a position of AMTS, a starting position of AMTS. I mean, she's the director of a naval testing laboratory! Case in point, of course, that was a long time ago, that was over 40 years ago, but these restrictions were part of the system, there wasn't anybody going out of their way to beat you over the head or to chain you down or anything, but this was an accepted part of the system. So if I had gone to Harvard or MIT or Brown or Case, which were sending us some fine technical people, or to University of Kansas, they went in for a lot of high-energy physicists there, very close colleague of mine from Kansas died very recently, but anyway, … I'm running off the point here, if I had come with that kind of background the odds were that I would never have been hired at all. I would not be hired as a woman, if I came in waving a degree from MIT. I would either be a technical assistant, if I were willing to think about it or I wouldn't be offered the job at all, because they would never offer a job like that to people from Harvard or MIT or Brown. You just wouldn't have even gotten offered a job from Bell Labs, because you were "overqualified" because, "A" you have a degree from a prestigious scientific technical part of a good university, B you are a woman, and there's no place for you. And they were right, there were no places to hire woman at that time, which is 40 years ago, at that level. And that's the way it was, that was the system.
So I said to myself, "Helen you will enjoy yourself here, and sooner or later, … the walls of Jericho will fall." And it took a long time to do it, but it was done. And I believe I was told, by two directors, although the two may claim to the contrary, and I don't want to sound like this because it sounds like I'm boasting and I shouldn't be doing that, because that's not right to do in an interview of that sort, I was the first woman ever to be reclassified as member of the technical staff, senior scientific staff, at Bell Laboratories. Of course, the floodgates opened a year or two later, you know, with hiring people, women, into training programs.

BT: When were you finally reclassified?

HW: I think it was 1964, it was late, it was how many years after I started there? It was in nineteen-sixty something. It took me either fifteen years or twelve years. … It was either '64 or '66 [to be labeled a staff professional scientist].

KP: That you were re-classified.

HW: That I was re-classified as staff scientist, member of technical staff at Bell Laboratories. But, so what? I mean, that was the system.

KP: But before that you were only a "technician?"

HW: Well, yes, I, of course, I mean, was promoted as often as people could permit me to get there, as before.

KP: Well, it sounds very much like your work with the British Ministry, your work was very interesting and your pay would go up, but there was a real limit.

HW: Yes, exactly, yes, precisely so. And I personally think that the final official blessing that came down on this was because my salary was out of sight. … You know, … Bell Laboratories

had a thing that they called the green book, where they would record past years salary. It was nameless, but the way the trends were for various job classifications, degrees you held, math, physics, whatever; … and they would pass this around, and it got to be funny, because you would come in for your annual review. "Well, Helen, you're doing great work with this fine technical report, you gave, x-teen papers, all that jazz. And you're getting this great raise." … Usually, Bell Labs' raises averaged between ten and fifteen percent a year, and several years I was hitting a twenty percent raise in a year, which is unheard of today. In those days, that was 40 years ago. Then, of course, I'd say, well, look at where I started from, you know, sticking in the velvet-edged stiletto when I could. But it then got to the point of where, you're right. I think they broke down finally and had enough evidence when the green book was like so and the curves were going like this, and my curve was about two inches off the top of the cover of the book, and at that time, I think, they finally faced facts that there was a time for adjustment and things were changing, and that somehow, the technical salary review committee was going to pass me this time around. It was kind of funny. Besides which, … I shouldn't talk like this, in a sense, disparaging anything, because I wasn't disparaging people. They were locked into the system, too. And there wasn't any way they could get around the system, until they … had battered it enough, and had developed enough chinks so that they … could begin slipping people through, and I was one of the very early ones, if not the first one that was able to be slipped through.

KP: Backing up a little bit, when you were going to college, what career did you think that you'd like to have?

HW: Something working at math and scientific technical fields and associated with undersea work. And oddly enough, that was exactly what I wound up doing. My orientation at the hydrographic office was to that end.
…

KP: So that assignment in the Navy was a pretty crucial placement. If you had just simply gone to another assignment, things might have been different.

HW: That's right. I would have been be doing something else technically. Probably math-wise or something, but I would not have gotten into the undersea physics kind of part of it that readily, or I would not have seen so clearly that this was something that was wide open. If I might make a funny kind of pun, the wave of the future. But it really was, in that sense. It was a coming technical field, which was opening up wide open, and there was going to be room for everybody and there was going to be a lot of new formative work being done in that field. Then I accidentally interviewed over in Bell Laboratories, you know, when I got hired. Three of us got hired from Douglass. I think we were the first three women who were hired in their post-World War II hiring thing. And the three of us were from Douglass, that's interesting. Well that's an aside about Douglass. However, yes, if I hadn't had that reinforcement that early on I might have floundered around, I don't think I would have long floundered, however, but I would have possibly gone in another similar but not that particular identification.
And it was interesting and fascinating that when I turned up for my interview over at Bell Laboratories, one of the three divisions wanted me over at Murray Hill, and one of them was in the analytic math department, and the other one was in the computer development thing, and

