

ARMED FORCES INSTITUTE OF PATHOLOGY

ORAL HISTORY PROGRAM

SUBJECT: Dr. Richard Froede

INTERVIEWER: Charles Stuart Kennedy

DATE: October 27, 1994

[Note: This transcript was not edited by Dr. Froede]

*Q: Doctor, could you tell me when and where you were born, and a little about your family, please.*

**DR. FROEDE:** I was born on 1 May 1929, in Milwaukee, Wisconsin. My father was a physician at the time. But if you recall the date, it was about ten days before the stock market crash. Things were pretty rough around there, so he decided that he would come out of his residency, which was in neurology, because he had to make some money. And he went up into a small town in Wisconsin to practice in a general-practice situation.

He was there, in this little town called Jackson, Wisconsin, for about ten years, until World War II came along, when he decided that he was gung ho and wanted to practice military medicine. He was about 45, 46 years of age at the time. He went into the Army and was sent to Fitzsimmons to work.

And then one day, running to an emergency, up a flight of steps, he had his first heart attack. And that was it as far as his practice was concerned. He didn't do much after that.

Although I will say that, over the years, when I got to college and eventually into medical school, he and some of his friends would put me through the mill. I learned a tremendous amount of material from them, particularly from one of the internists who used to live next door to us. I'd go out on house calls with him at the same time.

*Q: Did you grow up, then, in a medical atmosphere?*

**DR. FROEDE:** Oh, yes, it was very much so. My middle brother probably would have been a doctor if it hadn't been for World War II, because he was slanted in the same direction I was, not because we were pushed, but we just found it interesting what my father was doing. But he and my oldest brother ended up enlisting in World War II and spending most of their time there. My oldest brother stayed in until he retired. He was in the infantry. And my middle brother decided to go into the ministry when he came back. My father used to have three pictures there: One tries to patch them up; one shoots them; and one has to pray for them. And people in his office would kind of laugh about it.

Our family stayed in Jackson till about '42, and then we moved to Milwaukee. And from then on, until I left medical school, I was in Milwaukee.

*Q: Talk a bit about your high school.*

**DR. FROEDE:** My high school was Riverside, where I went from 1943 to '47. It's on the east side of Milwaukee. It was a very interesting school. It was an amalgam of a lot of different people, a lot of different backgrounds, religions, races, and so on. But there was something there in that high school that you couldn't do today, and that was we had a three-track system. Which I don't think any one of the students ever found discriminatory. But there was the college track, and there was the business track, and then there was the trade track. Those would go in for mechanical drawing and engineering and things like that. But we all had the same basic courses, which we all shared, too. But when you got into the higher mathematics, you were in the X track. And so I felt it was an extraordinarily good education.

*Q: Were you working towards being a doctor at that time?*

**DR. FROEDE:** Yes. I had sort of made up my mind when I was probably about 12 years old. I liked to watch this. As I say, I was never pushed into it, but they would always talk to me about it, always describe certain things to me, and it became very interesting from that standpoint. Also, at that time, my father had some pathologists who were good friends, and they used to come over to the house and drink coffee, and they would sit and they talked to me about pathology and described it. To me, it was probably medical detective work; that's

the way I felt about it at the time. From then on, I always wanted to be a pathologist.

*Q: That's interesting, because most of the people I've talked to, almost all of whom ended up pathologists, sort of backed into it or picked this up much later on. But you actually got the bug quite early.*

**DR. FROEDE:** I did.

*Q: After high school, where did you go to college?*

**DR. FROEDE:** My brother, before he had gone into World War II, had been a freshman at Ripon College, which was upstate. It's also the birthplace of the Republican Party.

*Q: Yes, yes, very famous.*

**DR. FROEDE:** He said that, when he got back, he wanted to go back there someday to finish his education. But he wasn't available, so I started in 1947, and then he came back in '49, and both of us graduated at the same time, in 1951. Again, I feel that even though it was a small liberal-arts college, both of us got involved in a lot of activities, and we both graduated, I think, with an educational background that was excellent.

*Q: Was there such a thing as a pre-med there?*

**DR. FROEDE:** Yes, it was a pre-med course, a lot of science and things like that. But mostly we had a lot of the liberal arts. In fact, my degree is a Bachelor of Arts, rather than a Bachelor of Science degree.

*Q: You graduated in 1951, and what did you do? The Korean War was in full swing at that point.*

**DR. FROEDE:** Well, when I applied to medical school, it was about a year and a half before. It was my father's medical school, which was Marquette University. I had been accepted, and so, as far as the military was concerned, I had a deferment to go to medical school. They had no idea how long it would go, so they decided to send people to medical school and let them get their doctorate, and then you put them into the service.

*Q: So you went to Marquette for how long?*

**DR. FROEDE:** Four years.

*Q: Could you describe a bit about the medical training at Marquette at that time?*

**DR. FROEDE:** Medical training then, again, was a little bit different than what it is now. A lot of basic material. The first two years, of course, were the basic sciences: pathology and microbiology, which was then called bacteriology, and embryology and anatomy. We had cadavers, and four of us would share the dissection. In the junior year, we began to get more into the clinical aspects of it. Although, during the first year, we had one course that took us into the clinics, just to give us a taste of what was coming. But the junior year was spent in the clinics and the emergency rooms. Then, in our senior year, it was more of ward work and surgery and medicine, orthopedics. At this time, because I wanted to go into pathology, I took a month's training in pathology at the VA hospital there in Milwaukee. Again, it whetted my appetite, so I wanted to stay in the field of pathology.

*Q: In your class, were you somewhat off to one side, as far as being interested in specializing in pathology?*

**DR. FROEDE:** No, I think there were at least about half a dozen of us who had decided that we liked pathology. We had a very good pathology department. W.A.D. Anderson, who had written the big book on basic pathology, was head of the department, and he got us all interested in it. And then, as I say, my father's friends kept it up.

