DR. WARREN ZAPOL

ORAL HISTORY PROJECT

Oral History Interview

By Liza Zapol

December 8 &9, 2015 (Cambridge, MA)

January 2, 2016 (Miami Beach, FL)

March 20, 2016 (Miami Beach, FL)

August 4, 2016 (Falmouth, MA)

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February 3, 2017 (Brooklyn, NY)

General Interview Notes:

This is a transcription of an oral history that was conducted by Liza Zapol.

Oral history is a method of collecting memories and histories through recorded interviews between a narrator with firsthand knowledge of historically significant events and a well-informed interviewer, with the goal of adding to the historical record.

The recording is transcribed, lightly edited for continuity and clarity, and reviewed by the interviewee. Oral history is not intended to present the absolute or complete narrative of events. Oral history is a spoken account by the interviewee in response to questioning. Whenever possible, I encourage readers to listen to the audio recordings to get a greater sense of this meaningful exchange.

Narrator(s)	Dr. Warren Myron Zapol
Birthdate	3/16/1942
Birthplace	Brooklyn, NY
Narrator Age	73-75
Interviewer	Liza Zapol
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Oral History Interview Transcript

Session 1

LZapol: So, this is the Warren Zapol Oral History Project. It's December 8th, 2015, I'm here at 30 Shepard Street in Cambridge, and I'm Liza Zapol, Warren Zapol's daughter. So if I can ask you to introduce yourself quickly, and just say where and when you were born.

WMZapol: So, I'm Warren Myron Zapol. I was born March 16, 1942, in Brooklyn, New York.

LZapol: And tell me about any early childhood memories, maybe what one of your first memories are, of childhood.

WMZapol: I, I think probably my first memories are going to school, and my mother was a schoolteacher at PS 202 on, just down two, three blocks from our home. So she would walk me down to the school, and I would go to school. She was very careful about my performance; always asked where the, why it was ninety-nine and not 100. [*laughs*] And was very careful about the teachers that I had; I think I was quite frightened, I seem to remember being fearful as a child. I was very skinny, easy to get picked on, the goody-goody who sat – rather short, sat in the first row, first seat, and I had a, I remember I had a particularly difficult time controlling my bowels when I got anxious, and I remember being taken home several times, at arm's length [*laughs*] to be washed up and cleaned up. So I, it's a, that perhaps is my earliest memories of PS 202.

I remember – what else. Not long after we started violin lessons, maybe at seven. Locally. And my mother was a pianist, and my mother put on shows at PS 202. She would always give me a role. Whether or not I deserved it and [*laughs*] I had lines to memorize, and so through the [19]40s, I remember my mother being president of the PTA. She was a very active woman, very interested in education, and very close to the principal of the public school, Charles Eichel and, who was nearing, mm, I don't know, fifty years of service or something in the Brooklyn schools. He'd been there a long time. Thirty years. And so she was very close, and very important, and I think she guided my education for those first six years of my education very closely. My father was less in touch. My father, Bernard, or Ben, as he was called, was less in touch with me. He traveled a lot. He went to Switzerland, and imported Swiss movements for watches. And that's the kind – before that he'd been in the dress business, cutting dresses at Jay Day [00:03:45] in downtown New York, but, and becoming vice president of Jay Day, but then he went into the watch business. And as a little boy, I remember having Captain Marvel watches, and he started the Marvel Watch Company. And he made Captain Marvel and Mary Marvel watches, became very, very successful, and by the time I was eight, in 1950, my father was making a million dollars a year. We had a Cadillac, and we became a very wealthy middle class family.

LZapol: So your father was born – do you know when he was born, what year was he born?

WMZapol: My father was born around 1910, my mother was born – I think he was a little younger.[1] And had immigrated; my mother was born in, on the East Side of New York City, had a

[1]Ben Zapol was born in Russia on December 11, 1909, Florence Zapol was born June 21, 1909 on the Lower East Side.

brother Jack, and Sol, the younger, Jack was the elder, and mom was the middle child. She went to teacher – she went to high school and teacher training school, so she felt education was important. Her brothers were not, never went to college. So my mother was quite, quite interested in education, teaching at Jamaica Training School for Teachers, I think she graduated from [there]. So she was a teacher. **[00:05:15]**

LZapol: Ok. And tell me about her – so she grew up on the Lower East Side, on Rivington Street, I think.

WMZapol: She grew up on Rivington Street.

LZapol: And where were her parents from, what was their story?

WMZapol: So Gussie [Haftman] my grandmother came from Galicia, in what was then Austro-Hungary.[2] And she came with her mother, and was perhaps fourteen in New York when she got married to my grandfather, who came from Austria.[3] And the only story I remember of my grandfather, Harry [Rothlein], was that he was trained as a barber. He remained – he couldn't write English, and they both spoke Yiddish as a primary language. Harry had stopped in Vienna, I remember, and didn't want to join the army cause the emperor at that time – this is maybe 1880?[4] The dates are in Ancestry. Harry didn't want to join the emperor's army, so he came, he immigrated to the States.[5] And he married a fourteen-year-old girl, Gussie, who I think [had] worked in the Triangle Waist Factory --[6]

LZapol: Shirtwaist Factory.

WMZapol: Shirtwaist Factory, and, at that age, so she basically got married at a very, very young age, to Harry. I think Harry had a wandering eye, he had blue eyes, blonde hair, he was an Austrian young buck, also from Galicia and I think Harry and Gussie had kids on the east side. I know my grandmother became quite ill with an abortion in the middle of, a spontaneous abortion in the middle of her pregnancies, and was bleeding out, and received one of the first human blood transfusions at NYU Hospital, at Bellevue. She was given – Karl Landsteiner was doing human transfusions, the first in the world, they got the Nobel Prize for it. And Gussie got a blood transfusion.[7] I've always wanted to go back and dig up that history. And it apparently saved her life.

L Zapol: Did she tell that story? Or how did you find out about that?

WMZapol: My mother said she'd become so ill, because they were young children at the time when --

LZapol: She miscarried.

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[2] Gussie was born in 1890 and came to New York in 1898.
[3] Gussie married Harry Rothlein when she was sixteen, on October 15, 1906. Harry was born in 1885.
[4] ?
[5] Harry emigrated to the United States on December 10, 1904.
[6] See above. She Gussie was sixteen when she married.
[7] Gussie's illness, miscarriage, and blood transfusion likely happened around 1910.

WMZapol: -- grandma went to the hospital. Yeah, she was a young child. So, my grandmother was a saint, she never said a bad word, she never, never had an unkind thought. She was always positive to her grandchildren, helped bring us up, always was the babysitter. In our house, where I grew up [393 Atkins Avenue, in Brooklyn], it was a two-story house, my grandparents lived upstairs, my grandfather had a barbershop as you came up the stairs. He first had a barbershop on Blake Avenue, and when he closed the barbershop on Blake Avenue he moved it into our house. And my grandmother and I would bring him food; he wanted soup for lunch every day, so my grandmother and I would take a stroller and put soup – usually chicken soup – pickles, hot peppers, green pepper, [*laughs*] green tomatoes and push them up Blake Avenue, past hundreds and hundreds of push carts, to my grandfather's barbershop, where Harry – and I think at one point some of his sons worked with him there, but Harry had a barbershop on Blake Avenue.[8] And cut hair.

LZapol: Who would hang out at the barbershop? What kind of customers would he have?

WMZapol: Well, other Jewish residents of East New York, and he had a steady string of them, and I remember that was the first time, as a little boy, I remember seeing somebody with an Auschwitz number on their arm. Cause he would be cutting hair, and they would have short sleeves, and I would say, 'Grandpa, what's that?' And he rolled his eyes and told me stories. So we would have lunch, and I would add that my grandfather, at every meal, had a small glass of Schnapps. He said it helped the food digest [*laughing*] and go down. So Harry had a glass of Schnapps.

LZapol: Did you speak Yiddish? If he really only spoke -- **[00:09:52]**

WMZapol: I only knew some words. Yiddish was the secret language in our family. If they were preparing to dump me, leave me, [*laughs*] go out – my father loved the opera. He loved *The Ring, Der Nibelungen*, the Wagner *Ring*, from his medical school days, and my parents I think had a subscription to the Met. So they would go to the Met. And my grandmother and my mother would go to movies; they would go to the dish movies, where you got a dish if you went to the movie. So frequently, they would do afternoon movies, especially if I was at school or something. When mom wasn't working. She didn't always work. She worked stretches, and then she came back as a substitute. At one point.

LZapol: So I don't think – you mentioned your dad loving *The Ring* from when he was in Germany, but I don't think you spoke about that here since we started recording. So, tell me about that, about, you know, his desire, before he became a businessman, what he wanted to do with his life. And also maybe about his upbringing and his parents as well.

WMZapol: So, to the best of my knowledge, pop came from Russia with his mother [Pauline Lifschitz Zapol] and his two sisters.[9] Rose and Sonya. And Rose and Sonya got married in the [19]30s and so did dad.[10] Dad had gone to Long Island College, to university, and then he had no money and the Depression struck in 1929. And then he was just penniless. And then in 1930, I think, his mother died of bone sarcoma, his father died, I don't know of what, and his brother

[8] WMZ Correction on 12/17/16: "Some of this **brothers** worked with him" (not sons).
[9] Ben Zapol emigrated on February 3, 1922.
[10] Ben married Florence in 1932.

committed suicide because he had tuberculosis.[11] Had been a Hebrew school teacher in Maine, and fallen in love, and an Orthodox family had made him divorce Molly Chesner and then he came to, he went to a sanitarium, came back to Brooklyn, killed himself. My father found him, so my father had three deaths in the family in 1930, so I think he was quite depressed. I sense that from his diaries.

And then he met my mother, in a, he was a waiter in the Catskills and my mother was playing piano in a girls' band, and I think he fell in love with my mother. But his plan was to go to medical school, and he couldn't afford, he went relative to relative begging money and didn't get any, so finally he decided to go to Germany, 'cause tuition was relatively cheap still. He could teach English, make enough money to get him through medical school. So he did. He went to [the University of Bonn, in] Germany. I think he spent a year and maybe another half year. And he prosected, he worked for a pathologist, an anatomist, actually, Johannes Sobotta, the most famous German anatomist. And he, Sobotta's wife would stuff rolls in his pocket, as I heard. And he also taught English to Germans who wanted to learn English, and he made money that way to pay his tuition, and he took the first year and a half of medical school subjects, whereupon in [19]32, roughly, [19]33, Hitler passed a law saying foreigners couldn't work in Germany, as he was trying to preserve German jobs for Germans. And my father no longer could support himself. So he went home. And in America he always, he did second best. He couldn't do medicine; he loved medicine, wanted to be a surgeon, but he knew he had to, he did everything he could to stay alive. He sold gold teeth, he bought gold teeth from people who were selling their teeth in the Depression. And for the gold, he could get a little money. He did all kinds of things just to keep body and soul together. Then he decided he was going to cut dresses; he never cut a dress before in his life. The family story is he went down to New York, in the dress district, there's a long line of people, like a hundred people lined up for a job, and he went right to the front of the line, and said, 'I can cut dresses, I'm experienced.' They let him in, he'd never cut a dress before, he cut right across the material, they threw him out, but then he knew how to cut dresses [*laughing*], figure that.