what was his name? What was that Greek fellow? Papadakos. Who was he? He was this signal processing character over at Brooklyn Poly for a while. And who was the fellow who wrote the book on calculus? He was there, too, David Slepian. … He interviewed me … and Wiebush from the underwater research department. And I said to myself, "Well, I'm a math major, I can use that anywhere, and it was impressive that these guys offered me a job." After I was through with my interviews for the day, all three of them offered me a job, which was encouraging. And three of us from Douglass got hired, and there were about eight or ten other people there. All three of us from Douglass were accepted. And, I walked into Wiebush's office, and he said, "How would you like a job here?" I said to myself, he wasn't telling me anything except the bottom lines, you know, except, of course, I knew it had to be Navy work, and I said, "Well I know I darned well that this has everything to do with naval research, and I know I'd be very comfortable here, so of eenie, meenie, miney, moe, I'm certainly going to pick the one that has naval connections, and that is connected with undersea research work." So that was no decision for me at all. I mean, … the handwriting had already been on the wall ever since 1945 in the US Navy Hydrographic Office on that. And so, that was it, as quick as that. Everything again, I say in that phase, as I look back on it, it was really pretty easy for me, I think. The decision making was easy, anyway. I mean, one had to come up to toe the mark with it, but the decisions were easy.

KP: You mentioned that there were three other Douglass women who were hired with you. Do you know what ever happened with them? Did they stay with Bell Labs?

HW: For some years. One of them was Annette Phillips, and she worked for several years, got married, stayed working in the field, … she went into computer work, and then she was from a fairly well-off family in New Brunswick. Her family owned a chain of drugstores or something there. And she just faded out of sight. I didn't keep track of her beyond the time she left Bell Labs, except that it was pleasant and she was continuing at least dabbling or using her work. I think, the other, … she was really good. She was somebody I have forgotten the name of, and I can look through my Douglass yearbook and pick her out [her name was Betty Brayton]. And she went up to IBM in computer technology and she later became some kind of divisional director or something like that. Oh yeah, impressive career at IBM. Whatever happened to her beyond that point, I don't know. But she got on very well up there, as far as early druthers for women working in applied math and computer technology. One of the things I pride myself on, the other great decision I made was to have nothing whatsoever to do with computer work, because computer work is the white-collar ghetto for women. It was particularly so in the early days.

BT: And you could see that then?

HW: Oh, absolutely, it was clear to me, because I worked with wiring our boards down in the naval oceanographic office. They were just using it for chart configuration and data, and mostly for stock keeping and everything like that. I was familiar with even hand-wired IBM sorters from way back when. So when I came to Bell Labs, I said, "Well, that's the up-and-coming thing, but if I do that, nine times out of ten I'd be writing code for somebody else, and I will be doing somebody else's programming, and I won't be doing my own work. And that was true, that was true. … I don't know why I knew that, but I used to warn kids. … Don't get your

degree in computer technology. Get it in physics or math or geophysics, or even statistical theory, but don't get it in computer technology. Because, if you like it, that's great, but you will probably be locked into, as a woman, into an underling service capacity with that kind of training.

BT: My husband's still saying that. I mean, he's telling current kids who are going into science.

HW: Oh, good for him, because I've been saying it for 40 years.

BT: He's saying, "Do not major in Cornell in computer science." Even if you like it, do materials, do whatever, he just told a friend of us this.

HW: Oh, absolutely not. Absolutely, yeah, that's my advice to all of the young people coming into the Navy. A Navy friend of ours had a daughter who made the first class at Annapolis, and I was saying, "Whatever you do, Tina, don't major in anything that has to do with computers." She's still in the Navy, a commander, had her second kid; married to a Naval Aviator; having a fine time. And she'll retire in a couple of years, too, as a Navy commander or captain, with an excellent pension and a whole career in front of her and the family growing, one boy, one girl. So there you are. Time brings all things. But keep away from being a computer programmer, because if you're a woman you'll be a programmer, if you're a man you'll be a systems analyst. If you're a woman you'll be a programmer. Not that there's anything wrong with knowing about computers; I must update my own system to do some modeling stuff. That's why -- I just thought of another kind of paper! -- It's fun, if you can do it yourself, but I never officially did any programming. I had two or three programmers and a couple of technical clerks who were working for me, and they did all that [at Bell Labs].

KP: How involved with Douglass were you after graduating?

HW: Not at all. Other than to send in my annual report with a check, you understand. You know, … my brief note of where I'd been and what I'm doing to … the little monthly, which may or may not ever get a line, which I don't care about. But I dutifully send it back. Yes, I have done this and that and I have gone X and Y, and all that bit. But no, no association with Douglass at all, because I was beyond that point, and had nothing there, except I would run into Nelson once in a while and write notes to keep track of Grace Hazard, but other than that I didn't bother at all. So, no association apart from my annual donation to the Douglass Annual Fund. And I recently got invited to the Colonel Henry Rutgers Society, because I put them in my will for some reason, so it automatically got me on a magic luncheon list, which we had a lot of fun at.

KP: Did you ever join or consider joining any veteran's organizations?

HW: Yes I did. Well, when I was in civil liaison in the Navy, Amvets were forming, and I got the fellow from the University of Alaska, two Navy guys, and somebody else there with him in Fairbanks, and they came down on one of those Forrestal protocol VIP cruise type things out of Pensacola and I met them. And they were forming Amvets at the time. And I thought it was a good thing, and most of the World War II veterans did indeed go into that, or the VFW. So, I am

not a joiner, as I say, and I didn't think about it at all until I was in the reserve and going to reserve meetings and lots of the fellows had alternative veterans' meetings. Because you're on a magic Navy list, I get bombarded by these contacts all the time. "We are forming a new VFW unit right here in Bernardsville. Wouldn't you like to belong to this so-and-so? And that's so close to your home." And, of course, this was addressed to H.M. Walkinshaw, YNC, USNR, and so forth. And so I said, yeah, okay, I can instruct or … perform some sort of an office or something. Oh, no. They couldn't have me, because I was a woman, you know. And I said, well, I technically qualified, because I've gone through Canada, and I've served in foreign wars. I didn't serve overseas, … and they are apparently changing their regulations to kind of keep women out of it. But that's alright. And besides which, it's mostly kind of a club.