*Q: In medical school, in those days, were there many women in your class?*

**DR. FROEDE:** We had a class of 89, and I think there were nine or ten women.

*Q: You became a doctor after getting out of Marquette, is that right?*

**DR. FROEDE:** Yes.

*Q: You got out of there when?*

**DR. FROEDE:** In 1955.

*Q: Now did the Air Force or one of the military services pick you up at that time?*

**DR. FROEDE:** At that point, no. I volunteered and went into the Air Force. I wanted a residency, and they promised me an internship and a residency. And they kept their word. I went to Walter Reed for my internship, which was a rotating type. And then, from 1956 to '60, I was at Letterman General Hospital.

*Q: In San Francisco.*

**DR. FROEDE:** For my residency in anatomical and clinical path.

*Q: In 1956, you were here, where this interview is taking place, at Walter Reed. Did you run across the AFIP?*

**DR. FROEDE:** Very much so. After I had finished my ordinary rotations in surgery and medicine and pediatrics and Ob/Gyne, I decided again I wanted to sample pathology, just to make sure. And so I came over here and spent two months in the anatomical part of the Department of Pathology, which was in the building at the time, which meant that I could go off and sit in on some of the conferences and enjoy the entire AFIP, as well as learning surgical path. and autopsy path.

*Q: Who were the big guns in surgical path. and autopsy path. in those days here?*

**DR. FROEDE:** Well, Dr. Earle was here in neuropath., Dr. Mostofi, Dr. Johnson.

*Q: They're all still going.*

**DR. FROEDE:** They're still going, and I know them all.

*Q: In one of my interviews, I talked to one doctor and she said that the theory was that pathologists don't die.*

**DR. FROEDE:** I spent a few days with Dr. Helwig, looking at dermpath. and GI path. To me, it was just priceless. I couldn't have had a better experience.

*Q: You were at Letterman from when to when?*

**DR. FROEDE:** From about July of '56 to about July of '60. And there, by the way, the chief of the department was Nelson Irely, who is now here and has been here for a number of years.

*Q: When you went to Letterman, were you by that point specializing in pathology?*

**DR. FROEDE:** Yes, by then, I was on my pathology track.

*Q: In the late '50s, you were on the pathology track. Were there specialties at that point, or was it general pathology?*

**DR. FROEDE:** There were specialties. There were people interested in dermpath. Some of the boards that are in existence now had not come into existence, but we were encouraged to try to pick some area that we thought might be of interest. At that time, I was very much interested in clinical path., and got involved in blood bank, chemistry and toxicology more than microbiology. I thought that I wanted to be a clinical pathologist. I enjoyed surgical path., but I also enjoyed

very much the autopsy pathology. To me, it was such a challenge to come up with a diagnosis, a total diagnosis, rather than just a surgical biopsy.

*Q: Were you able to indulge in what you were interested in at Letterman?*

**DR. FROEDE:** Yes. Yes. In fact, probably some of us who were interested did extra work in various fields.

*Q: What type of a hospital was Letterman and who were they seeing?*

**DR. FROEDE:** It was a general hospital, seeing military patients, as well as dependents. It was about a 500-600 bed hospital at that time.

*Q: Tell me, in the military, do you get the same type of experience (except, obviously, in wartime) that, say, a young doctor might get at a city hospital, with all the trauma of city living?*

**DR. FROEDE:** We didn't see too much trauma, probably for two reasons. One, it was a military hospital, and most of the trauma cases would have first been triaged before they came in there. The second was that we lived in an era when we didn't have to worry too much about all this trauma that you see coming into the hospitals today. Larger cities, yes. I suppose that would be something that the people at Letterman

would have needed to go to the city and county of San Francisco hospitals and that. But, as far as pathology was concerned, we saw the gamut. In fact, we saw some really strange diseases, too.

*Q: Where were they coming from?*

**DR. FROEDE:** Well, there was a public-health hospital not too far away, on the grounds of the Presidio, and we exchanged cases. So we'd see some of the diseases coming off these ships.

*Q: Did you have much contact with the AFIP while you were doing this?*

**DR. FROEDE:** No, only from the standpoint of consultation. We would send our cases to the AFIP. And, since I knew some of the people, I could pick up the telephone once in a while.

*Q: You left Letterman in 1960, and then where did you go?*

**DR. FROEDE:** Well, that was an interesting part of my career. Dr. Townsend, who was the director at the time, came out to San Francisco, and he asked me where I'd like to go. Oh, I named all kinds of places, like Dayton, Ohio, and places where the big Air Force hospitals were, such as San Antonio. And then he looked at me and he said, "How would you like to go to England?"

I said, "Fine, I'd love to go to England."

He said, "Well, it's not going to be to an Air Force base. It's going to be a Royal Air Force base."

And so, for the next three years, I spent the time at the RAF Institute of Pathology and Tropical Medicine. There, to me, that was a wonderful experience, from the standpoint of if I thought I'd seen things at Letterman... But at that time, of course, the British Empire was still where the sun never sets, and the different diseases that I'd only read about in textbooks would come in. We even had one episode of typhoid fever coming out of Zermatt, Switzerland. They brought some of the RAF people in; they'd fly them in with the various parasites, because this was one of their biggest hospitals.

*Q: Did you find the British and the American approach more or less the same to pathology, or was there a difference, subtle or otherwise?*

**DR. FROEDE:** The surgical pathology was more or less the same. They did not have pathology training like we had, you know, four years, or two years, or three years of anatomical, three years of clinical, two and three. And so we actually trained some of the general pathologists in surgical path., clinical path. Mostly clinical path., because the RAF Institute was more or less like a small AFIP, where all the surgical biopsies were sent in. But we also did some training in forensic path., which was essentially aviation pathology, so that they would know what to do when they went out on an aircraft accident. So

that way, I think I picked up my first interest in forensic path., and would go out on aircraft accidents with them.

*Q: What's the reason, I'm speaking as a layman on this, for wanting... I mean, somebody gets killed in an airplane crash, they're dead. What's the...*

**DR. FROEDE:** If it's true, you want to do the analysis of all the examinations, so you can study was it something that they had eaten, like a toxicologic? Some drug that they had taken? Was it injury, a pattern injury that they had and how they might have struck something? The other thing, did they have a heart attack? Group Captain Mason and I had a case where a fellow was landing a plane up at Prestwick, Scotland, and he suddenly collapsed at the controls. Ken and I went up and looked at it--MI (myocardial infarction), and we found an occluded vessel in the anterior descending branch. So these are the different things. Also, we felt that negative findings were as valuable as positive findings, sometimes.