So then he became a dress cutter, rose to the top of Jay Day, went into the watch business after the war. I never knew why he wasn't drafted. I think he claimed he had a punctured eardrum or something. And he was a bit old; he had a child, I was born three months after the war starts, after Pearl, so I think that's probably why he was never drafted and taken during the war. **[00:14:57]**

My father moved us. He bought a place in Bloomingburg, New York, a farmhouse. And we spent all our summers there, it was before air conditioning, and I think a good part of the year. My mother was up there with me, and my father would take the train to Middletown and then come up to Bloomingburg. On, say, Thursday night and go back Sunday night or something like that. He commuted --

LZapol: And that was when you were a few years old that he bought that --

WMZapol: That's when I'm – it's during the war. I think it's even '44, '45.

LZapol: Mm. So your early childhood you think you spent a lot of time there.

[11] Ben Zapol's father died in 1931, and his brother Harry committed suicide on March 21, 1926.

WMZapol: I did, and there's a photograph of me on a US, a big star, a gun with a big star on it, so I know, in Bloomingburg, so I know it's wartime.

LZapol: Mmhmm. Do you – but your first memories are kind of --

WMZapol: School.

LZapol: -- at the end of war, the war, yeah?

WMZapol: I have no real memories of that.

LZapol: Or Bloomingburg, at that point.

WMZapol: Right. Mrs. Brown. I have some names in there, but no real memories.

LZapol: Mmhmm, mmhmm.

So, so we're at school, and your mom is such a big influence in your life. You've talked about music a couple times, like your dad really loved Wagner, your mother started out as a band – talk to me about the influence of music on your early childhood, and your becoming, studying violin. [*laughs*]

WMZapol: A fiddler. Yeah, fiddling.

So, so, my mother was very sincere about me playing the violin, and she got local teachers and whatnot, but somehow, when I was, I must have been close to ten or twelve, she found [Raphael] Bronstein, who - there's a photograph of it upstairs – Bronstein, who was a great teacher. And one of Jasha Heifetz's co-students of Mischa Auer in Russia. He was a Russian immigrant on the Upper West Side.[12] And we would travel an hour to him, I would take a lesson and come home. All I can remember is he was a chain smoker – absolutely an ashtray full of cigarettes. Played the piano, thumped on the piano, played great music, Vivaldi, you know, all the greats, concertos, and I think it went on until eighth grade, probably. Maybe ninth grade. When I clearly had to make the decision, was I going to study more, or was I going to study more violin. General subjects or violin. And I went to general subjects. And after that I think my playing plateaued, but I don't think I ever was very good. I mean I certainly wasn't a concert violinist. I woulda been ok.

My mother had, I think, a much greater knowledge, love of music. She always played with me. She always practiced with me. I can hear her thumping on the key when I got the note wrong. She had a great ear. I, so I, my suspicion is that's what drove violin from the age of five or six through thirteen. And then I stopped. Dead cold. Got into other stuff. [*laughs*]

LZapol: So you say, I mean, it's clear that music was important to your mother, and studying, you know. What about your father? What do you think was important to him in life?

WMZapol: Hm.

LZapol: Or do you have a story or an example of what was important to him?

[12] WMZ Addition on 12/17/16: Raphael Bronstein lived on West 92nd Street, in Manhattan.

WMZapol: I think he loved people. He loved, he was much more interactive. He was, people liked to work for him. He was always – he decided, I think, based on the insecurity of life as an immigrant, I think he decided that although he realized the watch business as there for a while – and it didn't last, because Eisenhower passed a tax on imported movements so he could preserve Bulova, Timex, the American companies. And so dad's business basically disappears in the [19]50s, pretty much, or becomes much less profitable.

LZapol: He was doing a lot of work with Switzerland.

WMZapol: Importing Swiss movements.

LZapol: Mmhmm.

WMZapol: So he, he realized, I think, the only thing that would be very valuable was property, so he kept investing in Bloomingburg. He bought land – first 150 acres, then 250 acres, and so he probably had 350 acres in the Catskills, and he built cottages. Either the houses were there and revamped or he built new cottages. He built fifty cottages, or fifty-two cottages.

And then he got people, and hired people and he started a day camp, because this is the year before televisions, before – you know, we had circuses, we had no air conditioning, so you wanted to escape from roasting New York City, so wealthy middleclass left New York in the '40s and '50s and you could see the peak years were the mid-'50s and would drop their wife and kids off. Kids would go to day camp, mom would cook and have a day, have the afternoon off to play mahjong or schmooze with her friends. Kids would come home at five o'clock in the bus, the big bus would brig us down from the camp, which was maybe half a mile away. Up on the hill. And I worked, I was first a student or a member of the camp, and then I became a junior counselor, I remember. And eventually became a counselor in another camp, where I worked with Joe Silk [Joseph Silk] when I was in college. But basically, that occupied all my summers. **[00:21:21]**

LZapol: So was your dad the camp director? Did you --

WMZapol: No.

LZapol: -- see more of him when you were there?

WMZapol: No, he was not; he handled the administration of the entire operation. Which was hiring plumbers and carpenters. And he would plumb and carpend himself, and he was more into the – and chatted with people, and convinced them to come, and my mother was always worried about money, that he would lose money, nah nah nah, my mother was very money-centric. All poor people who had lived through the Depression were very money-centric. And she was more the papers, but she had, we had a baby grand piano in the house, she had her music, she ran shows in the camp. Every summer we did Gilbert and Sullivan, *The Mikado*, *Pinafore*, I either played the violin as a member of the orchestra – very small, just one or two people – or I was, or I had a part.

I met Marty Rich. Marty Rich's mother worked in the Zapol's cottages and she ran the casino kitchen. So Ida [Rich], a saintly woman, Marty's mom, ran the kitchen, and Marty therefore got a free camp. Marty even was much poorer than we were. Much much much. So, I got to know Marty that way. He became an architect, a very famous one. And Stanley Greene, who also lived around the corner from us in Brooklyn, the Greenes came up and took cottages during the summer.

So many of my friends' families would spend the summers with us, and we'd see them in Brooklyn during the winter.

LZapol: So were all the families kind of Jewish of a similar – you said they were poorer, but kind of similar in terms of class, or?

WMZapol: Well, they were all middle class Jews. Stanley's parents, father was an optometrist around the corner. Marty's father I think may have worked in the post office or something, I don't remember.

LZapol: So yeah, so kind of business, working class, doctor, sort of different, but --

WMZapol: Yeah, middle class, first generation, for many of them --

LZapol: Uh huh.

WMZapol: -- Americans.

LZapol: And so, I guess, that's interesting about, it's really kind of the same neighborhood in East New York just kind of moved up to Bloomingburg for the --

WMZapol: Right --

LZapol: -- summer.

WMZapol: -- but I think actually the tenants were from all over New York.

LZapol: Is that right?

WMZapol: Yeah. Not just our neighborhood. East side, west side, absolutely, absolutely. And I don't remember a lot having moved out to New Rochelle or any place like that yet, but this was mainly, mainly Brooklyn, Eastern Parkway, other parts of Brooklyn --

LZapol: Mmhmm.

WMZapol: -- yeah.

LZapol: So yeah, I mean, tell me about what East New York was like. What was your address, what was your --

WMZapol: 393 Atkins Avenue, Dickens 52284. Brooklyn 8, New York. I think it was. [*L. Zapol laughs*] Eventually got a zone. Two story houses, well cared for, clean, almost all Jewish, on our street, an Italian street, an Irish street, a church, a Catholic church. So you either went to New Lots Avenue station or Shepard, on the respective lines. It was about halfway between them. They, they, I became friends with neighbors, next door. I have another friend, Harry Jaeger, J-A-E-G-E-R, who lives, he's still alive, he's up in New Hampshire, he, he was three doors down. Little Harry, and he was kind of like a younger brother to me. We had a synagogue one block away, which I think is now a Baptist church, and that's where I was barmitzvahed – that's where my grandfather and grandparents would go to pray. Orthodox, ladies upstairs, gentlemen downstairs. Where I would – yeah, no, I mean, it was a very classical Jewish neighborhood, which disappeared by the, by, what, '50s, '60s? **[00:26:09]**

LZapol: Late ‘50s --

WMZapol: Poof!

LZapol: -- yeah. So what, do you know when your parents moved there, or what brought them there?

WMZapol: Yeah. My, they all, my grandfather came to Brooklyn first, with the kids, and the family. Probably [19]30s? Maybe [19]20s. Maybe ‘20s. Late ‘20s, ‘30s.[13] And then the kids moved nearby, so, on, I think Jack [Rothlein] had a place, including a beauty shop, cause he was a beauty, a beautician, Steven’s father, on New Lots Avenue, and Sol [Israel Joseph Rothlein] --

LZapol: These are --

WMZapol: -- Linda’s dad, moved --

LZapol: These are your uncles. Your --

WMZapol: -- a little further --

LZapol: -- mother’s brothers. Yeah.

WMZapol: My mother’s brothers. Everybody was not very, within ten blocks or something like that. So everybody was a little, close through the ‘40s, probably into the ‘50s, and then they began to scatter a bit more.

LZapol: And you spoke about your synagogue. So what was your parents’ sense of religion, or your grandparents’ sense of religion? What was --

WMZapol: Well --

LZapol: -- their identities?

WMZapol: -- my grandparents kept a kosher house. My parents did not. Except at home, in Brooklyn, cause we ate with my grandparents most of the time. But as soon as we went to Bloomingburg, or as soon as we left the house, it was bacon and eggs. My, my mother would go to synagogue, and my – they would attend synagogue twice a year, or, Yom Kippur. My sense is they were, they would consider themselves Jews and were not active in the synagogue. The synagogue spoke Yiddish and was even of an older vintage. My grandparents’ vintage.

My grandparents weren’t terribly active. I think they would consider themselves Jews; they were very much for Israel. Very strong supporters of Israel; Harry Truman was god in our family, cause he recognized Israel in ’49, whenever it was. But I think – were they believers. I suppose, in a ritual or a spoken sense.

LZapol: What were – how did you celebrate some of the major holidays, like, what was-- Yom Kippur, you mentioned, was spent at the synagogue.

[13]WMZ Correction on 12/17/16: The Rothlein family moved to Brooklyn in 1925.

WMZapol: Right. Yom Kippur was at the synagogue. I think we fasted. I think it was a time of fasting. Pesach was usually at grandma's house. Grandma sold her dishes to a Christian down the street for a dollar, in, so she didn't have any *chametz* dishes. And then we would get them back [*laughs]* after Passover. So she had four sets of dishes.

LZapol: Do you have a particular memory from Passover?

WMZapol: Well, we would usually have a family event at Passover. And mom's brothers would come with their families, so there'd be twenty people at the table upstairs in grandma and grandpa's apartment.

LZapol: Did you like your cousins? **[00:29:57]**

WMZapol: I did. I liked Steven [Rothlein], I felt closest to Steven, cause he was I think a year older than I was. And Robert [Steven's brother] was much younger, Linda [Rothlein, their cousin] was much younger – young kids, you know, wait a minute. [*laughs*]

So, Steven was much more of an athlete. I was never an athlete. I couldn't hit the baseball, I was the last picked when they made a baseball team. I was not an athlete.