----------END TAPE TWO, SIDE TWO----------

Kurt Piehler: This continues an interview with Helen M. Walkinshaw on June 13, 1996 at Peapack, New Jersey with Kurt Piehler …

Barbara Tomblin: And Barbara Tomblin.

KP: And so you were unable to join the local VFW.

HW: Well, I didn't try once I pursued what they were about. They clearly viewed it as a kind … of a male bonding organization to review what I'm sure, was a lot of stringent and happy and unhappy experiences that they had. Mostly World War II-ers, I guess. And so I thought that was a fine thing. I'm certainly not going to interfere with their right to free and happy and war story telling or anything else. I think I was motivated to join or try to join, first of all because my father had been a VFW member and DAV and wounded, of course, and, I thought that would be reasonable, though not necessary at all. And, also because I thought I might possibly help. Because at that time, I had stayed in the reserve and with my stint in civil liaison I knew a great deal about the formalities of the structure of the reserve organization for the Navy, veteran's rights and benefits, and could be of real, probably real help to them in performing some kind of liaison, because I still had a lot of ties in Washington as well. And as well as being knowledgeable enough to give them some advice on-- because lots of the men, I found out, who came out of World War II probably through a searing experience or possible because they flipped through so quickly they couldn't get a grasp of what was going on beyond the immediate cessation of hostilities. My very mind wanted to look back on what veterans benefits are like, who's been on the inside, who went through the GI Bill or really wanted to go through the GI Bill. Things of this sort that they wouldn't necessarily really get by turning up at Newark at the VA office and asking official questions, because that kind of liaison and input doesn't come that way. So I thought I might possibly be helpful and be welcomed but since they had apparently other views of maintaining the organization as a kind of social and fraternal thing, why that was great by me; welcome to it and I hope that they enjoyed it, but clearly no place for me there and I don't want to be where I don't have a place.

KP: What about the American Legion, because the American Legion does take women?

HW: I've never thought of the American Legion seriously as a veterans organization, I think they're kind of over the hill. And, I mean, if I were to join any veteran's organization it would be Amvets probably, because I was aware of the basis of its formulation. But apart from that I was still active in the naval reserve for the last 23 years so I had enough of that, going to drills once a month and keeping track of everything that was going on there, particularly the Korean War. I mean we lost our surface unit, turned over its personnel staff three times during the Korean War [to active duty]. Lots of the guys never came back, never came back, not because the attrition was high or the casualties, but because they decided to stay in the Navy. They had just been off active duty in the reserve, you know. And most of them were lieutenant commanders and commanders there, and ready for destroyer commands and stuff of that sort. Several of them never came back. They decided, well here I am going around again, … I've only been out for three years and I may as well stay in. And lots of them did make permanent careers of the Navy. And that was my naval reserve experience.

KP: Maybe we should ask you a little bit about that, because you elected to stay in the reserve.

HW: Oh, yeah, I never got discharged. I stayed in the reserve for the next twenty some odd years.

KP: Why did you decide to stay in the reserve?

HW: Because I knew all about the formulation of the reserve and its training capabilities and the fact that it was a modicum of drill pay, but more than that it was essentially maintaining your contacts. And I know all about the structure of it, and how it would function, and what its procedures and opportunities would be, from having been in the office where it was all put together and drafted legislatively to begin with. So you see I knew about it intimately, where it was coming, and what it would permit, and what it wouldn't permit, and where it was going. So I had again an inside track. So I'd like to A keep up with my Navy background and B, see where the Reserves were going that I had watched being put down on paper.

KP: You mentioned you were in at the birth of it. What was the conception of the reserve? And you got to stay with them a long time, did it live up to its original conception?

HW: Oh, sure. Yes, indeed. It organized itself to structurally serve as a kind of way of training, pre-training; let's put it that way, personnel who would be conditioned to select the Navy in case of a hot war going down, cold wars going down, which, indeed they did for the next 30 years, … or act as a source of recruitment for permanent careers. And that it did. It performed marvelously. It did all of the above. Did all of the above with Korea and Vietnam and the NROTC officer corps pre-training and conditioning to the Navy as a selected kind of thing. I think if you asked anybody after World War II … whose father had forgotten about it, quite, what branch of the Navy, … rather what branch of the service they would go into if they had to be … conscripted, particularly with Vietnam looming on the horizon. … I'm sure eight out of ten of them would probably say the Navy. Possibly the other two might say the Air Force, right? … And the marines would always get its quota from volunteers, strictly volunteers, anyway. So they were not a player in this personnel recruitment, pre-recruitment game. So that was interesting. The Navy built its reputation post-World War II, of course, from what it did during

World War II. Except for those who served directly in Europe and the Army it was primarily a Pacific War. We got into it with Pearl Harbor. It ended in Tokyo on the deck of a Navy battleship. So … World War II was largely in the American imagination I suspect and certainly, in my mind, largely a naval war, with the marines, all through the Islands of Guadalcanal, naval aviation, carrier aviation, the whole smear through the … battles of the Pacific campaigns. It was a Navy war.