*Q: Did the British use their pathologists differently than...*

**DR. FROEDE:** Most of their pathologists were doing clinical path. and blood bank and microbiology. A few of them, in some of the bigger hospitals, in the Far East and in Africa and the Aden Protectorate,

would do some surgical path. But most of the biopsies were sent on in to us.

In the clinical path. area, sometimes they were ahead of us in certain things, and sometimes a little bit behind us in adopting new things, new techniques, new reagents, and things like that. And so it was rather interesting to me to do some of this, because I'd go down to the American base, the USAF base at South Riceland, and we'd swap reagents. If the pathologists there couldn't get anything, I'd take something down to him and he'd send stuff back up, particularly in the area of blood banking. They used the Oxford system, where it would incubate for an hour to get your blood group, and then you'd incubate an hour to get your cross match. Well, I had the rapid reagents that I'd brought back with me, and so what I would do was tell them to do a quick grouping on it, so we didn't violate any of the regulations. What we'd do was a rapid group, so at the same time that he set up the group in an hour, he would set up the cross match in an hour. And I could come in one time in the middle of the night, instead of spending a couple of hours there. So that's the type of thing. Then they changed; even in the three years, they began to change some of the...

*Q: You had the AFIP here, with some of these doctors you've mentioned who had been specializing in various branches for years and looking at thousands of specimens. Did you find that the unique collection of the AFIP gave a stronger delivery system to people with problems?*

**DR. FROEDE:** I think it did, because if I had something, and several of us who were reading the surgicals, we would quick air ship it to the AFIP. It made it nice, because I knew some of the people here and we could have a very personal type of consultation. So I think it's a tremendous thing to have the database that they have now. It's things that you look at, I've seen this pattern before; where have I seen it? And then you send it off to a consultant, or you look at a database, and you find it. The fascicles are a tremendous database. And this new CD-ROM I was playing with the other day on the... to me, I wish I had had that 20, 30, 40 years ago.

*Q: After your time with the British, when did you leave and where did you go?*

**DR. FROEDE:** I left in '63, and from '63 to '65, I was at Orlando Air Force Base, which is now Navy, and I guess it's closing now, from what I hear. But it was Orlando Air Force Base, and I was chief of pathology there, all alone; there were no other pathologists. But I had consultants in the city who were excellent--Paul Berrick and others--that I could always turn to, so I never was at a loss. And also I had the AFIP that I could send them to. I was there for two years. But also, besides those duties, I was a consultant to Project Gemini.

*Q: Could you explain what Project Gemini was.*

**DR. FROEDE:** This was one of the first projects out of Cape Canaveral putting a man in space. I knew Gus Grissom and a few others. At that time, we set up the blood bank. We taught them how to cross-match, we taught what drugs they could use, and we did chemistries and everything else. We had a regular little clinical lab.

I'll never forget the day that Gus Grissom said to me, "I know why you're here, doc. You don't have to tell me." And, of course, he was one of the first ones who perished.

*Q: In a fire. Did you get involved in any of that?*

**DR. FROEDE:** No, that occurred after I left. So I never got involved in anything like that.

And then, in the last six months of my tour there, I got word from the surgeon general's office that they needed a pathologist in Germany, was I willing to give up down there and go to Germany? I said yes, because I enjoyed England so much. I said fine, and so I ended up in Wiesbaden, Germany, from '65 to '68.

*Q: On the family side, were you married?*

**DR. FROEDE:** Yes. One of my children was born in San Francisco, and one in Florida. I think they still remember their days in Germany.

*Q: What were your main concerns in Wiesbaden?*

**DR. FROEDE:** The workload. There were three pathologists, but at times I was alone for three-week periods, when people were transferring. We had a tremendous workload, because it would feed into Wiesbaden from all over Europe. I'd walk in and I'd find 300 surgicals there, to start in processing. Some days there were only a few; some days many of them. But, again, I still had the backup of the AFIP, and I used it.

*Q: Let me ask a bit about the backup of the AFIP, at this point.*

*We're talking about the mid-'60s. You've got a surgical problem.*

*You're in Wiesbaden; the AFIP is in Washington, D.C. How would you do it, and how was the response time?*

**DR. FROEDE:** Rather than use the mails, we put it onboard an air-evack flying out of Rhein Main, which is just up the road from Wiesbaden and Frankfurt. And it would be landed down here at Andrews Air Force Base. So you knew that, within that same 24-hour period, at least it was on its way to the AFIP. And then, of course, you could mark it "Rush," or you could mark it "Routine," whatever you wanted to do. And I thought the response time was pretty good.

*Q: Would you get back cables?*

**DR. FROEDE:** If there was something the matter there and they felt I should be notified, they'd probably pick up either a cable or a telex or a phone call.

*Q: Did you get involved at all with German pathology while you were at Wiesbaden?*

**DR. FROEDE:** We had an interesting group there of military pathologists, as well as a few civilian pathologists, that we'd get together about quarterly and swap cases. We got to know some at the various universities, Mainz and so on, that had very interesting cases. I will say this, that we always picked a good place to go. Like Oktoberfest time, we'd be in Munich.

*Q: You were in Wiesbaden from '65 to '68. Then, all of a sudden, we move to the major focus of what we're talking about.*

**DR. FROEDE:** Actually, the major focus, as I mentioned, probably started back with my days with the Royal Air Force. But then I was doing some medical-examiner type cases when I was in Florida.

*Q: Could you explain what a medical examiner does.*

**DR. FROEDE:** Well, we had a suicide and some accidents on the base. And then the local medical examiner, Tom Haydred, got me interested.

I'd go down and look at some of his materials. So, when I was interested that way, I decided, well, maybe I like forensic pathology. And so I went to the surgeon general's office and I was inquiring about it. In fact, I was probably on my way to a forensic path. residency here at the AFIP in '65, when... meeting of pathologists in Germany came up. They did ask me if I would give up that idea for a short while and go to Germany, and I still have the letter that says, upon my return, I would be assigned to the AFIP as a forensic pathologist in the residency program. And they carried out their word.