LZapol: So did Steven – you felt like Steven had a, judged you for that, or –

WMZapol: I felt closest to Steven [*L Zapol laughs*] and Steven of course is the, would sometimes do overnights at our house, and he was quite naughty, and he's the one who, we burned the stamp of Hitler. So that gets you into the stamp of Hitler.

So we all knew Hitler was a bad guy. My grandfather and the Auschwitz survivors at the barbershop had made it clear that he was not to be thought well of, and I collected stamps, and of course there were all these awful Hitler stamps that came from Germany during the war. So we decided we would burn Hitler in effigy on a raft of toilet paper in the toilet, and somehow, in my apartment, which was downstairs, our toilet was connected to the toilet upstairs, which was grandma and grandpa's toilet, and then it all went up through a vent, so there was a little center vent through the house out.[14] And unfortunately my mother, who loved pink, had plastic pink flamingo, I think, or plastic pink flowered curtains hanging over that window to the vent, which unfortunately was a little too close to our pyre, Hitler pyre, and so, because we thought we might have trouble getting it to light, we put lighter fluid, cause my father smoked, on it, to help us ignite it. Dropped a match on it, of course it, boom, went up in flames. Then the, filling the room with smoke, and then caught the pink curtains on fire, plastic curtains, they went up – all the smoke rose up through the center vent, to grandma's. They smelled the smoke, came rushing down, and I don't think it was, it wasn't a – it went out. We threw pots of water at it, Steven and I, very embarrassed, of course, but it was one of the childhood events that goes down in history in our family. [*laughs*]

LZapol: Now was this the same time that you singed your --

[14] WMZ Correction on 12/17/16: It was not a vent, it was a communicating shaft (with a skylight on our two story house).

WMZapol: No, that was [*L Zapol laughs*] – I got into science. [*laugh*s] So the kids and I got into science, remember, it goes radio – we got into radio. This is when I'm twelve or thirteen.

LZapol: Ok.

WMZapol: And we – I went into radio, and I went into rockets. This was the time of Wernher von Braun, a German émigré, who was helping America develop rockets, the Germans had the V2, and we started to develop rockets after the war. So rockets were big, and we dreamt about space travel, and we read Robert Heinlein, and we thought about going to the moon, and we started to build rockets. And I think it was in Stanley's backyard, we kept watching, on, I'm not sure if it was a TV ad or the radio, but there was an American called Carl Stapp [John Stapp] and they were testing the effects of rocket acceleration on the human body, and there would be pictures of Carl Stapp's face as his – he was on a rocket on a railroad car, and he would accelerate along, and his whole face would get splattered back, and we thought, 'Wow!' And they used railroad cars, so we decided we would take a Lionel railroad set, set it up in the backyard.

Now, around all these row houses, you might have, oh, I don't know, a five hundred foot stretch of backyard, and Stanley's was in the back of this backyard, and so, being smart kids, interested in radios and electrics, we made a zinc sulfur [rocket], we got a fifty millimeter shell, drilled it out, filled it with zinc sulfide, and then we knew we needed a Venturi to accelerate [the burning gasses], so we got a doorbell [*laughs*] which had just the right, the brass ring of the doorbell had just the right angles on it, so we bolted it with screws and nuts, to the zinc sulphur interior of the – and I'm sure I had help from Stanley Greene and from – I'm not sure if Marty Rich was incriminated in this. And we decided we would ignite it, and then we thought, how would we ignite it? So we got a nichrome wire, a nickel chrome wire, and attached it to a Lionel transformer, and thought we'd put the power through it to ignite it. So we set it up in the backyard along maybe a twenty-foot stretch. We decided we'd stop it with a cardboard box, figuring that might be enough. Put an empty cardboard box at the end. And we got down into the blockhouse, which was the cellar. I threw the switch, nothing happened. So I figured, well, the nichrome wire wasn't insulated, and it probably was touching the Venturi, it just needed to be lifted up.[15] So I went out to the rocket, lifted it up, and that's the last thing I remember. [laughter] **[00:35:47]**

The next thing I remember, I'm laying on the ground, the rocket has gone off, it has gone at least five hundred feet and slammed itself into the side of a building [*L Zapol laughs*] and a lady is hanging out the window and screaming and yelling at us for [*laughs*] for exploding a rocket at her building.[16] [*laughter*] Unfortunately I'm laying on the ground, I can't see very well – my eyes are teary, and hurting. And people are looking at me, and I had burnt off my eyebrows and my hair on the front of my head, and I looked like a little gray man. [*laughter*] I had little gray eyebrows, little gray hair, and they brought me home - I lived around the corner – pressed the button and left me. [*laughter*]

My grandmother figured out that I wasn't in great shape, so she took my hand and we went to Dr. Meister, George Meister, our family physician, who I think was a distant cousin. And George said, 'Warren, what was the rocket fuel?' And I said, 'Zinc sulfide,' and he said, 'Oh, it makes an excellent skin ointment, and eye ointment, and nothing to worry about, you'll be good in a couple

[15] WMZ correction on 12/17/16: The wire was probably shorting to the Venturi.

[16] WMZ addition on 12/17/16: The lady was yelling at us in Italian.

of days. Go home with your grandmother.' So I went home with my grandmother. [*laughter*] He checked my cornea out, my eyes were okay.

LZapol: You must have been terrified, though, at that moment.

WMZapol: I suppose; I don't remember the terror. [*L Zapol laughs*] I'm sure it was --

LZapol: Or humiliated?

WMZapol: What was it --

LZapol: What was the feeling?

WMZapol: -- somebody said, the worst words in the world to hear as a child is 'When your father comes home.' [*laughs*]

LZapol: Do you remember what happened?

WMZapol: No. I really don't. I don't, I guess I got quiet time or whatever. [*L Zapol laughs*] Whatever people do nowadays.

LZapol: So you said first – yeah, first there was radio, then there was rockets. And you --

WMZapol: They kind of came at the same time. I was, I think, at Stuyvesant when I got into radio. Lenny, there was a young man, Cahan, C-A-H-A-N, a classmate of mine, maybe Lenny Cahan, or some Cahan, Michael Cahan, who lived in the, mm, Bronx, maybe, who was into radios. So we got into radios because telephones cost a fortune, it cost you ten bucks a minute to make a phone call to California, whatever AT&T got, try to call Europe, and TV was just coming on the horizon and we knew, electronics was not feeling – Marconi had done it in 1900, so where were we? In the 1950s, we were, we built radios, and so I built radios, they never worked, we took apart old radios, I would always shock myself, and my fingers were always singed and burnt from shocking and burning, but never the less, we then got a Heathkit, convinced my parents, and I think my parents were strong supporters of it. And my father built me a tower. So I passed my license when I was twelve or thirteen years old. My, my novice class, then my general class radio license. You had to go to downtown New York and take a, put on headphones, you know, translate code and then do theory.

So I was learning about electronics. Which was good for the country, we'd had radio operators during World War II, the country needed them. It wanted this. And so, what are we, we're '55 now, get my license. And dad, I realized that you need power. That's money, didn't have much money, I would run 60 watts, not 500 or 1000 watts, and then the other thing is, it was high, Bloomingburg, it was on the side of a hill, so dad built me a fifty-foot tower.[17] One of his friends was in the steel industry, Patty Rausch, one of our tenants. And somehow, a fifty-foot tower went up. I think I was always scared to death of going up there, and my, I think my father put up the antenna for me. I was, I never got over my fear of heights climbing on those towers, which had very poor ladders and were not – I mean, the tower never fell down, it was great, and I had a great antenna up, and then I think that summer was peak of the radio wave season, ten meters? I had a friend in Cape Town, South Africa. And I would talk to Barney at Barmera [00:40:29] in South

[17] WMZ addition on 12/17/16: Bloomingburg was at perhaps 1,000 feet elevation.

Africa. At Cape Town. He ran a lobster fleet, and South African rock lobster tails, and we would talk at noon, when I came home for lunch, cause I think I was a junior counselor, I was allowed to come home for lunch. And I'd have my sandwich and sit there talking to South Africa. And I think that, just that exotic, having a friend in South Africa you could talk to, and it didn't cost anything, or the whole thing cost sixty bucks plus the tower, I think it was really kind of amazing. **[00:41:02]**

So, speaking around the world. Making friends around the world. Hearing signals from god knows where became a very important thing to this thirteen year old, and I don't think he lost it. [laughter] As you will remember. [laughter]

LZapol: Yeah, yeah. And that all started with your friend from the Bronx? That was the guy who introduced you to it?

WMZapol: Right, right. He, we both took our exams, and we studied together, I think we still have the book, on tape, of my first, you know, radio amateur's guide and license test. You studied the test, basically, cause that taught you what you needed to know.

LZapol: Mmhmm, mmhmm. And it sounds like your dad supported that. You said that both your parents --

WMZapol: My parents supported it. Absolutely, absolutely. There was a little TV interference [*L Zapol laughs*] but not a lot, and --

LZapol: Right. I remember that.

WMZapol: -- you're a million miles from everywhere, so nobody really cared. And, and there were movies at, and the casino, that's what really was – my father got movies on sixteen millimeter film every week from some subscription service. And everybody went and watched movies. Had pop – Ida made popcorn. Marty gave it out. [*laughter*]

LZapol: And did any of your other friends then get into ham radio because you had that tower, or was that more of a solitary thing for you?

WMZapol: That was solitary, cause it was in Bloomingburg and I was really alone. I don't think anybody there – it took a special kind of techno nut, techno nerd, to get into that at that time. It was much, it was not anything like the prevalence of Internet or things like that, it was very, it was relatively uncommon. There was a Stuyvesant radio club. There was an MIT radio club.[18] I continued to be active in those clubs. Not very, but, and at MIT I almost flunked out, I spent so much time at it, working Australia and various places. At two o'clock in the morning, which is two in the afternoon there, so I did a lot of, I did too much – my first year I almost knocked myself out at MIT with radio. There was a Quonset hut left over from World War II with the antenna on it; MIT's radio club almost did me in. [*laughter*]

Then I came to my senses [*laughs*] after getting a bunch of F's, I think, the first time, and said, 'Whoa!' I got D's or something, but I realized I had to stop.

[18] WMZ addition on 12/17/16: The MIT Club was W1MX.

LZapol: So after this guy in Cape Town, did you have other kind of regular dates with people where you talked to them, or --

WMZapol: No, actually, I think I just started working lots and lots of people. I don't remember other – it may be, but I don't remember other everyday people that I would talk to everyday. And that was only for a summer.

LZapol: And did you then also have this system where you would then also get a postcard from them.

WMZapol: Right. QSL cards, as they're called. Yes, yes, yes, I collected hundreds of them. There are many from those days, in that pile of QSL's on the Cape, yeah.

LZapol: So what was it that was so worth it for you to kind of like, to start to even, you know, be more important to you than your studies? What was it about it that --

WMZapol: Well I – it was sort of magical, the magic of radio. The magic of radio waves and how they propagate, how they bounce, where they go. The randomness of it, the influence by solar cycles and things like that. I think it all always fascinated. I mean, it was out of our control, yet if you were participating, it was great fun. **[00:44:56]**

LZapol: And this was mostly Morse code, or also speaking, when you heard people?

WMZapol: I think it was both.

LZapol: Yeah.

WMZapol: But I, as I got older, I tended more towards Morse. But I think it was both.

LZapol: Mmhmm.