KP: What were your duties in the reserve?

HW: I was primarily an instructor.

KP: And what would you teach?

HW: Instructor and do the office work. Anything that there was to be taught, completely flexible. We had a protocol of lesson plans which were drawn up and we would … depart from them, but cover certain prescribed material and go freelance from that. But I did office management and did work for the C.O. and generating, … as a chief just wrote all the letters that had to be written myself, manage the liaison contacts with the office: the TAR [Training And Reserve] billets that did all of the leg work and scut work and everything. And I did the fancy letter writing, and liaison work, and then instructed. So the answer to that was everything, everything from that knot tying to first aid to ship board drill, works.

BT: And this was when you part of a unit.

HW: I was part of a surface unit down in Perth Amboy, Division 3-26, I think it was or maybe it was 32, but it was a surface pre-training company.

KP: In training, did you train male sailors?

HW: All the time. Oh, yeah, oh gosh, yes, all the time, because so few women turned up. There, one or two other WRs turned up occasionally, one a lieutenant JG. But they were there not as long as I was and not so much into the mesh of the training protocol as I was. But, yes, of course, it was 99 percent male, young kids out of high school and young first-time job seekers who were doing something on the side.

KP: So in the naval reserve you were fully integrated into the Navy.

HW: Oh yeah, we always felt we were anyway, aside from the separate barracks. I mean, that was the thing, that was again wartime service. In wartime service everybody was integrated. In fact, the people we were on duty with at the naval oceanographic office came from backgrounds just like the women did. I mean they were away from their families for the first time. They were in the military organization for the first time. So … their whole background and experience was a complete parallel with our own. So there was no reason for other than a totally integrated approach to activities. And there wasn't. And during wartime pressures, there wouldn't be anyway, you know. But you didn't see that at all in wartime and you didn't see it at all under the circumstances of dealing with the class of personnel … who had a complete commonality with

your own experience other than that of gender. So, no, … there could not possibly be, under those circumstances, any sense of separatism, and, by the time I got back [to reserve status], I was kind of viewed with awe as one of the rarest of the species, a female genuine chief. Seriously, very few people could pass their first time around permanent appointment, a CPO appointment in the Navy. I remember, again, three or four of us were the only ones who passed it, who were women on active duty in the whole Potomac Naval Command which was about one third women, I would suspect, during the war time years. And only three of us passed it, the first crack off the exam for the ALNAV examination for permanent appointment Navy CPO, simply because of all the military questions there [in the test]. It was funny. Again a strange incident, I will launch off into another kind of sea story on the side. Those of us, two out of three of us who passed it for the first time were from the Navy hydrographic office. And I suspect the reason the two of us from the Navy hydrographic office passed it for the first time was because we used to prepare and were familiar with reconstructing battle damage blueprints of ships that were coming in and we developed a technique, for isometric projections of ship diagrams, color coded diagrams for engineering analysis, oil, water, fuel lines, structural support, armor placement within the hull, with the whole scheme of shipboard construction and compartmentation laid out for us, and these kids used to negatively engrave and etch and be familiar with these diagrams intimately from the word one. And I was familiar with them, because I was the one that was kind of overseeing them and watching it all happen and taking my VIP tours around. So that I was cognizant of this aspect of it and fully a third of that final, I remember … laughing myself sick as I scrolled down my good answers itty bitty quick, dealt with shipyard compartmentation and construction and battle control, damage control techniques and protocols. And here we were pouring over this for the past year and a half at the Navy hydrographic office, because we were doing the diagrams. So, I said, yeah, I know what a frame eight in a CL hull is, you know. [laughter] … Who of all the women on active duty doing administrative and communications and hospital corps work in the Washington area were familiar with ship hull design? It was the few of us who were at the Navy hydrographic office staring at those diagrams for many a month. Which was kind of one of these weird things, … another weird coincidence. So sooner or later we would have passed through, you know, through plugging hard and recognizing what we had to brush up on, but we passed with some of the highest marks apparently in the whole PRNC Command simply because we were looking at these diagrams. I suppose most of the sailors on board the ships who were coming up for exam didn't have the intimate knowledge that we had of hull construction, simply because they had to live in parts of their own ship, … one part at a time, you know, not overall. … And, again it was one of these strange crazy coincidences that keep happening to you through life, and you say, here's another one of those crazy things that's going to go right, and it did.

KP: You were also in the Navy during World War II and remained for several years after the war.

HW: Yeah, three years of peace, so-called, right.

KP: And you were around the same time period where Truman would issue his desegregation order and then you would stay in the Navy as part of the reserves. I guess my first question, is did you have any contact with any black sailors?

HW: … Yeah.

KP: Any women?

HW: Male and female. … Oh, yeah, sure!

KP: In what context, what was your initial contact?