*Q: What did a forensic pathologist do at the AFIP when you came here in 1968? What was the job description?*

**DR. FROEDE:** At that time, it was, I believe, the Division of Forensic Sciences, which had a forensic pathology section, a legal medicine section. But they were doing the same thing that we did as the years progressed: suicides, homicides, any of these cases, we would review them. And then the Registry of Forensic Path. was here, and some of the civilians would send their cases in. So this is what they were doing. At that point, there was another section, the Radiation Path. section, which was doing almost all the aircraft accidents. So it really was a separate entity there, from our viewpoint. But we saw all the other medical/legal cases.

*Q: You were in more the medical/legal side, rather than the aircraft?*

**DR. FROEDE:** Right. Don't get it wrong, an aircraft accident is essentially medical/legal. It can be criminal, if somebody blows up an airplane, like at Lockerbie. It can end up in civil cases, court actions against someone. And this is why you want to do a good workup. One of the biggest things, of course, in aircraft accidents is identification. Forensic pathology, in essence, will start the identification process.

*Q: In '68 and thereabouts, was the focus of your work pretty much on incidents within the armed forces?*

**DR. FROEDE:** Yes.

*Q: You weren't being called upon for other things? Because I know, later, we'll be talking about the Azores and Jonestown.*

**DR. FROEDE:** It was pretty much limited to work in the military. The year of training was a diverse year for me. It wasn't all here at the AFIP. Dr. Stahl was in charge of it at the time, and I spent four months at the Office of the Medical Examiner of the State of Maryland, in Baltimore. During that four-month period, I think I did 40 homicides and something like 140 cases; at the same time, getting a couple of weeks of training in toxicology in the tox. lab with Dr...

But then the other thing that we were doing was going down to the Smithsonian for two weeks of training in anthropology. And then another two weeks would be at the Bureau of Narcotics and Dangerous Drugs (BNDD). We learned a little bit of what goes on in the streets. All of this information could ultimately be used to help analyze your own cases.

*Q: Litigation has always been a factor for forensic pathologists. Were you feeling the pressure that everything had to be just right, or understanding that, behind whatever you did, some lawyer might attack it from whatever angle?*

**DR. FROEDE:** In later years, while I was out at the University of Arizona, there was a retired trial attorney out of Chicago, and he had a famous saying that anything you do, anything you say, anything you write, and, sometimes, anything you think will usually be used against you in a court of law.

So the answer is yes, you try for perfection. You don't always achieve it, and sometimes you make a mistake and so on, but you try to do the best, and you try to set up a protocol so that you don't miss anything.

*Q: Were there, particularly in the earlier years, in the late '60s, a feeling of constant looking over your shoulder of litigators?*

**DR. FROEDE:** Oh, yes.

*Q: How would this impact on what you all were doing?*

**DR. FROEDE:** We did our cases, and that was it. We knew that we would be questioned in the courtroom, and they would try to find something and dwell on that, that you missed this, therefore you didn't do... But I never worried about it. In fact, courtroom to me was, and still is, fun. I have a couple of cases going to court here in the next few minutes.

*Q: Do you have any stories of any problems or incidents that happened in the courtroom while you were here at the Institute that are etched in your brain?*

**DR. FROEDE:** Not so much here, because there were only a few cases that ultimately went to court. There were only about six cases when I was up in Baltimore where I had to go to court, and I never got called on. Even though Dr. Fisher and I went on a murder case, he was on the stand, and they didn't bother me. So I didn't get that much court experience. It wasn't until I left the Institute and became medical examiner in Arizona that I ended up anywhere from one to two, three times in court every week.

*Q: In this period from '68 to '76, what type of equipment were you using? Was that different than, say, what one would use now?*

**DR. FROEDE:** Yes, the instrumentation in toxicology wasn't as nice as you have now. We didn't have DNA. And the types of microscopes that you would use weren't as nice compared to microscopes that you have now. We had a range downstairs, but we didn't have some of the equipment in the range that's here now. We developed a system here. And thinking back over it, in fact, I presented a case down here at a CAP meeting in 1971, and if we'd had DNA at the time, what a fantastic job we could have done. We might have convicted the person who murdered another one.

But this is true anywhere now. Everybody who has been through those days from about '60 to '90, that 30-year period, could look back and say, gee, if I had had this instrument, if I had had this technique, what a wonderful thing it would have been. The radioimmune assay technique, when it came in in the early '70s... I thought, gee, we can't even measure LSD. A couple years later, you could measure LSD in the tissues. So these are the things that have been fun watching develop, and being able to participate in this development.

*Q: You mentioned LSD. You were here at the height of the drug culture, where, across a large spectrum of society, people were playing around with various forms of drugs, particularly things such as LSD.*

**DR. FROEDE:** It's an interesting term you used: "the height of the drug culture." As far as I'm concerned, it has never slackened. You're

thinking of the Beat Generation, the hippies with LSD and some of the other drugs. It's back again. It's a cyclic type of thing. They suddenly rediscover the wheel. Right now, the concern is about the new generation of opiates, LSD and things like that. So it hasn't changed.

*Q: Was this a big part of your work, looking for traces of self-induced drugs?*

**DR. FROEDE:** Yes. We had a very good toxicology section here, with Dr. Peninos and Dr. Goldbaum. So it was really nice to have something like this. They did the research and they did the routine stuff. And then they would sit down with us, What does this mean? And I think that part of it is the interpretation. In fact, all of forensic pathology is interpretation of patterns. Whether it's a blunt-force injury on the skin, where you can say, well, this is a claw hammer, or the pattern of drugs in the body, or patterns of diseases. So my lectures, when I talk to the students who will be talking to the residents this coming month, the one lecture is Patterns of Injury. I like to call it the KGB--knife, gun, and bomb.