WMZapol: It was both chatting and Morse.

LZapol: And what would be a typical chat with someone on this?

WMZapol: It's unfortunately rather uninteresting, it's your signal strength, your name, your position, on the world, and then the transmitters power and type and antenna type. So it's rather, it's rather information, radio information rich, but not socially – it's absolutely socially sterile.

LZapol: Huh. And so you wouldn't necessarily actually know anything about the person that you're

WMZapol: No – much of what I did on the, on the radio bands I was on was not very social. There are social hams, the people who meet again and again and again every night for decades. There are certain bands where you can't go very far, where I made friends in the local area, like I became good friends with a priest who had worked in Antarctica, Father Dan Linehan at Weston College Observatory, when I was on a very high frequency band in Concord, for example, when I started to go to the Antarctic. So Father Dan and I would talk for, really a long time, about McMurdo, about Antarctica – he had been there when they set up McMurdo in the '50s; he had been the first one to do the Pole, remember the Father Dan, on that side it's Thursday, you can have the meat there? [*L Zapol laughs*] So, you know, it's old – he was full of stories and tales of

Antarctica, and he was great fun. So I have had, made close friends, but I tend to favor techno nerds [*laughs*] who've been to Antarctica.

LZapol: So, when you were a pre-teen and a teenager, were those about the contests, too? Like getting as many places as possible? Or that didn't evolve until later?

WMZapol: Well that was a way to – I don't think I was ever a terribly good contester, but I don't, I think I was ok on code, but not super fast on code. I did become extra class, or, you know, the high speed code test I passed, but, with Guyton, I remember, one of the chaps I went to the Antarctic with, Greg Guyton, but my sense was that I did like to, there was something called DXCC, or work 100 countries, so I worked 300 countries. I think I'm up around 300, which is, I think, close to the limit, I think 350 is the limit or something like that.[19] So I did get hooked up into that, and then I've been working more recently on islands around the world, so I've been collecting islands. But it's like – it's a bit like collecting postage stamps, isn't it. In the old days, we liked it cause we actually posted them [cards] to each other, so you got a stamp from Tanganyika. But I think, more recently, it comes from bureaus, national bureaus that exchange cards with the American bureau, and then you get a bag of cards with no postage.

LZapol: Well I think of you as somebody who has an unbelievable sense of geography, and I, you know, I imagine that that might have started here.

WMZapol: Exactly, exactly. You know, where was Papua New Guinea; where was East Africa – absolutely, absolutely. And I think that may have triggered this terrible wanderlust that got me to start an expedition and go to India when I was graduating from MIT.

I had worked with Joe Silk, and Joe had said that's possible. I had worked with him at a federation camp, Surprise Lake, in, near Poughkeepsie, when I was maybe eighteen. Second year of --

LZapol: MIT.

WMZapol: -- MIT. Maybe third? **[00:49:47]**

And I worked another summer without him, but when I was, you know, camping, a camping counselor, an outdoorsman counselor.[20] And Joe and I had become good friends, and he was English and he was from Cambridge [University], and I was from MIT, so he helped me, because English people had done that much more than Americans, driven from England to India. And we convinced the Land Rover company to give us a Land Rover for a thousand dollars, or some ridiculously small fee, too, and then we got some investors, you know, other kids who would give us five hundred or a thousand dollars so we could buy the things we need, and then we drove from England to India in 1962. Unfortunately I contracted malaria, probably in northern Iran, near the Caspian [Sea] when it was endemic, got sick, travelled across Afghanistan, Iran, Kandahar, Kabul, places you could never go today.[21] Four guys in a – there were four or five, I don't know, in a Land Rover, camping out. Beautiful people, great melons and grapes and fruits. And then one

[19] WMZ addition on 12/17/16: As of 2016, he has reached around 303 countries.

[20] WMZ addition on 12/17/16: The camp was Camp Sunrise Lake near Poughkeepsie, NY.

[21] WMZ addition on 12/17/16: I contracted falciparum malaria.

of, Oliver Walston was one of our co-travellers, his father was Lord Ralston, or Walston, and we stayed at their house in London, and then we could stay at all the British embassies.

So we stayed in Ankara, and then we stayed in Kabul, and then in Rawalpindi, at the, we camped on the British embassy grounds. And I got sicker and sicker, and lost a lot of weight, and ended up in the Holy family hospital in Rawalpindi, where a nun doctor, who I believe had gone to Harvard Medical School figured out that I didn't have something dysentery, that it was really malaria. And she gave me anti-malarials, and I was anemic, and she cured me.

LZapol: So what are your memories of that moment?

WMZapol: I remember really feeling really good once I got better, cause I had lost maybe twenty or thirty pounds, and was sick as a dog. But I think David remembers this story, he reminded me that I had – we would commute between Rawalpindi and Lahore. And, on the Grand Trunk Road, and I think my worst memory, maybe of my first twenty or thirty years was driving, I was driving, and there was so much rain – people built houses right on the road, so your front door opened and you stood on the road. Not, and there was no shoulder. And people, you'd drive along at thirty or forty miles an hour, and the door opened up and the kid came out, and thunk. And people had told us, 'Don't stop if you hit somebody, they'll kill you.' And 'The natives are very restless, and don't like foreigners,' but I said, 'We gotta stop.' So we picked the child up, and we, there was another Indian walking on the road, we picked him up, put the child in the back of the car, and said, 'Where's the hospital?' And they said, 'There's an army hospital down the road here.' So I remember motoring out to the army hospital through mud, and they took the child, and I think he had a broken arm and leg. And they patched him, and then we, the policeman bicycled out and said, 'Oh,' and I think he took our passport, my passport, I'm not sure, and he said, 'Come back in a week, and we'll see how the child is doing, and we'll talk about it.'

So I spent an anxious week, who and what, I, you know, it was terrible, to have hurt a child. And then, I didn't have a passport, and was I going to go to jail here and live here forever, what was going to happen to me? So it was frightening. I was all of twenty years old? And we came back, and I can't remember, I'm pretty sure, we didn't go the hospital, cause the child had – the military hospital would dress him but wouldn't keep him. And so I think we went somewhere else, and I met the policeman, and the policeman smiled and said, 'Would you consider a monetary settlement?' And I said, 'Of course,' and he said, 'How about twenty-five dollars?' And maybe, or maybe it was fifty or something, it was a very small amount of money, and we gave twenty-five dollars. And the mother was happy. And the child was cast by then. And I got my passport back. **[00:55:09]**

LZapol: And where did you go from there, after?

WMZapol: I think we lived at the Atomic Energy Commission, of all places. Pakistan was building a nuclear bomb at the time. I don't know why, some of our guys from MIT knew some people there. And so --

LZapol: [laughing] That's crazy.

WMZapol: It was kind of crazy. But at that point, I wrote my mother, I'd had malaria. I was in no shape to drive back another three or four thousand miles. So we sold the car to a farm, and flew home.

LZapol: So here you are, this young man from East New York; is this your first time out of the country, or had you travelled a little bit to Mexico before then?

WMZapol: I had done – my mother had taken me to Cuba, Castro's Cuba, I think was my first trip, staying at the Hotel Nacional in Havana.[22] Maybe I'm four or five? '47, I think that's our first passport, somewhere. Mine.

And then we went to Mexico, maybe '49? To Mexico City and Cuernavaca and Acapulco. Those have been my only external trips before that. I'd never been to Europe. So this trip, when I was twenty, was, you know, cheap fare to Iceland, Iceland, London, stayed in Lord Ralston's apartment, where we had tea and toast brought to us by the manservant, it was a little bit of *Downton Abbey*, and, in London, and then Ralston – Walston – W-A-L I think it is, Walston and I and the psychiatrist – someone became a psychiatrist, from MIT, and another guy, who was interested, I mean, so there's a linguist, there was – there were just different people who went along with us to form the MIT Southwest Asian Expedition. And there's a wonderful brochure for it in my PDFs [collection].

LZapol: And who were you in that group?

WMZapol: I was the organizer.

LZapol: [*laughs*] And if there was a psychiatrist and a linguist, what were you? [*laughs*] At that time?

WMZapol: Mm. I was the organizer. [*L Zapol laughs*] I was the guy who figured out the car, where we were going, did a lot of driving. I was the leader of the expedition.

LZapol: Mmhmm. Did you enjoy doing that?

WMZapol: I think so. [*L Zapol laughs*] I thought, it was my first experience trying to get other people to do the things you want them to do. And it was a rather complex event, I thought. I mean, it's perhaps the predecessor to Antarctic voyages, getting other people to do science as an organized group, and in eight or twelve weeks. Seeking the prize, getting the prize, and going home, safe and well, with your information.

LZapol: Was it successful for these other people you were working with? Were they able to do some research?

WMZapol: I think they got to travel. It was a travel event. I don't honestly think, although we tried to convince the world we would o great things in geology, geophysics, radio [*laughter*] – we had radios – and I think in reality it was mainly a travel event.

LZapol: Yeah, yeah.

WMZapol: My parents didn't think much of it. [*laughs*]

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[22] WMZ addition on 12/17/16: This was before Castro was in power. See https://en.wikipedia.org/wiki/List_of_Prime_Ministers_of_Cuba

LZapol: What did they think?

WMZapol: They thought I was a little bit off the road.

LZapol: What were their expectations for you at that time?

WMZapol: Well, they always hoped I would go to medical school. And I hadn't really, I was too busy doing this to go to medical school. And I came back and decided I would go to medical school. I think partly because of the terrible malaria, and the fact the doctor had really done the right thing. And I then, I think I applied to BU, got in very late, like November, they gave me credit for the year, and then I transferred to Rochester, which was a much better medical school. For years two, three and four.

LZapol: Hm. So that must have pleased your parents, then. **[01:00:04]**

WMZapol: It did. [*L Zapol laughs*] And they paid for it. And I think MIT was like 1,500 a year to 3,000 a year, and medical school was about the same. So they – I also had a New York State scholarship, at Rochester. At those, you took exams and New York State would give you college scholarships, in those days. So I had - my New York State scholarship I believe paid for a chunk of my medical school. I believe.

LZapol: So I think before we keep going into your medical school, there's some other questions I have about your childhood, but you might want to take a break now, it's been about an hour.

WMZapol: Let's take a short break.

LZapol: Yeah.

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LZapol: Ok, so just to resume after a --

WMZapol: Ok.

LZapol: -- a little break. So you had a thought about Brooklyn being quite different.

WMZapol: Well, Brooklyn was insular. I mean, you had the, all of New York, which was wonderful and interesting and diverse, and cultural and I could go to the Yiddish theater with my grandparents, and their, they had a society they belonged to, where everybody brought their own food on Sunday night and we all would go to the East Side together, and the Galicianas would all collect --

LZapol: At the lodge?

WMZapol: -- and tell stories in Yiddish. So I mean, but it was all a Yiddish story of Jewish immigrants, on the whole. And although I met diverse people in public school, I think it was really, it was really going off to MIT that put me in a world where my roommate was [George Sinclair] from Oklahoma, my, I was surrounded by people from very disparate places. One of my best colleagues and I joined a service fraternity, Alpha Phi Omega. I taught swimming to Cambridge

urchins at the MIT pool on Saturday night. And helped the Boy Scouts, I mean, it was a Boy Scout fraternity. And collected money for charity.