HW: Well, of course, I told you about the mess cooks. That was before the days of desegregation and at Burke's general board. He was a black, by the name of Willis, great guy, a great guy. A lot of the Filipinos were mess cooks, too, in the Navy, at the time. And that was the Navy at that time, blacks and Filipinos were mess cooks. The first black fellow, I think I ran into after desegregation, was in the naval barracks in Potomac Park. I think it Quarters B in the mess hall and I think he was a seaman who was striking for boatswain's mate, something to do with shore patrol activity. They moved into the deck rating kinds of things and it was not until much later on that that changed. And the women, of course, moved directly into the then-open communications and computer aspects of stuff. And the men that I saw, the few black men that I knew to chat with in the mess hall or something like … were either in administrative duties, the same that the women were, or they were going in for deck rating qualifications, not technical specialties, not technical specialties. Because the Navy had strict test score requirements at that time and most of the blacks frankly who were coming in, who were fine, really nice people … they were clearly picking the cream of the crop -- I thought the Navy, probably deliberately didn't make the technical score aptitude test so as to have many of them get into technical background work until later on. And then three or four years later things began to move and there didn't seem that selectivity.
Another aspect, at my last Navy reunion, and we do such things, believe it or not, one of the captains we went with, has a nice place, and a beautiful boat on the Chesapeake down at Pax River, there and he is a naval aviator, retired captain. So, he wrote the typical letter and had us quartered at the BOQ when we were staying on our Navy reunion down at Norfolk and Patuxent River. And in the process there were a great, great many blacks on the base and doing technical ratings, mostly aircraft mechanics, and also in the administrative ratings and in the naval aviation facility there, and male and female. And they were again several cuts above average. If you took the average high school attendee, who was black or non-black, those characters had to be in the top of their qualifications class, very fine people and no problem with them at all. I mean, they fitted in perfectly, and Navy regulations saw to it, that people who thought otherwise were going to get stepped on. [laughter] So I was glad to see that. We had a lot of pleasant conversations with them there in the BOQ, BOQ staff they were primarily, and the ones out on the plane tending ranges. I didn't see a single one, by the way, when we would mess at the Officer's Club. We had a couple of dinners there and there wasn't a single black waiting on the tables, so I said, well there's been progress. [laughter] Not a single black Navy person was waiting on a table at the O Club at Patuxent River. They were gone from there, hopefully to move onward to better things.

KP: You were also in the Naval Reserve during the Korean War.

HW: Yeah, I told about our staff turning over, right.

KP: And you retired from the Navy around 1966 and you left the reserve.

HW: That's right, around that time, I forget, '64 or '66. If I wrote it down somewhere, it was accurate, because I looked it up for that, okay.

KP: What were your thoughts about Vietnam? This is now the third war.

HW: Most of the people in the Navy and most the people down there [in our reserve unit] were as much down on Vietnam as the average student at a university. No way! That was rotten from the word go as perceived by the Navy people I knew. Rotten from the word go. And I got a direct feedback on this too, because just before I left I was with a research company after our surface division dissolved. I was down at Lakehurst, Naval Air Station at Lakehurst. And at Lakehurst the returning squadrons, helicopter squadrons of the Army, medical evacuation groups were coming in there for training and retraining. So I heard a lot of horrendous, first hand stories about wounded evacuation during the Vietnam War from those fellows who were in the Army medic units and were training, trained by the Navy at Naval Air Station in Lakehurst. Well, the marines have a big helicopter operation, I might say, even more than the Air Force. The Air Force doesn't go in for this kind of support tactical air. I mean tactical fighting, but not tactical support aircraft, like, helicopter reconnaissance. They're overhead with the AWACS, but they're not down on the ground where the bullets are flying like the HELOs are, and the Marine Corps specializes in that. So the Marine Corps instructors, I guess, were the ones who were doing their regrouping and retraining of the medical evacuation units. So I saw, heard, real first hand horror stories from down there. Also people back, Navy sailors, back from the riverine patrols. That's a part of the war, which has never been, never come out in public. It's just that the casualties that have been taken on small boat operations with the Navy in the riverine patrols in the Mekong Delta are absolutely horrendous. It reminds you of the UDT kind of thing during the end of World War II, 95% casualties, really horrendous. So we used to go down there on weekend drilling and we would chat up with the fellows like that who were literally in and out from the fighting in Vietnam.

KP: So you had the sense, even as far back as 1965, 1966 that this was not the right war.

HW: Most of the people I talked to in the Navy thought exactly the same way. And certainly the guys in those medical units thought the same way, I can tell you. [laughter]

BT: Interesting, because that is early.

HW: Yeah, that's early, but I mean that's when I was down there and it was already the flack was coming into the military that this was bad news. Also problems with the drug problem was well understood, particularly by the medical personnel and corpsmen down there. And they said, boy are we going to have a problem down here with the drug bit.

BT: Drug use was really excessive.

HW: Exactly, exactly, it was wide open. … And they were very much aware of that at the time, of course, being medical personnel and … having been there, literally on the ground and on the way. They perhaps had a clearer perception than the guy slogging through the jungles did, because they were too busy trying to survive, I guess, to think of anything else, but some kind of relief. But the view of those who were going in and out and in a position to step back and then see what they were having to handle, particularly with the evac, medical evac stuff, already had totally bad vibes about Vietnam. It was interesting. I was surprised at that, when I would make some kind of neutral remark eliciting a response they would come right back and they would say this is one lousy blank blank of a thing, you know. And the enemy was a vicious enemy. Make no bones about it, they had no sympathy with the Vietnamese doing the fighting, but they knew that it was the wrong thing at the wrong time … with the wrong motivation behind it. So … that was my impression from them and they would then launch into, you know, ten minutes of nonstop with me. But this again was a specialized return. This was from the Navy fellows who had been on the rotten edge, and the medical evac people who had again a terrible view of what was really going on and who were facing up to the drug problem in its early stages too, which they also as medically trained personnel were well aware of and were deeply concerned about. Now, I don't know what the fellows thought of, who were sitting off-shore lobbing shells into the jungle to no avail. I mean, … they had that detached; that's another thing about naval warfare, it never quite has the impact; the human trauma is largely missed. You, meaning the man who is firing the guns and lying off shore on the ship has no, has this {there is a space buffer}, this sense of detachment. Not that if you don't drown, or get blasted, or fried, you don't die as horribly as anybody else, but there this sense of physical separation which the Navy has the benefit of, which I suppose sustains it. … It's a way of enforcing, probably enforcing discipline that's easier than most other services have to contend with.