*Q: Did you have your favorite murder instrument?*

**DR. FROEDE:** That's another interesting question. Almost all forensic pathologists are fascinated with weaponry, from the standpoint of guns, because we see so much of it. We used to see a lot then, but we see a

lot more now. And you have to understand this, because it's usually the gunshot victim that turns into... Yes, you have stab wounds, and, yes, you have blunt-force trauma, but it's usually the guns.

*Q: Much more effective.*

**DR. FROEDE:** Much more effective, and much more final. So that's one of the reasons why Dr. Fink developed the range downstairs, to test weapons.

*Q: Could you explain what the range is.*

**DR. FROEDE:** It's just like an ordinary gunnery range, except it's down in the basement of the AFIP. You test-fire the weapons at targets, and determine distance, determine the patterns, then just to see how fast the bullets are, what it would do to a gelatin block. We did all that kind of work.

*Q: If you want to find out how a gunshot wound would work on a human body, what do you use as a substitute?*

**DR. FROEDE:** Of course, there is always the animal work. But that's a problem, particularly today. The animal-rights groups have really put a stop to a lot of animal testing.

So that, here, we went to the gelatin block. It's just a mass of set industrial gelatin, with oil of cinnamon as a stabilizer. It smelled very good. You'd get them in long blocks, about 15 inches long, about six inches high, four inches wide. Using that as the target, you could tell how the bullets reacted within that mass. Now it's supposed to simulate muscle, but it's nowhere near muscle, because what you can't do is change what's going on inside the block like you can with a muscle. If I kicked and you saw my foot coming toward you, for example, you might tense up. Well, you can't do that with a gelatin block.

*Q: How about bones, do you put bones in the blocks?*

**DR. FROEDE:** We would put bones in the blocks, yes. I had a very famous case out there in Arizona where we put a jawbone in a block, then we could tell the distance that weapon was fired.

*Q: Did you find in forensic pathology that you were having an impact on the designs of weapons systems, for instance, airplane configuration, tank configuration, this type of thing?*

**DR. FROEDE:** I don't think we had as much as some of the other places, such as Aberdeen. Ours were more tissue type. They call it wound ballistics, what happens to you. Some of the information that was given from the wound ballistics' studies, yes, it would show up, but I

don't think we had that much influence on the design of weaponry. I think more in the aviation area and the automobile, where we tried to deal with the patterns. If we could determine that that stickshift sticking out of the floor was going to put a hole in your head every time you stopped, get rid of it. I think that's the type of thing that we were looking at, more than redesigning weaponry.

*Q: How did the Forensic Department fit into the AFIP, in the '68 to '76 period, administratively? How did it work?*

**DR. FROEDE:** Well, it was part of the Department of Pathology, under Dr. Helwig. It was just another one of the divisions there, and we had access to everything in the AFIP. So if we had a case that we wanted to tox., we went down to tox. If we had something that we were interested in pulmonary pathology, we walked upstairs to Pulmonary. And I think, there, one of the nice things about that was the instant communication, that you could walk that case and come back, or they would say, come back tomorrow, we'll pass it around. I think that is probably one of the problems today with the mail-order business, although with fax machines and things like this, your diagnosis takes a while here at the AFIP to go through accessions and everything else. Whereas, I can take a slide now, I can put it in overnight mail or Federal Express to one of my colleagues, he looks at it, he faxes an answer back within 24 hours. I think that is probably one of the one drawbacks here, and I think they're trying to rectify that now, based

on what I heard about... But that's why the instant communication that we have being here was so wonderful.

*Q: You could go to a world authority on almost anything you wanted.*

**DR. FROEDE:** Right.

*Q: When you first arrived, Captain Bruce Smith was the director. How did he run the organization?*

**DR. FROEDE:** Can I use the term "a tight ship"? I have known him since that time. I've lectured for him when he left the service. He retired and went down to the VA hospital, and I'd go down to the VA Hospital and lecture for him in forensics. So he obviously knew that I was capable of putting on a good show. He ran the place very well as far as I could tell. During that period of time, it was Dr. Smith, then Dr. Morrissey. As far as I was concerned, it went very well. If nobody bothered me, and they let me do my work, then I thought he was good.

*Q: Dr. Morrissey, an Air Force colonel. I interviewed this morning Dr. Cowan, who was saying Morrissey was sort of yanked here and really wasn't too happy here and left rather disgruntled about the way the place operated.*

**DR. FROEDE:** That's true. But as far as I was concerned, I had known Bob for a number of years before, so I got along well with him.

*Q: At the time, was there anything like the armed forces medical-examiner system, which developed later on and with which you became involved?*

**DR. FROEDE:** What happened in that period of time was the conversion from a division to a Department of Forensic Sciences, with, then, a Division of Aerospace Pathology, a Division of Toxicology. Tissue Reactions to Drugs was under it at the time. Legal Medicine. Some of them went on to become their own departments. This was a period of time that there was expanding. During the Vietnam affair, there was an expanding workload for us, expanding challenges, trying to put these cases together.

It was at this time that Dr. Stahl and I, probably over a cup of coffee one morning, decided that maybe we ought to have a medical-examiner system. We put a set of slide together. And I still have those slides, going back 20 years from the time that we actually started it. So the seed was planted then. And it took a long time before it finally reached fruition.

*Q: Why did you feel that a medical-examiner's office was necessary?*

**DR. FROEDE:** For a couple of reasons. One, was to legitimize the office. The Department of Forensic Sciences, that sounded great. But it was not like my colleagues outside, who were running coroner's offices or medical-examiner's offices. We felt that the workload should be more in line with a medical-examiner's office, developing protocols and trying to work out the problems this way. And I think, in the long run, it was proven to be very valuable and very true.

*Q: Well, you mentioned Vietnam. The Vietnam War was going strong during this period. It was also going sour. In our armed forces, there were cases of fragging of officers, tossing fragmentation grenades at officers, and a lot of drug use and all. There were some real problems. I would have thought this would have put an extra burden on the forensic side to find out was somebody killed by enemy fire, or by a disgruntled member of the American Armed Forces behind the barracks, that type of thing.*

**DR. FROEDE:** It's true, during that period of time, the workload increased quite a bit. In the tox. area, we did some research studies and published some papers, with Dr... and Dr. Goldbaum. There was a study at that time of wound ballistics, by Dr. Fink, and some of the materials he would gather from there. Unfortunately, somebody over in Vietnam threw out a lot of that material. And so we never really did get a good collection of data that way.