One of my close friends was Abdul Hassan who was from West Pakistan. And had grown up in Lahore Pindi, as I remember. Maybe he was from East Pakistan and then went to west. East Pakistan is Bangladesh now. And he was helpful in getting the MIT Southwest Asia Expedition thought out.

But, but certainly at MIT, I was surrounded by people who were not New York Yiddish speakers. They were rare. I think my first year roommate was, but he was quite strange. And – Bob Silver – he was very strange. And, but my sense is that the normal people who weren't, you know, many of them were from all over the country. I think I realized at MIT, like at Stuyvesant, that I was smart but not the smartest. That there were a lot of really smarter people around me. And I would have to work. Or focus in a field, and become excellent in it. But I just, I don't think I had the innate knowledge of physics, mathematics, to drive me to the top of physics or math, and so I think there were only fifty of us out of 900, at MIT, who went into biology, and I went into biology.

And I think one of the people who was a physiologist who taught in the fourth year, I took his course and I think that's, he's the one who convinced me, I think, to do medicine, too. He was Clifford Wolff's teacher, I'll think of his name in a minute, in London. [Patrick Wall] And he was an assistant professor and smoker, I remember, and I studied the owl. I studied owls eyes for senior thesis. The owl's eye. And I studied owls because owls, when hey were on a, chewing on a bite block, couldn't move their eyes. They don't have extraocular muscles, that's why they swing their head from side to side to look. And so we were measuring the pupillary diameter of the owl's eye. I don't think it was a terribly great thesis, but, because I was too involved in going to India, but I did like them, and I think they convinced me that physiology, understanding how the body worked, would be a useful occupation --

LZapol: Hm.

WMZapol: -- to work towards. In medicine.[23]

LZapol: So what, you know, this idea of it being, you coming from a more insular environment to going to a place where you were – your story wasn't typical, you know, your background wasn't typical. How did you – how did people – how did you feel like people viewed you?

WMZapol: I think they viewed me more normally --

LZapol: Mmhmm.

WMZapol: -- by being interested in a lot of other things. **[00:04:57]**

I think Joe Silk also played, those two summers, I was at MIT, [*doorbell rings*] but I worked with Joe --

LZapol: Oop!

[23] WMZ addition on 12/17/16: We also had a great teacher of electronic engineering, Larry Stark.

WMZapol: That's our mailman.

LZapol: Does he just ring, or should we --

WMZapol: Yeah – I think people thought of me more normally when I was nerdish. And interested in strange countries, my friends were interested in business, Lindquist [Robert Lindquist] was interested in business administration. People were interested in physics and radios and, you know, it was just, nobody was interested in Yiddish kike from New York City. So, that disappeared, period.

LZapol: Meaning you kind of – you weren't interested in that, either.

WMZapol: I wasn't. I almost never went back. I think I visited rarely, East New York, after I was at MIT at sixteen. Perhaps for a day or two a year for the next two or three years, and then not at all.

LZapol: Were you – why do you think that was? Were you embarrassed about your background at all? Are you --

WMZapol: No, I was opened into the world. I think it was more the light shining at me. And I felt secure about exploring that world. I don't know why. [*laughs*] It must have been a little scary. But I, you know, just like flying to Antarctica on an Air Force plane, it was just something you know it's not terribly – you know it's reasonably safe, but not purely safe. You know one in a thousand dies a year, but you think it won't be you, and you'll learn a lot. What you gain will far outweigh the risk.

LZapol: So yeah, so talk to me about risk taking. I mean, your, were either of your parents, do you think, risk takers, or who was a model for you

WMZapol: I think my father was a bit of a risk taker. If you're in business, you're a risk taker, so he, he started businesses, and they collapsed or they did well. And my mother hated it. My mother was not a risk taker; she worried that we would be penniless and things wouldn't go well, so I think she feared poverty and a life of poverty, and my father wanted the upside of life, and was willing to take a risk for it.

LZapol: And did you have other models, or role models, in terms of that kind of travel, risk-taking adventure?

WMZapol: Not exactly. No, I'm trying to think when the next time – well, research is a risk. It might – what you're doing might be worthless. You don't really know when you start out. But you follow a path. A road.

So I think risk taking is the nature, you know, risk and reward are somehow tied together. If you take a great risk, and win, you could have a great reward. And I think that was the Antarctic, for example – we took a risk, both in our own lives and in the science we did. But we pulled – if you pull together a team that's spectacular, you're likely to succeed. Somebody will get the right idea in there, and even in a short period of time, you will advance human knowledge. Like inhaled nitric oxide, [using a] poison gas in babies? Like electric NO, who knows about that, but, you

know, it's all risky, but if you sense it's good for the world, or good for understanding, knowledge, off you go.

LZapol: Yeah, I was just reading something --

WMZapol: That came out after medical school.

LZapol: Right. I mean, so, but your leadership – or then let's talk about this other thing, cause you were a leader in this travel to India, you know, had that – were you, do you consider yourself maybe the leader of the band of boys of friends when you were doing the rocket experiment, or was that somebody else in that team?

WMZapol: I'm not so sure. I'm not so sure. I think we were, it was more collaborative. I think I found India was particularly – it was fun, but it was a little disappointing, because the people were just so individualist. You could never get them to all do the same thing. They would jump on a plane and meet you; they wouldn't contribute to getting the vehicle the next 500 miles, sometimes. Or they wanted to go to Turkey or something, you know, they did some – so these were all, these were four kids who were individually driven to satisfy themselves. **[00:10:08]**

Later on, we focused on the scientific project, and we all had similar focuses. At NIH --

LZapol: Common goals.

WMZapol: -- we went to Puerto Rico and studied babies, at, in Antarctica, and then human studies, on very critically old people, great risk, they would die. Most of my patients did. It was very disappointing and depressing. Yet, NIH said, 'Soldier on, here's more money,' you know? And ECMO is now used commonly, thirty-five years later or something like that, you know, it's forty-five years later; some of the risks won't flower in your lifetime, or in your medical lifetime, or in your work time.[24] Some of the technologies need to be developed, and they're not really there yet. And they will be developed, because they're useful for humanity.

LZapol: Yeah, I look forward to talking more about that, the through line of risk, and maybe even, I was reading something yesterday about risk, that people who like to take great risk, it's called edge workers in some sociological literature, but that they also like doing that because it's actually a way of showing – they, it requires great skill, and it's a way of proving and showing your great skill --

WMZapol: Yeah --

LZapol: -- to work on the edge.

WMZapol: -- you get a lot of, you know, going to Antarctica, you got great press, great pictures, great stories to tell at your school. Just like being a doctor, but even more so in the Antarctic, and penguins and things that kids love. So I think there's, there is a – there is *nachas* or happiness in the act of doing it. Even if you don't markedly advance human knowledge, get a first paper in Science out of it, you know, I think you, you do get a lot of kudos for just doing it.

[24] WMZ correction on 12/17/16: "Some of the risks won't *allow an invention like ECMO to* flower in your lifetime…"

LZapol: Mm, mm --

WMZapol: Right?

LZapol: -- because it's, it's sort of pioneering, or --

WMZapol: Yeah, it's in the intellectual interest in the planet, in a sense, but it's – and you don't always win. Every year isn't great. Often I found, with Antarctica, the first year was just about figuring out where the [technical] problems were, and the second year you conquered the problems and you brought home the bacon.

LZapol: Mm, mmhmm.

WMZapol: So, you know, it was kind of a combination of learning, adjusting, advancing. I think same thing in human studies --

LZapol: But that's interesting, it's like you have to fail to then build on those failures.

WMZapol: It's very rare. We gave the first baby NO [Nitric Oxide], and it turned pink, but we had done one or two babies before that that hadn't done well; we'd waited too long, we had asked for too many catheters, we, it's unusual to break through on your first attempt.[25] But if it doesn't take long, it's very, it's very good to get that feedback. Positive effects.

LZapol: So, do you have any memories of your own doctors when you were growing up? You know, like --

WMZapol: George Meister, going to him, you know he's pretty primitive, in the '50s, you probably had a fifty-fifty chance of being better when you came out of his office [*L Zapol laughs*]. You know. I, did I know I wanted to be George Meister? No. I don't think until I went to MIT.

LZapol: Well the --

WMZapol: My father had planted the seeds of medicine, and I knew in physics and math I wasn't that great, so I would probably be better at biology, which was an unexplored field. I didn't love biological chemistry so much, organic chemistry was hard for me. But physiology: how do things work? How does this organ tell this organ, this thing, this blood pressure tell this? I could understand. It was physically – and my MIT background helped me in the sense of applying what I knew to make the next step. So it was very helpful.

LZapol: What was your – so I mean that's interesting, like sort of taking a person apart like you might a radio or something like that, like understanding --

WMZapol: Right!

LZapol: Yeah.

WMZapol: I think physiology is very much the understanding of physical phenomena. And neurological and vascular, blood, nerves. How it all works together, and what are the driving

[25] WMZ addition on 12/17/16: Jesse D. Roberts and I gave the first baby Nitric Oxide in 1990.

influences, and how do you influence the driving influences? So, yeah, no, I mean, that MIT background was very helpful. **[00:15:21]**

LZapol: I'm --

WMZapol: But I always tell the story, when I went to [NIH], I didn't want to get drafted, and I didn't get the Berry program when I was a surgical intern at the Boston City Hospital on the Harvard service, so I had three choices: I could go to, maybe apply to NIH – they only took fifty people, or something, to do research, I don't know the number; the second was be a psychiatrist for the Peace Corps, or a doctor for the Peace Corps, and mainly a psychiatrist, cause the kids were stressed; or be a general medical officer in Vietnam. And I said, 'The other two sound better,' so I had a Peace Corps interview and they were willing to let me be a Peace Corps doctor.

And then I went to NIH, and [Robert L.] Bowman, who was the lab director, with [Theodor] Kolobow, who was the artificial lung internist, Bowman said to me, 'Where'd you go to high school?' And I said, 'Stuyvesant.' He said, 'You got a job!' [*L Zapol laughs*] Cause he'd gone to Stuyvesant --

LZapol: Ah!

WMZapol: -- Bob Bowman. So I think probably the most, my high school was probably far more important than my NIH time.

LZapol: Mmm.

WMZapol: And NIH made me a researcher.

LZapol: Mmm.

WMZapol: Cause I'd really just [been practicing as an] MD up to then. And then I did two and a half, almost three years of research at NIH, met your mom, and changed my life, because then I knew I didn't want to be a surgeon, I wanted to be an anesthesiologist, I was interested in pinkness, oxygenation, how your lungs work --

LZapol: Mm, specialized.

WMZapol: -- and I would focus on anesthesia, cause it was doing intensive care, and anesthesia was very dangerous and not very well worked out at that point. Said, 'That sounds good to me!' *[laughter]*

LZapol: Before we go, you know, even beyond your time at MIT, cause I actually feel like there's more even in your time at MIT, you know, you just mentioned Stuyvesant, and I think kind of understanding you as an adolescent, or as a teenager, we haven't really kind of gotten into – maybe that can be something we talk about another time, but you talked about traveling so far to get to Stuyvesant, like an hour and a half on the subway, you know, do you have any stories about even just getting to Stuyvesant? And the subway rides?