KP: No, the Navy I think it is for that reason able to maintain a hierarchal relations so well.

HW: Exactly, because it's physically detached, … it's literally physically detached.

KP: I'd be curious if you have ever heard this; a lot of sea-going sailors told me and junior officers said that in many ways the weather, typhoons, were much more more frightening than the enemy.

HW: Of course; they were [seagoing is not for the timid]. More Navy people go down in those typhoons. I remember the horrible photographs that I had seen of that DE turning over. This is in the Pacific, that Pacific typhoon. Talking also about James of the British Purchasing Commission, lawyer at heart, having his leg busted two years in a row being flung out of his bunk in his corvette. And he was the CO. I said, "You should have been up on the bridge, James." [laughter] He said, "I was." "What do you think I was lying down for? … Out from total exhaustion." I said, "They should have strapped you in." True, and an interesting case in point, my cousin went out for the Sixth Fleet on board the *Leyte* during the "chicken of the sea" bit with the Russians, when we were playing games with the Russians in the Mediterranean. Of course, with the Sixth Fleet maintaining its presence. And he brought home a statistic which I have repeated often to other people. I may as well repeat it to you. That in the carrier operations off the *Leyte* when he was stationed on board they lost four aviators and six planes that couldn't be salvaged from mere deck operations every week. And it's just the attrition of operating at sea.

BT: And people don't understand that.

HW: Yeah, but it's true.

BT: Aircraft carriers are just a huge accident waiting to happen.

HW: Oh and understandably, understandably. But they lost four naval aviators a week, to say nothing of the plane damage. Yeah, well this was the operations in the Med in the coldest days of the Cold War, of course, when they were flying who knows how many missions, combat missions, maintaining a CAP all the time, combat air patrol.

BT: I don't think that would happen during normal times.

HW: No, during peacetime under normally controlled situations, … but of course, under training it would go up again. But normally qualified naval aviators, I would suspect, are some of the best flyers in the world. Like my retired Navy captain, Bruce Hargen. … He was in a crash, walked away from it. He says, any plane ride is good that you can walk away from. And he had one. He had one.

KP: The roles of women in the services have changed remarkably in the late 1980s and 1990s.

HW: Oh yeah.

KP: Would you have wanted to have had the opportunity to serve aboard a Navy ship?

HW: If I hadn't done other more important things, certainly. I mean if I had stayed in the Navy, I would have. Well, of course I would have taken my commission, you know. But that would be the only terms in which I would have stayed in the Navy. Absolutely, yeah, just like not joining the WAAC. It's the same kind of thing. I mean, the sea is where the Navy's at. That's what it exists for and that's what it takes its justification from and without that it's a side issue. I mean it's a side issue, my playing that part of a part. That kind of a part is a side issue. I admit I have never savored the thought of being any kind of an auxiliary in anything I did in life. It went even to Bell Laboratories when I said, "No, Helen you will have nothing to do with computer technology." Why? Because that was a support function. I wouldn't be doing my own work or doing it independently as I was able to come to do.

KP: And I guess the other question tied to my earlier, opportunities for women have expanded, but the Navy got very badly battered by Tailhook.

HW: Oh, that.

KP: Yes. What are your thoughts, knowing the Navy very well for a long period of time?

HW: Yes, that was regrettable, more wrong, should never had happened. And I suspect it happened because the Navy, like everything else including our economy is so vastly inflated

with quasi-qualified people who shouldn't be there to begin with. I mean, I think that's the grown-up version of the frat house philosophy that came into the peace time Navy just to keep the ranks swollen for cold war demand and that the core of the Navy had no real need for. So they just inflated the ranks, mostly the commissioned ranks, with people who didn't come up to standards and who hadn't been … knocked into shape by either operations at sea because there was no room or time or billets afloat to get that opportunity, or a war.

BT: And this is non-aviators as well as aviators?

HW: Oh sure, but it's worse in aviation, because they get turned over so quickly.

BT: How much responsibility for Tailhook, is the Tailhook association, and how much is it that the Navy?

HW: It pandered to them.

BT: Yeah, exactly.

HW: What else, what can I say? It pandered to them. Having known so many women who have served. … Most of my Navy friends now that I go on our own private little reunions and meetings with, were in naval aviation so they know this from the ground up and they were livid. Talking about salty language, you should have heard some of the comments out of my friends about what's the Navy coming to with this Tailhook trash. Why are they letting in this kind of trash? My husband, who's a retired captain, my husband who's a retired colonel in the marines, … my husband would never do that. And, of course, they, lots of them married in the service, you know. Most of them were dual service families. And they were absolutely livid, absolutely livid. And their husbands were so embarrassed. Bruce Hargen was saying, "I don't know what's the matter with these people these days." [Meaning, that the senior officers would tolerate that behavior.] I said, "Oh well Bruce." Oh dear! It was at our last reunion at the Patuxent River NAS. We had spent a splendid day out on the Chesapeake in their boat.