But from the standpoint of what you're talking about, the caseload, the fraggings and things like that, they would come in here and they would increase our workload. But we accepted this, and we did what we could. It was very difficult, for example, to look at this in an autopsy protocol. The one, probably, hard part about the system here is that you have field pathologists doing your work, and then you review the protocol. You don't actually do the autopsy, you don't see anything, and so there may be some things missing. Yet the missing things have, in some ways, value. One, for teaching. You can teach the new residents: Don't miss this next time. The other is that what we have, the missing things, may be not accounted in this, but only the positive findings... so we could interpret them. It was an interesting era.

*Q: Speaking of training, were you involved in training?*

**DR. FROEDE:** Yes.

*Q: What was the main thrust of what you were teaching?*

**DR. FROEDE:** Well, all of forensic pathology. The residency program is a real long one. And so we had residents all during the time I was here. In fact, I was one of the residents at that time.

*Q: Also, you were benefiting, weren't you, from the Berry Program?*

**DR. FROEDE:** Yes.

*Q: So this meant that you were getting a fairly picked group of people.*

**DR. FROEDE:** We were getting some very good people in. They did some very nice research there. The other thing is that Dr. Stahl had started on was trying to expand from just forensic pathologists. We had a veterinary pathologist, and we had lawyers coming in for a training program... fellowship with. It was really forensic sciences, if you want to use the term, but we still thought that it needed that title: Medical-Examiner's Office.

*Q: Where were, in your opinion, some of the best medical examiners coming out of? Was it universities, or hospitals?*

**DR. FROEDE:** Almost all of them are connected with a university. I think New Mexico has a wonderful program. Dade County, Florida. There's Baltimore. St. Louis. They're developing a new program in Milwaukee. Seattle. You notice I've not mentioned New York, because they don't have a residency. Of all the places you would think would have a residency, they don't have a residency program.

*Q: They really don't?*

**DR. FROEDE:** Unless they've started up this past year. But, to me, the best programs (and the AFIP is considered amongst the best) had diversification. It wasn't just working the pit day after day until your year was up. They would send their people out in the field for field work; they would send their people for anthropology courses, which is what they're doing now. The resident is going to do an awful lot of cases, on his own, of gunshots (my KGB-type cases), and he'll never have time again to do some of these things that he has during his residency. Because really he's not under an obligation to do the daily work; it's a learning experience. And I feel that experience that I had at the Smithsonian, at the BNDD, at Baltimore, that was very good. Any residency like that is in the top bracket.

*Q: Did you see a change and upgrading of the forensic work done by pathologists in the armed forces? Were you able to see a discernible result?*

**DR. FROEDE:** Yes.

*Q: How? In what manner?*

**DR. FROEDE:** Well, I think their autopsies were done better; they were looking for other things. And, of course, they would call in, too, "I need some help." Then, if we couldn't send anybody, we'd tell them

what to do. And I think the admission that I'm not omniscient and omnipotent is something that some people don't have. I think when they do that, they then are knowledgeable enough to know their shortcomings and request help. I think this is one of the problems today in the forensic area, that there are a few people out there who are very willing to say, "I have never been wrong; I have never made a mistake." I will say this, there are fewer and fewer in that category, because I think they all now appreciate the value of consultation, which is just what the AFIP is, a consulting body.

*Q: Did you get involved with the museum at all, or was it more or less dormant at that time?*

**DR. FROEDE:** At that time, it was shut down for a while. We did make a display on the toxicology of drugs. And then it shut down complete when the University of the Uniformed Services came in. So everything was tucked away, and by the time I left, it had not reopened.

*Q: You left here in '76. Where did you go, and why did you go?*

**DR. FROEDE:** Well, I had my 20 years in. In fact, I had enough time to have a good retirement. I have 25 years, for pay purposes. Somebody I had known over the years, Dr. Jack Layton, who was out at the University of Arizona, was looking for a forensic pathologist to help develop his program. He gave me a call one day and said, "How would

you like to...?" We'd always wanted to live in the Southwest, and I had other friends out there, so I said, "Fine. What you got?" He told me what he had, and that was intriguing enough for me to decide to retire and go out there.

*Q: How did you find work at a university? Was it different from here?*

**DR. FROEDE:** Well, different only from the standpoint of changing your master. Here, the master was the federal government. Out there, it was the academics and the state. Sometimes I wonder which is worse. In general, I was in the Department of Pathology. My title is chief of forensic sciences. There was nothing there when I came. It was strictly develop it from the ground up, develop all the connections within the university, and develop the connections within the state. There were a few pathologists out there who decided that I was a threat, a terrific threat, and they did everything they could in their power to try to stop this development of the system.

*Q: How did they perceive you as a threat? Was it just that you were taking a piece of their action, or what?*

**DR. FROEDE:** The problem was whose turf it was. And they could see where the university might become the Office of the Chief Medical Examiner in the State of Arizona, which meant they either worked for it

or they didn't. And that meant money out of their pocket. And when you take money out of somebody's pocket, they get a little bit upset.

But, in the long run, we did develop as much as we could. We covered half the state, the counties around there. Every county attorney that we had wasn't willing to trade. The system was kept up after I left in 1987, and still is in effect today, except it's not with the university, it's with the county. But the same counties are still with this group. And the new chief medical examiner was my former resident.

*Q: Well, you got hauled back to the AFIP for a while.*

**DR. FROEDE:** Yes, in 1987.

*Q: How did that come about?*

**DR. FROEDE:** A number of years before, I think about '83, '84, Dr. Collins had said, "Why don't you come back to the AFIP in a Distinguished Scientist slot." At that time, I was still in the developmental stage out there, and I really didn't want to.

Then one day I was in Dr. McMeekin's office, and he said, "How would you like to come back?"