WMZapol: I think the best part about going to Stuyvesant was [that] Leon Greenfield's father ran the newsstand in 14th Street Union Square. And he would give us comic books to read. If we brought them back on Monday, we could take them on Friday. [*L Zapol laughs*] And so I remember

reading a lot of Leon Greenfield's father's, who's an English immigrant to America, comic books, and he ran the Union newsstand.

LZapol: So then you would, presumably he'd re-sell them --

WMZapol: It's like a library.

LZapol: He would resell them --

WMZapol: Yeah, yeah, he'd pack 'em up and resell them on Monday morning. So I read a lot of Fawcett Comics, I remember.

LZapol: What's Fawcett Comics, what was in them?

WMZapol: They – I think they did Marvel. Captain Marvel. Superman, I think they did – Fawcett was a big comic book manufacturer at the time.

No, I remember it being very cold in the winter in New York, and they would have a little potbellied stove in stations that you could stay warm in, especially on the L. This was Stuyvesant on 14th Street, before it moved, on the East Side.[26] It was still on the wartime sessions, so you started with afternoon session, you started at noon or one o'clock and went 'til five. In the first year, and then the second and third years, you started at seven [AM] and went 'til noon.

LZapol: So this was so they could --

WMZapol: They had --

LZapol: -- have more kids?

WMZapol: -- twice as many students through the school.

And so, Stuyvesant was important, certainly, in my upbringing. I got into trouble at Stuyvesant, I remember in French, I was awful at it; my mother then figured out private tutors.

LZapol: How did you get in trouble?

WMZapol: I was flunking it. [*laughter*] **[00:19:55]**

I just didn't understand it, and I think Marty and I had the same teacher, Mr. Ashkenazi or something [*laughter*], '*Tout d'abord au tableau noir, d'avant la classe, c'est serait Zapol!*' You know? [*laughter*] Ah! [*laughter*]

So there were all kinds of frightening - but my mother salvaged me, she said, 'Get a tutor, you need help, you know, if you don't know something and you can't pick it up by reading it, get someone to help teach you.' She got help. I think that was also contributing to the death of violin, because it was, I needed to work on this stuff. If I was going to understand French, I couldn't be practicing Vivaldi an hour or two every night. So, you know, it was clearly, decisions had to be made.

[26] WMZ addition on 12/17/16: Stuyvesant was on 345 East 14th Street.

LZapol: Now you said that you were – it was MIT that was more diverse, but there were some aspects of public school that were also diverse. I mean, Brown v. Board of Education happened, what, 1954; you --

WMZapol: We had a few, we had a black student or two in our class.

LZapol: Mostly Jewish, mostly --

WMZapol: Yeah, and lots of Italians. It was New York; it was a good slice of smart New Yorkers moving up.[27] I would say socially – it was all boys. I was totally immature. I was a little bit – I was obese and short. And I don't think I ever had a date, until I don't know when, probably third year of college or something.

LZapol: That must have been hard on your social capital.

WMZapol: It was awful! [*L Zapol laughs*] I was totally – I was not – girls didn't exist in my social sphere. Proms were impossible. I just, I didn't know anybody, or if I knew somebody, she played piano in the orchestra or something like that. But it was kind of rare. I didn't, I only, I knew them socially through the orchestra. But I didn't know, and then of course Stuyvesant was all boys. And MIT was essentially all boys. I think there were 900 of us and fifty women, but I think only fourteen survived?

LZapol: Hm. Must have been hard.

WMZapol: Sixteen?

So we had certain mixers with Wellesley, and then I got into that friend of mine, had friends at Wellesley, and then I took out some Wellesley girls.[28] But that was probably junior and senior year of college. One of my roommates had a motorcycle [Robert Lindquist]. We would motorcycle out, on a single cylinder BMW like we had in the garage. Yeah, no, it was not – social life was something to come later.

LZapol: Did you parents ever talk to you about girls, or about relationships with girls?

WMZapol: Not really. I think they could care less. To be honest, studies, grades, proceeding towards medicine was what it was about.

LZapol: And was, you know, was, do, was it kind of taboo to talk about dating, or no?

WMZapol: No, no, no. No. But it just never came up.

LZapol: And what about then, once you were dating, in college --

WMZapol: My mother told me to dance at some point. I don't know.

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[27] WMZ addition on 12/17/16: It was immigrant kids of New York.

[28] WMZ addition on 12/17/16: My friend at MIT in 1962, Norman P. Soloway (Nick) had friends at Wellesley, like Wendy Tinklepaugh, who became my girlfriend in 1963-1964 when I was at University of Rochester. She then married Nick. We also knew Kay Ransdell, whom Nick married in 2012.

Yeah, and then I think was ok! I mean, I think there were boys, and there were girls, and I would go out there and I think the most exciting thing we ever did was kiss. [*laughter*]

LZapol: I mean --

WMZapol: Kiss goodnight! [*laughter*]

Cathy Kuzmick. Yeah.

No, I mean I, I don't know, I was just too busy. My mind was elsewhere. It really was. And until – and even as an intern, even - in medical school I dated some nurses, also not very, not very actively. Medical school kept me really busy!

LZapol: Mmhmm.

WMZapol: And then it wasn't 'til NIH, Joe Silk's list, 'Try these women!' And they were mostly mom and her classmates. And bingo.

LZapol: Yeah. I mean obviously you don't have to talk about anything that you don't want to talk about, but --

WMZapol: No, I'm happy to.

LZapol: -- there's also, but yeah, I mean like, you know, as a teenager, you must have been aware of girls, or other people dating girls --

WMZapol: I was.

LZapol: -- or movies or --

WMZapol: I was.

LZapol: -- stuff like, you know --

WMZapol: I was, I was, but I don't think I ever – I don't think it was a serious pressure.

LZapol: Yeah.

WMZapol: It was a pressure, but not a serious pressure, I would say. I never devoted time to it. **[00:24:58]**

LZapol: Mmhmm, mmhmm. Yeah.

And, you know, you talked about getting in trouble for not getting good grades. But were there other examples of kind of getting in trouble or acting out, you know, classic adolescent stuff?

WMZapol: Yeah, I think I got my father's car stuck in the mud once.[29] So, yeah, we'd gone off, I don't know why, in Bloomingburg, and ended up driving through a place where it got stuck and it had to be towed out, and I was a bit ashamed of that.

[29] WMZ addition on 12/17/16: He had a Cadillac, which I got stuck in the mud.

LZapol: Cause you took off --

WMZapol: Cause Marty and I --

LZapol: -- without permission, or something?

WMZapol: Yeah, listening to rock 'n' roll and driving the car, and maybe we went up, I don't know, to try to meet some girls in Wurstboro, or some, Monticello or some place. I don't think it ever happened, you know, it's just mainly the drive and schmoozing and talking. I think it was Marty and I, or maybe Stanley and I, I don't know who it was, some kids and I.

LZapol: Yeah, and I mean I guess there might have been girls at camp, right?

WMZapol: There were girls at camp. Right. And I think Linda Greene, Stanley's sister, I thought was beautiful and lovely. Yeah. You're right.

LZapol: Yeah.

So what, yeah, what did your dad do when you got stuck in your --

WMZapol: He towed it out. He was bored.

LZapol: Did your dad ever get mad?

WMZapol: Almost never at me. He had an extraordinary kind – he was an extraordinarily kind man. Everybody loved Benny. Whereas my mother was more testy, could be difficult, was not as overt in showing affection. My father was a loving, kind man.

My parents had difficulties, I think, because of their significantly different characters. But they were each very strong in their own ways, and carried on, and I never knew of any problems. I may have heard rumors, but I never knew of any infidelities or rumors. I mean, maybe before I was born, or around the time in those years, but my father may have known other women, I don't know, but I have no evidence. But maybe a rumor or two surfaced. Because my mother was infertile for so long, ten years.

LZapol: And yeah, I imagine also not uncommon for businessmen of that era, too.

WMZapol: Right. I think that's right. But I don't know.

LZapol: Yeah.

WMZapol: I don't know, secretaries, whether, you know --

LZapol: Did you ever get pulled into his business? Did you ever work with him?

WMZapol: I never wanted – I always didn't want to be a businessman.

LZapol: Did you ever work for him? Or, you know --

WMZapol: As a camp counselor.

LZapol: Right.

WMZapol: But I never wanted to be a bus --

LZapol: Did he want you to be involved?

WMZapol: I don't think he cared; he was happy to see me go towards medicine.

LZapol: Yeah.

WMZapol: Yeah, no, they were both very happy and proud I went towards medicine.

LZapol: What was your first job as a kid?

WMZapol: In Stuyvesant, I delivered insurance binders in Manhattan. So between, say, Wall Street, 35th or 40th Street. There were lots of insurance companies scattered around the city. And when somebody made a deal to insure something – buildings, houses, I don't know what it was – businesses. So I would, when I worked, since I had half session school, I worked the other half. It was during the Eisenhower administration, I remember he was running for President, and I would pick up some binders and deliver 'em, that was the Stuyvesant kid. So I went from office to office to office dropping them off; I was a little postman for the insurance industry. And then I got in trouble with French, and my mother said, 'Stop working.' And so, boom, that went.

LZapol: You had a little extra pocket change for a little bit.

WMZapol: For a little bit.

LZapol: What would you do with that money you think?

WMZapol: I have no idea. [*L Zapol laughs*] Probably think about radios. But I don't know.

LZapol: Yeah.

WMZapol: But I don't think I ever accumulated enough.

LZapol: Yeah. What – you know, you talk about your

WMZapol: Oh I also, Stanley, Marty and I also opened up Speedo Developing and Printing in the basement of our house. And we must have developed four rolls film or something for neighbors, for a dollar each [*laughing*] or something like that. I don't think we were very good, we probably ruined a lot of film. [*laughs*] It wasn't a perfectly dark basement [*L Zapol laughs*] and we couldn't quite get it sealed. Speedo Developing and Printing. I do remember painting the sign. **[00:30:16]**

LZapol: How did you know what to do?

WMZapol: Oh, cookbook I suppose. Reading and, you know, various developers. Marty was more into it than I was.

LZapol: Yeah, you must have --

WMZapol: That's where we hunted cats, in the basement.

LZapol: Oh, what's the story about that?

WMZapol: Oh, we had a golden cat. [*laughter*] And I remember, I guess all children have figured out spitballs, but we decided that if you had an aluminum tube like an antenna and a hatpin in it, you could fire the hatpin into the cat. [*laughs*]

So my grandmother, who would cook for the cat every day, she bought lung and boiled it --

LZapol: Oooh!

WMZapol: -- and cooked for her cat. The cat did not like me.

LZapol: [*laughing*] Oh, I bet!

WMZapol: Cause I hunted it. [*laughter*] Anyway.

LZapol: Did Goldie know about that, or she

WMZapol: I can't remember if that was her name or not.

LZapol: Uh huh.

WMZapol: Oh, I think the cat understood. [*laughs*] I'm not sure my grand – anybody else caught on.

LZapol: Yeah, yeah.

WMZapol: Naughty, naughty, you know, we all have a naughty one in us. [*L Zapol laughs*]

LZapol: Yeah so, there, a couple of other, like, outlying questions, like about – this is sort of in the vein, but about Eve's dad, with the sugar cubes and stories about other refugees and families from Europe.