KP: How often do you go to reunions? Once a year?

HW: Usually it's formally every three years and we normally get together at least that. And sometimes, we have mini meetings on the side, informally.

KP: And this group that you have the reunions with, which group or office is it that you gather for the reunion?

HW: You mean where in the Navy, did these people once upon a time come from?

KP: Yeah, yes exactly!

HW: An interesting thing happened with the people at the Navy hydrographic office after it disbanded. A lot of them went into naval aviation. So, from the Navy oceanographic office to

naval aviation with other friends in naval aviation, and the people I knew in Washington and telecommunications, the one that I told you who was doing the cipher work.

KP: So the tie is really Washington?

HW: It's Washington for the cipher cryptographic work, it's in and out of Washington, and West Coast and Patuxent for the aviation group and people who second handedly came out of the naval oceanographic office in and around Washington. So it's primarily in and around Washington … the telecommunications and Navy command center in Washington and the Navy Department, the oceanographic office now at Suitland, Maryland, many of those who sifted through both, and the naval aviation group, which is Patuxent River, the West Coast and, of course, Corpus Christi, Jacksonville, Pensacola, you name it. You name it, we've been there and done there. [laughter] … So yeah, it's primarily there. It depends on, you know, where the Navy commands are. So the aviation groups are strong around the U, the periphery of the US and NAV OCEANO was close to Washington, and Washington is, of course, Washington, so. …

BT: DC?

HW: Always DC …

KP: I guess, do you have any questions about Bell Labs, since you know Bell Labs better than I.

BT: I really don't know that much about it. I mean I know, my husband was in Bell Labs for a while.

HW: Oh that thing where … what's his name does the testing now. …

KP: Briefly, although we could do a whole interview on this and probably a follow up, but I just wanted …

HW: With me I'm afraid you might, but go ahead.

BT: The last part is a whole other…

HW: Yes, … it's a whole separate, … that's act three.

KP: You mentioned that there is a real high in your Navy career.

HW: Yeah.

KP: It sounds from day one that you arrived.

HW: From day one, yes, from day one, my Navy career took over. I walked in the door was shown my desk and lab area, met my supervisor who was a nice guy, Rudy Nichols, who was well known in the acoustical society from Harvard, in the Harvard underwater research group that started off a lot of the Navy war time stuff. Nick had met me before I was hired by the then

director, and so he came in from New York and said, "Hey, I understood that you were in the Navy. We're just starting out on this project and they've given us a submarine to act as a sound source for us to do some tests on," he said. "But none of us here, at least me, your supervisor …" {a couple of technicians, of course, were in the Navy previously} … "but none of us here really knows quite how to frame what we would like to do in language in that would probably sound ridiculous to anyone who was running a submarine, so … can you tell us how to do this?" I said, "Give me your material. I will cut you a set of orders that any submarine commander will, at least, find intelligible. So that was, yes, that was literally the day after I reported to Bell Laboratories, which was July of '52, I think it was. Just after I had finished Douglass and was going to graduate school part-time. They let me off by the way. This was the way things worked at Bell Laboratories, at that time. There was no formal training program for women or any advanced educational program except Kelly College, which was restricted to men, again, men with engineering degrees. No math or physics degrees at all. But it didn't mean a thing to Bell Telephone Laboratories, because it was *the* Bell Telephone Laboratories, [and they made their own rules back then]. No, any graduate courses you want to take just sign right up. We'll let you leave here, whenever you want, and you can continue with your graduate school education. Which is what I did program or no program and that's exactly right. And that's how Bell Telephone Laboratories worked.

KP: Where did you do your graduate education?

HW: Mostly at Rutgers, in and around. Picking up courses in math and statistical theory.

KP: Did you ever go for an advanced degree?

HW: Yeah, I got my M.Sc. in statistics and math from Rutgers Graduate School I think that was a couple of years later. And then accumulated credits, a mess of other credits. One of these days I may go back and finish my doctorate.

KP: So you never finished your doctorate?

HW: No, no … I've piled up almost all the credits, but I never formally applied to get my doctorate. Which, so what? That's one of the things that was not a bad decision, because it was the only decision I could make. As I say, they would have never hired me if I had an advanced degree at the time. I knew that for the next fifteen, twenty years, and by that time I was already on top of things, writing my own experiments and going to sea and doing the underwater stuff with the Navy that I dearly loved and writing the first things that were ever done on this kind of research along with my colleagues, and I didn't have the time. When you're working at that kind of pace, I didn't have the time. I just picked up enough 40 or 50 graduate school credits that I may or may not be able to use and by that time the work was so advanced and we were having {although highly classified} such a kind of extraordinary weight in decision making in the whole underwater community which was then coming together. Us, Woods Hole, Lamont, Scripps, Naval Research Lab, the Harvard School; and Lincoln Lab, which was high frequency radar type stuff, not anything to do with us. We stuck to the geophysics. Well, anyway, we were making such a remarkable dent in a new, non-existing field. We were beginning to write the book on underwater and geophysical explanations of sonic phenomenon of one kind and the whole

environmental impact of things that became clear, just within the past ten years. The interplay of physical forces, undersea, the heat balances, the atmospheric interchanges, the effects of the sub-bottom, the whole smear. We were finding out things for the first time with other university groups and professional organizations, so I would not have been willing to sit down and take a comprehensive exam for my doctorate to save my life at the time, because we were doing the work, the original work in this field. The fundamental research in this field. And so no way was I going to take time out from that when I was in the middle of it. So now it's time for me to relax and maybe knock it off one of these days. I don't know, maybe I will.