Well, I tell you why: I saw the handwriting on the wall at the university. Dr. Layton and I had been together for about 11 years, and he was reaching retirement age. You've heard, after the old academic, the new broom comes in. And I was afraid they'd sweep all that stuff

out that he and I had worked on so hard to develop within the department. As it turned out, that was right, because within a few months after I was gone, they swept it out of the university and sent it up to the county.

But when he said come here and be a Distinguished Scientist for a couple of years, do some research and things like that, I had no idea that I would ever end up as the Armed Forces Medical Examiner at that time. And so I decided I was getting old enough, and it was getting pretty hard to do 11 autopsies a day, pretty tired at the end of the day. And there were only three of us. At that time, I was trying to keep up my peer-group activity, working on the *Journal of Forensic Sciences*, and I was also in the chairs going on up to become the president of the American Academy of Forensic Sciences. So I thought, well, this is a good opportunity to change and see how I like it.

So I came here in 1987. And one of the first things they asked me to do was to take a look at the new medical-examiners' reg. that they were trying to put through. And I found a lot of things in there that needed some change. I spent a good number of hours down at the Pentagon with an Army colonel there and with the lawyers, trying to get these changes.

That bit of paper gave whoever was sitting in that job a lot of responsibility and very little authority. We tried to change as much as we could, but it was very difficult, because if we changed too much, it would have to make the round-robin again and it'd be another five years before you'd get started again. Nobody was willing to go through

this. Let's start it up, let's see how it works, and then let's work from there. [end side one]

*Q: ...medical examiner?*

**DR. FROEDE:** It was coming from here and, interestingly enough, from the criminal-investigating people. They were fed up with the hospital pathologist who was allowed to do a case, or wasn't allowed to do a case: "You can't do an autopsy, you've got surgicals." And it was also coming a little bit from the outside: "It's about time you people shaped up and got a medical-examiner system in the military." There had been several cases over the years before where everybody got upset about it. Congress got upset about it. And so Congress sort of mandated that this thing be set up. Now when they mandated, they didn't pass a law. If they had passed a law, we'd be on our way home right now without any problems. But they didn't, so it became just a reg. And with that, everybody would be sniping at it.

I felt at the time that I was fairly well supported by the Medical Corps, but there were several people who did not understand what a medical examiner was. I suppose the term "medical examiner" is a misnomer. It should be changed, because a medical examiner to them was somebody who came in, like the FAA, and did medical exams. Or a medical examiner came in and examined your records. There was one surgeon general who was very upset about this, that I was going to storm into his hospital, review all the medical records, and close the

hospital down. But we finally convinced him. After that, he became pretty good friends of the system, that we weren't going to do that.

*Q: Would a better title have been "coroner?"*

**DR. FROEDE:** You know, that's another interesting thing. Most of us, when we go out, are called coroners. I mean, the press calls you a coroner; it doesn't say medical examiner. "The coroner was out there," even though you're a medical examiner. But the name coroner, in this country, unlike in England, is bad. In England, the coroner can only be either a lawyer or a doctor or both, and very professional. When I was with the Royal Air Force and I testified in Coroners' Court, it was totally professional. Here, it could be anybody. It's an elected office, it could be the local bartender; I've seen nurses who were retired; I've seen funeral directors; I've seen furniture salesmen, they're all coroners. Now, in some places, they're very good and they have medical-examiner doctors and so on. So the name coroner, maybe we should get something new. It's bad at this point.

*Q: I know, when you say "medical examiner," to me, this is somebody who comes around and takes your blood pressure to find out whether he gives you...*

**DR. FROEDE:** That's it. Now, in New Mexico, realizing this, Jim Weston, when he created the system out there, used the term "medical-

legal investigator," which now implies you investigate. But even that's a little bit lengthy. You're right about coroner. Gee, it's handy, you can click it right off.

*Q: You were the first Armed Forces Medical Examiner, is that right?*

**DR. FROEDE:** Yes.

*Q: You started on the 2nd of May, the day after your birthday, 1988. How did you see the office at that point?*

**DR. FROEDE:** Dimly. It was a time that we didn't have a big staff. It was a time that people were sniping at us, because they didn't want to see a system run into. It was a time that we didn't have a lot of money to do the things, because it would be draining the AFIP funds; we didn't have separate funding. I really had only four people to send out to do the job. There were times in that first year that literally I'd be the only one in the office, just trying to handle the telephones.

Then we began to develop the teaching program, and I spent a lot of time on the road, going to Europe, going over to Japan and Korea, and even around the country, trying to tell people what the system was, what it did, what it could do for them. I always tried to achieve the positive with them; how, even in a malpractice case, we might be able to help out the hospital. And I think I got the point across almost

everywhere. But it was time consuming. You'd spend two weeks in Europe, and you'd spend...

*Q: Why go to Europe?*

**DR. FROEDE:** Because we had a very large force of people there, and most of our cases were coming from the European area. We had a couple of good pathologists in the Pacific area who were taking care of things, so from that standpoint, the Pacific kind of handled itself. But Europe needed a lot of help, and particularly the criminal investigators were very adamant about my coming over and setting up seminars, teaching other criminal investigators, working with the German police, and working with the hospital commanders. I think I made about three trips over there in the first few years, and then set up programs.

*Q: You stayed on until, what, 1991?*

**DR. FROEDE:** Ninety-two.

*Q: In this time, were there any particular cases?*

**DR. FROEDE:** Oh, there were a number of cases. You betcha! I think the first really big case we got involved in was the Iowa.

*Q: This was the battleship Iowa, when one of its 16-inch guns blew up.*

**DR. FROEDE:** That was the first time we really pressed the medical-examiner system into effect. We had some air crash accidents and things like that, but up until that time, we did not really act as a medical-examiner's office. At that point, when this happened, we moved over to Dover, Delaware. And Dover ultimately became the medical-examiner's office in all these cases, the *Saratoga*, the Higgins' case, then, of course, Panama, and, recently, Somalia and other areas.