WMZapol: Yeah, it's a good memory. Well I think, the Eve's dad story was I was, for a holiday, probably, at Sonya's house. Dad's sister. And Milton's mother, and [also] Jeff's grandmother. And it must have been about 1950, and some relatives came down from Canada, from Montreal, and it was Eve and her parents. Her mom, [Paula] who was immense storyteller, smart lady, English teacher, and French teacher, and her dad [Eliot], who was [also] a chemist, and who worked in, of all places, was then going to Bartlesville, Oklahoma. To work for the Phillips Oil Company, I think it was. And he was a chemist, and I think he did one of the fascinating scientific things, which was he was trying – he gave me some matches and said, 'Light the sugar cube.' And of course you could light the sugar cube all you wanted, and it wouldn't burn. And then he said, 'I'll do it,' and he just lit it, and off it went. And I said, 'How'd you do it,' and he showed me his trick, which was to rub it in an ashtray and get ash on it. And for some reason, ash catalyzed the burning of sugar. I still don't know why, and, but he lit the cube on fire. The cube.[30]

Just another example of science doing kind of miraculous things to an eight-year-old's mind, or a nine-year-old's mind.

[30] WMZ addition on 12/17/16: The trick was to rub the cube in an ashtray and get ash all over it. And the metals in the ash catalyzed the burning of the sugar.

LZapol: And how did they find their way to you? I mean, you then had some relatives that were still leaving Europe --

WMZapol: We were trying to help them.

LZapol: Yeah.

WMZapol: I think my – I'm not sure whether – I know after the war my father had gone to Europe, and gone to various DP camps to try and find people who were related to us who hadn't gotten out of these countries and of course Eve and her mother and father --

LZapol: They couldn't get out without a sponsor, right, they needed

WMZapol: I think so. But they went to Canada, cause America was still tough on immigrants. America's never been easy on immigrants. [laughs] And so they went to Montreal first, where they, where she went to school and met her husband, who came from Egypt, Maurice.[31]

LZapol: Oh, Maurice.

WMZapol: And off they went to Bartlesville, Oklahoma. [*L Zapol laughs*] Oklahoma, where's Oklahoma? [*laughs*]

LZapol: Did you maintain a connection with them after that?

WMZapol: As relatives. As relatives. But mainly through my parents, and not I.

And then one day somebody says Paul is at MIT as a freshman?[32] And I'm going out to Concord. And I stopped and --

LZapol: Eve's son.

WMZapol: -- picked up Paul, and Paul's doing Frisbee on east campus, and he goes out to Concord with us and meets the family and becomes a member of our family, and a year or two later he goes to Antarctica with me as an MIT student. Takes the year off, or, pretty sure, six months, or a year, does a lot of photography, has a lot of fun, decides he wants to be an anesthesiologist. [*L Zapol laughs*] Goes to University of Illinois medical school and then he's here [at MGH], you know. And I have a cousin working in the department.[33] Amazing. **[00:35:20]**

LZapol: Yeah, it is such an amazing trip, and then of course I developed such a close relationship with Eve and her family in --

WMZapol: Chicago.

LZapol: Evanston, yeah.

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[31] WMZ addition on 12/17/16: And Paul Alfille was born in Toronto.

[32] WMZ addition on 12/17/16: This was probly Paula Szapiro who called in about 1974 to tell me that her grandson was at MIT.

[33] WMZ addition on 12/17/16: Paul is now Vice Chairman of Anesthesiology at MGH.

You know, and it's interesting, cause I experienced their religion, and sense of religion. They still kept a kosher --

WMZapol: Kosher house.

LZapol: -- household, though maybe not outside of the house. You know, it's interesting, you talked about, your parents didn't necessarily keep kosher outside of the house, and what traditions did you decide you wanted to keep? Even though you kind of left. You left East New York and didn't look back, but Judaism was a different thing. What was important to you about that? And --

WMZapol: I think it kind of grew. I don't know as we ever – I don't know. I got married in a synagogue, and I married a Kaplan. [00:36:24] Who didn't know anything about religion. And that was fortunate, but nevertheless, I think we didn't get involved in religion until Concord, and starting a synagogue and doing more. Did we even – were we even observant?

LZapol: Well, David --

WMZapol: I think probably Yom Kippur we observed.

LZapol: but David had a bris, right --

WMZapol: Yes.[34]

LZapol: -- so they had --

WMZapol: Yes, right.

LZapol: -- so you did, kept on, maybe with children, or something?

WMZapol: Yeah. It was probably my parents that expected it. And family. That was it, yeah. Yeah, no, I'm not, yeah.

LZapol: What were you going to say?

WMZapol: I don't really know. I think we've kept it for traditional reasons. That would be my guess. If I was to, because my parents did it, because my grandparents did it, because people seemed to like it, and our friends, as you guys grew up, the Friedmans, also did it. And others that we knew in Concord.

I think starting the synagogue was very important, cause there was always a place, and you could go, and you could people meet people, and Dori [Stern], and this – there were people there who kept the candle lit.

LZapol: Right. Cause we started out meeting in the basement of a church, kind of, and then in the church itself for the High Holidays --

WMZapol: Right, right. Right.

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[34] WMZ addition on 12/17/16: David's bris was at home in 1972, on Prentiss Street in Cambridge, MA.

LZapol: And it was kind of a mixed, kind of we were squished in there as a --

WMZapol: Community.

LZapol: -- congregation, and then found our own space. And found, were a part of founding our own space.

WMZapol: The first synagogue in Concord. Yeah.

LZapol: What traditions have you chosen not to keep up?

WMZapol: Oh.

LZapol: That you grew up with, you know.

WMZapol: Mm. I don't have, I think I had an anti-religious childhood, and I was sent to something called a Talmud Torah, which was run by a rabbi or two in the basement at five o'clock after PS 202. Where we read a lot of words we didn't understand. And I think that turned me off. So I think I had a turn off on much religion. And therefore Yom Kippur, Pesach, that's about it.

LZapol: So this, the questioning that I think of as a part of Judaism was not a part of that space, that Talmud space that you were in.

WMZapol: No, it really wasn't. It was memorized. And bench. So we'd stand up and pray, and read all these words, and I don't think they were even transliterated into English. So. It was just reading a lot of words that didn't mean anything to me. I know *baruch atov* and then it went off.

No, and it was every day, or four days a week or something, not Friday, maybe, I don't remember.

LZapol: This is preparing --

WMZapol: But it was a real turn off, and so we'd eat poppy seeds and put 'em through the holes in the floor. [*L Zapol laughs*] Where I think the mice enjoyed what was left. I mean, it was not, you know, and they were disciplinarians, and it wasn't, it was a very negative experience, I thought. **[00:40:13]**

LZapol: I think of that scene – I don't know if you remember that film, *A Serious Man,* with the Coen brothers, they really, the boy is like training in a place like that --

WMZapol: Yeah.

LZapol: -- and they're really rigid men, who were overseeing – mean, mean people.

WMZapol: Yeah, Rabbi Pernicoff [00:40:29] and I can't remember his name, but, oof! Ooh! It was not fun. I don't have any good memories of it. And I think I didn't want that on anybody else [*laughs*] in my family. Including me. [*L Zapol laughs*]

LZapol: Did you – so that was, presumably that was getting ready for your bar mitzvah.

WMZapol: Yes, probably. Although I had private lessons. Doing the *haftarah* and doing the – which is another non-transliterated Hebrew discussion.

LZapol: Like --

WMZapol: I did it.

LZapol: -- you don't know what it means.

WMZapol: I did it, but you didn't know what it meant, and if you knew what it meant, it would be rather complex Biblical stories that were not well explained. Or explained at all to you. And you learned it from old men who were quite insular and only knew about prayers and that stuff. So it wasn't attractive to a young spirit. Young scientist. Forget it!

LZapol: What do you --

WMZapol: So I did it, and I was so pleased it was over, that was the end of it. [*L Zapol laughs*]

LZapol: Once you did your bar mitzvah you were done --

WMZapol: Done. Done.

LZapol: -- with studying. Yeah.

WMZapol: Absolutely done. That was enough. Yeah, no, I can't – I can't, yeah, it has no appeal to me.

LZapol: What do – do you have any positive memories from your bar mitzvah, or, kind of, that

WMZapol: Oh, just friends and relatives, but I must admit, it was – I think, I was an actor in a performance, you saw the movie. I did my act.

LZapol: Did you like being in the spotlight sometimes?

WMZapol: Um – not then, I don't think. Not then. Later on, giving talks, enabling people to understand complex things, treating humans better. A lot of *nachas* in that. Or how do seals work – you know, you can – expanding human knowledge, I got a lot of happiness out of giving those talks. And teaching.

LZapol: Mm.

WMZapol: In the end of the day. The most important thing I did, will do, is teach all these people. To do what I did. And to enjoy it, and do it well. So it's the, from Paul [Alfille] and Bill Hurford and all these other people who were my students, who are still taking care of people, running departments, or doing science.

A young man I worked with yesterday, [Vamsi Mootha] a brilliant Howard Hughes scholar, you know, I could help him and enhance his science and make him go beyond and think about human studies, and, you know, no, so it's your students that count. You have a life that's going to start and be over. But all the people that you influence and grow is probably the most important part of your life. They're either your children, or they're a teacher. I mean, I was a teacher. I have

ten Fellows, or five Fellows; they're not all going to do it. Some of them are just learning the Hebrew words [*L Zapol laughs*], but some of them are passionate, become passionate, do better than you will.

LZapol: Mm.

And you talk about, yeah, these different kinds of teaching, and these different kinds of learning, when we were talking on the Cape about, like, teachers that influenced you. You spoke primarily about your mother.

WMZapol: Yeah, I think she influenced me. To learn, to do a good job. To get it all right. But then I think MIT – Stuyvesant, Stuyvesant. I can't remember the guy who taught physics, he was terrific. And very important. He's the guy who said, on the day Sputnik went up, 'Gentleman, learn science or learn Russian.' [*laughs*] So, I can't remember his name.

LZapol: That must have made an impression. [*laughs*]

WMZapol: Yeah! It's still there! [*laughter*] It's still there, right? Beep, beep, beep, beep, beep, beep – it went around the earth. And we knew physics and science. So I think that was the impulse to go into physics and science. **[00:45:14]**

And then, at MIT, the physiologists in the third and mainly fourth year, Baker, and I can't remember the other guys name, but they were wonderful physiologists.[35] And then --

LZapol: And your violin teacher you spoke about, too. Yeah.

WMZapol: Yeah.

LZapol: But not so much. Mm.

WMZapol: No.

LZapol: Sorry, you were going to say, and then after MIT --

WMZapol: No, and then after MIT it was medical school, and there were a few spectacular teachers there, physiologists. Wallace Fenn; the Dean of the medical school I thought was incredible, coming in and saying, 'The President has been shot, gentlemen,' in pathology, I remember that. 'Our country is in the Vice President's hands.'[36] And he walked out. You know, and Kennedy, that's my second year of medical – first year at Rochester, second year of medical school.

LZapol: Mm.

WMZapol: And then, and then NIH. Kolobow, Bowman, fabulous people.

LZapol: Mentors, yeah.

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[35] WMZ addition on 12/17/16: Other professors are Pat Wall and Jerry Lettvin.

[36] WMZ addition on 12/17/16: Wallace Fenn was in Physiology. The Chief of Pathology of the University of Rochester Medical School reported to us that President Kennedy had been shot.