KP: Hopefully someone can do a follow up interview just on your science background, but we do not have someone yet. How many articles did you publish over the course of your career?

HW: Oh about a dozen I think. Most of them were classified though. And they're in Navy-type things. Only three or four of them saw the light of day in the unclassified literature. Mostly in the ASA and the AGU. I belong to the AGU and the ASA.

KP: But it sounds like you presented quite a bit at conferences.

HW: … All the time, but I rarely got a chance to get it published, I think I only published about a dozen, a dozen would be a good guess. And I've got, somewhere, pieces of them all. Some of which are still classified, so I only have sanitized pieces of them.

KP: So the large part of the work was classified during your career.

HW: Almost totally classified. Right now, I and a few colleagues, including some people fairly highly up in the echelons down in Greensboro are working toward attempting to have our material declassified so that it can be published. I presented a great deal of it in papers, informally where I could kind of get away with it, without putting through a formal written thing which had to be passed by both Bell Labs and the Navy. But I've made about four or five times the number of presentations than I've done papers that have gotten published, simply because of the nature of what it was. So we are now working on the declassification scheme. That's one of our more dedicated purposes. To get some of the stuff which was formally classified, though really the subject content of it was not classified, but the necessity of it being under a certain governmental protocol, particularly our ONR contracts, made it automatically classified. And now it's hard unwinding that to get it into the public domain. But the three of us, technical department head supervisors, one of the directors down at Greensboro and I, are part of a little group that are attempting to free our work that is now in the archives to release it for publication. So the answer is, yes, I averaged about sometimes two a year and rarely got them published, only published about a dozen and lots of that is even classified in the Navy publications, things that are still confidential. They have a classified publication that they're in.
On the average I presented at least one public thing a year, and of course, internal things to the Navy practically every other month. You know what it was in those days … flying down to Washington on the five or seven o'clock shuttle and delivering yourself of an hour and a half of chit chat and view graphs and show and tell. So that went on all the time, but very little of it, I regret to say, ever saw the public domain and that's what we're working on right now, that very thing. Because it's fundamental work that is still as fresh as it was done originally, 40 years ago,

it really is. It's fundamental work in its field. For instance, the stuff that we did following the *Thresher* and the *Scorpion*, which we were associated with the location of. Sad stories behind that remain and will forever remain personally classified, if not officially classified simply because of the loss of the people who were involved. But we did a lot of fundamental research based upon the need for attempting to do that kind of exploration to second guess what happened with underwater wave propagation, energy propagation, you know, identifying the source of this kind of an event. What was this? Was it an atomic bomb? Was it a sub being crushed? … You know, that kind of thing. Did an awful lot of fundamental physics which is now available to be published and which, of course, can't be released, and yet it's simply fundamental physics on source propagation, energy propagation. We did some great work on that pure, pure physics and, of course, it is under the aegis of the research that was carried in this Navy contract. Which … understandably, was secure at the time. I mean, is this World War III starting or did we lose a sub accidentally? It's just as critical as that.

KP: Bell Labs has recently gone through another change.

HW: It's not Bell Labs, that's our consensus. And that's why so many of us retired when we did. The going was good and we said let's come off the top, it'll never be the same. Fantastic years, time in history generates that kind of situation rarely.

KP: So I gather as an outsider you are talking 1950s, 1960s, 1970s, and even the 1980s were golden ages for Bell Labs.

HW: Yeah, that's right, … even from the first moment of divestiture it was clear that there was a change of climate. So you would say 1980 or was 1981, whenever it was …

BT: 1987 it started to change.

HW: Yeah, that's right, there is no question about it. I mean the glory of days of Bell Labs were at an end and it was marvelous while it lasted, fantastic and it did a lot of good things. It did a lot of good things that hardly anyone will get to hear about either, unless people like myself and my colleagues are able to pry loose a little of this really pure type science stuff, and applied type, but real science, not putting another sentence in an algorithm to make a telephone line carry one more digit. You know, not that kind of garbage. I mean, I understand it's commercially, highly necessary and desirable, but it sure isn't science, and it sure isn't Bell Telephone Laboratories. … And I wish everybody luck. I still have a few colleagues there, but they recognize that they are phasing out their careers and the problem is that they are kind of caught in a time warp. They've got a half a dozen or so years to go, before they'll lay back and either start consulting or go off to some university somewhere which 90 percent of us do, of course. It's a great era, which has come to an end. It's not the same. It's nothing resembling Bell Laboratories, but a phenomenon like that, an extraordinary technical phenomenon like that … comes and grows and flourishes and begins to reach senescence; and it happens to reach senescence with a pretty clear cut off date to it, which is perhaps healthy in a way. Perhaps it's healthy. Because, all of us feel very good about it, and sometime there'll be another generation come along with similar needs and a new field, new fields of endeavor that will pick up and start all over again. And so it's best to cut it clean.

KP: Barbara, any more questions.

BT: I think that's a good ending.

KP: Thank you very much.

----------END OF INTERVIEW----------

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