*Q: Well, about the Iowa. The Iowa was a very controversial one, because there was strong questioning of why there was an explosion there. The Office of Naval Investigation pointed the finger at one time to one sailor and said, "Well, he was a homosexual and he was unhappy." And this aroused a firestorm of protest in the media and all that. Did you get into it early enough?*

**DR. FROEDE:** Well, there again, no, we didn't. We never were able to send anybody to see the *Iowa* until after the fact. Which is where my civilian colleagues have it all over the military, and that is, the phone rings, and you're on your way to the scene. Had we been able to see the scene, had we been able to work with the NIS and any of the other people, the engineers and so on... Later on, we did get engineers. But since it was the first time, nobody really wanted to send anybody to us. They finally sent a gunnery officer, and they

finally sent an engineer to us, but it was several days into the investigation. They sent them up to Dover, and we worked together on that.

But it did point out the one thing that I think has been helpful, and that is, you've got to use your medical-examiner system to assist you. They are there to help you. Not to be a hindrance, not to put you down, but to help you. And in helping you, you're going to look pretty good. If we had been in there, maybe we could have made the NIS look a lot better.

Then we had *Saratoga*.

*Q: What was the Saratoga?*

**DR. FROEDE:** This was the carrier where the sailors had gone on a holiday right around Christmastime into Tel Aviv, and on their way back, the ferry boat tipped over and 21 people lost their lives.

We had Panama, just cause.

Then probably one of the most memorable cases was in 1989, the end of July, early August, with the film on Col. Higgins, the Marine Corps colonel.

*Q: He was an American Marine officer assigned to the U.N. peacekeeping force and was kidnapped.*

**DR. FROEDE:** He was kidnapped, and then they released the film of him hanging, suspended. And we went to work on that one, on the identification. The FBI did a magnificent job on that. We worked several nights with them on that, to identify him, by taking a picture of him and doing superimposition, by getting a picture and adjusting him as he's turning, to a certain point, and then we could actually just point-for-point. And we were able to demonstrate to the Marine Corps things that they claimed had happened did not. As far as we were concerned, Higgins had died many months before that. And that's all I can tell you about that case at this point. It's still considered an active case. The bodies came back in December '91, and we did the autopsies on the Army Lt. Col., retired, Buckley. Buckley and Higgins came in.

It's interesting. I mentioned *Saratoga* at Christmas, Just Cause, Christmas. For about five years, we spent most of our Christmases at Dover, Delaware.

*Q: Did you have an actual office at Dover? Was this your operational office there?*

**DR. FROEDE:** It was just simply a mortuary where we could do the autopsies. And, of course, during Desert Shield, we went up there and began to stock it. But we couldn't do anything; no construction could be done. And we knew, if you followed Jack Anderson's figures, that we

would lose somewhere between 17,000 and 25,000 dead. There was just no way Dover could have handled them.

*Q: We're speaking now of a conflict between the United States, with its allies, and Iraq in 1990. Jack Anderson was a columnist who, along with many others, was predicting horrendous casualties.*

**DR. FROEDE:** So Congress authorized the expenditure of the funds, but wouldn't permit it to start until everything started, which, in their infinite wisdom, sounds great.

It started on a Tuesday night, and I went up there the next morning. Construction started, and it was an extraordinary battalion of Air Force engineers and construction people out of Indiantown Gap. In 21 days, from the footings to the final, they had put this thing together for us. I spent about 60 days up there, just fighting all the battles of construction. I learned a lot about the construction business. You don't put drinking fountains next to the autopsy table, and you don't put 3 x 3-foot ducts over the autopsy table, because nobody could straighten up.

Working with them, there were some mighty fine people up there. But the red tape was horrendous. I think probably my biggest problem there was the Army red tape, trying to get records from the Army so we could sign out the death certificates. The Navy and the Air Force and the Marine Corps were very cooperative that way.

The FBI did all the fingerprinting, and we did have some Army CID people who helped them along with it, which was very good. We would go to the Ops. Center about nine, ten o'clock at night. We knew what flights were coming in, and we had the tentative names of the deceased, so we would send them down to FBI headquarters, and they would pull these files, so that the next morning, when their team came up, they had the fingerprints and they could do it right away.

We wanted the Army to do this; look, here are the names, get us the records, so that we can sign out the DCs by the end of the day. Well, my poor fellow who was doing a lot of this work spent hours there every evening, because they'd come in one at a time. If anything held up the return of bodies to their loved ones, I felt it was the paperwork. Although we were criticized by people saying the reason the body can't go home is because the pathologist hasn't done the autopsy, that was wrong. It was the pathologist and the anthropologist and the dentist working together to put the pieces back together. And that takes days.

We had one case that I'll never forget, when a name was given over CNN at eight o'clock in the morning. At five o'clock, I had a call from a congressman, saying, "Why isn't the body in the hands of the family?" Well, it takes 18 hours to get it from Kuwait to Dover. Then it has to be identified and has to go through. So I explained the whole thing, he said, "Thank you very much, doctor," and that was the end of that. But that's the type of thing that we ran across.

I'm very proud to say one thing: there is no body going into the Tomb of the Unknown Soldier from that conflict. We identified them all.

*Q: I might add that you received the Defense Meritorious Civilian Service award for your work during Operation Desert Storm.*

**DR. FROEDE:** That's right.

*Q: Well, you, in many ways, as you had at the University of Arizona, were setting up the structure on which this medical-examiner office would operate, weren't you?*

**DR. FROEDE:** That's right.

*Q: When you left there in '92, did you feel that the authority of the medical examiner and the legal framework in which that office worked were better and stronger?*

**DR. FROEDE:** Yes. And I think my successor has been able to do a lot more, too, because of the framework that it started on. By then, four years later, I think it was recognized by my colleagues in the forensic field as being the Office of the Armed Forces Medical Examiner. And that, to me, was the most satisfying aspect of it.

*Q: The Dover facilities are there still?*

**DR. FROEDE:** They're still there. They have been used for Somalia. Had the Haiti campaign gone through, they would have been used for that. They're there for anything. They've used it for aircraft accidents and other identification problems.

*Q: Well, doctor, is there anything you'd like to add?*

**DR. FROEDE:** Oh, no, I think we've covered just about everything that there is.

*Q: Well, I thank you very much. I appreciate this.*

**DR. FROEDE:** You're welcome. It's been a pleasure.