WMZapol: Mentors. All strong, sending me in the right direction to go ahead, and then coming to MGH, Laver, Pontoppidan [Dr. Henning Pontoppidan], especially, kind man, and a nice man. As a guide. Lowenstein [Dr. Edward Lowenstein]!

LZapol: Mmhmm.

WMZapol: Perhaps the greatest of all. Lab next door. And doing dogs and morphine and trying to figure out if you had to anesthetize people with heavy vapors and figuring out no, all you needed was morphine. And some other drugs. So Lowenstein had made immense contributions. They're almost forgotten, but he convinced me, to a great extent, to stay in the science, keep at it, got me my job as Chief. Which maybe was right or wrong. [*laughs*] But now I'm back at it.

LZapol: Yeah.

WMZapol: Science is my first love, I think, and discovering things.

LZapol: Well we'll have to talk more about those mentors, you know, later, after, next time we talk.

But is there any – you know, I'm sure there are many stories, but is there anything you wanted to share today about, you know, your first twenty, twenty-five years that we haven't talked about? We can talk about – we can talk more tomorrow, so maybe, you know, maybe this is a good point to stop. Thanks dad.

[END OF SESSION ONE]

[BEGINNING OF SESSION TWO]

LZapol: So this is Liza Zapol, we're at session two of, on December 9th, 2015, at 30 Shepard Street, with Dr. Warren Zapol. And now we'll be talking about the, that experience, I would imagine, your becoming a doctor. I neglected to call you doctor in your last introduction, and I think now might be more appropriate anyway since you were talking about your life before you became a doctor.

But before we started recording, you just started to reflect about your time at MIT as a whole.

WMZapol: Yeah, no, I found MIT strenuous. It was a time when I came to grips with what my strengths in science were and weren't [*laughs*], what I, how much studying I could do. I think second year was a much better year than first year. First year was, I hadn't focused enough on my subjects, but second year I did a good job. I also took not quite as intense courses. Physics for Philosophers; you know, I did courses that I thought were better taught and didn't expect as much from you as a student but also gave you the big picture. So I had, I think I had better teachers second year. And third and fourth year. So I think they went much more smoothly. No fear of flunking out – remember when we, first day we went there, they said, 'Look to your right, look to your left,' there were 900 of us, and they said, 'One of those people won't be here when you graduate.' And MIT liked to remove about a third of the class by tough exams, and it was a tough place.

So I was glad to be not removed. [*laughs*] To have survived through the four years. I was a bit diverted by the excursion to India, and so I didn't, I don't think I did as much as I could have in my fourth year in terms of academics and science, but I took my exams. And when I came back from India, I did want to go to medical school.

I convinced someone in the BU admissions office to let me in. And I had a wonderful Islamic roommate, Abdul Hassan, and the two of us lived, I think, in Allston, and I commuted by vespa to BU. Did three-quarters of the year, got past everything, had [a] very good anatomy [class]. That's all I could [remember] – biochemisty, Isaac Asimov spoke in biochemistry. He was a BU professor, a famous sci-fi writer. He was great, and he came with a black bowtie, and wore his dinner jacket, you know. So he was very impressive.

It was a good year, but I realized it wasn't a great medical school, and I transferred to Rochester, both for money reasons – I had a state scholarship from New York – and I went off to Rochester, New York for the next three years. [A] Far better medical school. It was heavily psychiatry-oriented, and I think I got my dislike of psychiatry by having everything [except] physiology and biochemistry taught by psychiatric type people. I mean, they were convinced the mind controlled everything. But I was less convinced. I was more of a physical physiologist; I believed in pressures and flows and red cells and climbing factors and so, so I think I hung more towards medicine and surgery, and I think surgery interested me because it was procedure-oriented, you could do something and fix something.

Intensive care didn't really exist yet; anesthesia I don't think – we had a good pharmacology and anesthesiologist there. Teachers. And I liked them, I liked pharmacology very much. Harold Hodge was my professor of pharmacology, I remember. He'd written a toxicology text, Gleason, Gosselin and Hodge, and he was very, very good. And he was very much involved with banning cigarettes and doing very important things, I think, for the country. He was an FDA advisor, as a toxicologist, and that was also the time when the sleeping pills for pregnant ladies, from Europe, Frankie Kelsey kept them out of the United States. Thalidomide. And he was very involved in that. **[00:05:07]**

I thought, I got very interested in pharmacology and the public health, and things that drugs could do. And I also liked anesthesiology, it was a time when there were no epidurals – I remember walking past women's labor wards [at Rochester] and hearing screaming, and the screaming pitch would change as the baby's head was delivered. And it was just horrible, and women were given morphine and scopolamine so they wouldn't remember anything. A couple days later, they woke up and [noticed they] had a baby. And that was terrible. So I kind of felt anesthesiology had a long way to go.

And then I took a bunch of exams in my senior year for an internship. And I applied to the Mass General, and I remember being asked by Harry Beecher, who was then [Chief] before Kitz [Dr. Richard Kitz], my predecessor, and Harry asked me 'What [body] position would you transport patients in,' and I must admit, I didn't know. And I think that's what kept me from being

an MGH [surgical] intern, but I also applied to the Harvard service at Boston City Hospital, and they took me, cause I had good grades in medical school.[37]

And so, I went right from medical school to an internship in surgery at the Boston City Hospital. I think that was my first real, real bath in medicine, in taking care of people. I think it was, it was hard work. It was on every, every other night, and every other weekend. And I would go in Saturday morning and come out Monday night, and if the nurse was kind to you, she wouldn't wake you up in the middle of the night, but most of the time they did, and all I can remember is coming home as a zombie and crashing. [laughs] And I remember I had a girlfriend, from the North Shore, and she would pick me up in her little convertible. I would fall asleep, and then she would bring me back, fast asleep. Or we'd go to the beach and I'd sleep on the beach. I spent all my time sleeping when I wasn't working.

Working was kind of tough. It was a city hospital, lot of poor people. Horrible things that I saw, you know: children that had been injured by their parents in hot bathtubs and burnt, just horror stories after horror stories. Elevators that had crashed with kids climbing on top of them. So pediatric surgery, I think, was awful, just for the horrors I saw.

I liked neurology and neurosurgery. I got, I got to understand the city hospital, it was us against the world, all the interns and nurses, we were all fighting an inadequate budget and a tough world. And, you know, the rats would, would chase the stretchers as we pushed them down the corridors, the underground corridors, and the mayor was kind of Boston, to the people of Boston, sot hey all came and had Thanksgiving dinner with us. They never cared where, who you were or what you were at the cafeteria, so we fed half the poor of Boston. I mean, it was just a way of the city providing support for the poor of the city, you know, it was that sort of thing.

LZapol: And this was mid-'60s, or --

WMZapol: '66. '66. '67. July of '66 to June of '67.

And in the middle of that, I did not get what was called a Barry plan, which was a way to finish your surgical residency. So I thought of going NIH. I had two wonderful teachers [at Boston City Hospital], Judah Folkman, who is very famous since as a father of one form of [vascular] cancer, you know, of VEGF and [novel] cancer therapies, capillary growth inhibitors, and Jack Norman, an African-American cardiac surgeon. And they were wonderful, they ran great laboratories and they were doing great science.

LZapol: They were at NIH?

WMZapol: They were at the city hospital, in a dive. [*laughs*] And my chief was a wonderful man who was a great surgeon, and – an abdominal surgeon, Bill McDermott, and he was very disappointed when he eventually learned I'd go into anesthesia. 'What a waste,' he said.[38] But I did go to NIH as, I think I said yesterday, I was chosen because I'd gone to Stuyvesant High School because Bowman said, 'Oh, you went to Stuyvesant! You got a job!' My lab chief. **[00:10:11]**

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[37] WMZ addition on 12/17/16: I applied to the 5th Harvard Surgical Service, and Bill McDermott took me because of my good grades.

[38] WMZ addition on 12/17/16: McDermott also said "You will never have your own patients."

And Bob was an editor of *Science*, and he had invented the Aminco-Bowman Spectrophotofluorometer, a way to measure chemical using light. Which, every lab had one. And he had been one of the starters of NIH, and one of the first people in the National Heart Institute, as it was then called. And Ted Kolobow, a rather strange and sweet man, not a bad bone in him, an Estonian refugee who had invented an artificial lung, and a disposable artificial lung – not just an artificial lung, one you could throw away [after use]. With silicone rubber membranes, at NIH, they patented it and I then spent three years working with him [Ted] on using that.

He had not applied it to an animal, and so we applied it to animals. First we tried dogs, and – it's hard to work on puppies. We had only small lungs, and we had puppies jump around and bark and so it didn't work very well, and so we switched to sheep, NIH had a sheep farm, and I started working on lambs.[39] And I had the idea that we could use it as an artificial placenta. We could actually grow the baby [fetal] lamb in an aquarium, and so that's what I did. And it was amazing. You'd C-section a [pregnant] sheep, take the baby out, cannulate its umbilical vessels and transfer it to an aquarium. And grow it in the aquarium for a couple of days. It was way ahead of its time, and ended up in *Science*, and all over the newspapers of America, you know, women could grow babies in aquaria. You wouldn't need to carry 'em around anymore. Let 'em out when you want to! [*L Zapol laughs*]

Of course, we could only go three days or four days at that time, so. I'm sure you could do it [now], and it developed into something called ECMO, extracorporeal membrane oxygenation for babies. And after working on the fetal work, Ted and I decided to try some babies at the Children's Hospital of the District of Columbia and we did, not very successfully, it was very early, the devices were poor, we had to anticoagulate or thin the [babies] blood.[40]

LZapol: Was that your first time doing human trials?

WMZapol: Yes. And then we went to, to Puerto Rico, and we tried [smaller] premature babies, which were even tougher. And each one bled into its head. They would die anyway. But there were tremendous numbers of premature babies in, at the University of Puerto Rico. I think we did five or six. All responded poorly to anticoagulation with intracerebral hemorrhage, and we stopped. And we realized – and even to this day, prematures are [still] not put on ECMO. Term babies are put on ECMO, very carefully, and now they don't have to use [as] much heparin, and the devices are much better.

But it all kind of happened twenty years later. We were twenty years too early, in some ways. And lovely people like Bob Bartlett in Michigan, a surgeon, he did the babies later. And did it much more successfully than we did. We pointed the way, but we hit the stonewalls. Life is full of stonewalls.

LZapol: So what was the stonewall? Was it that it wasn't successful, or then was funding revoked or what happened?

WMZapol: No. One, we had great funding. It was, at NIH, we were intramural, and the lab had a fixed item of money, you didn't have to write grants, it was heaven. It was giving anticoagulation

[39] WMZ addition on 12/17/16: These were 5 kg lambs.

[40] WMZ addition on 12/17/16: We worked with Dr. Gordon Avery, the head of Neonatology at Children's Hospital.

to hypoxic babies. Two, I don't think we knew how to take care of the lung of babies at that point. And three is the devices– now the devices have blood thinners bonded to them, so you don't have to give blood thinner to the baby. Or very teeny amounts. And we had to thin the baby's blood, and they would bleed into their head, and that was the end of them.

So, I think it was the technology of heparin-bonded surface. Anticoagulant bonded surfaces that allowed baby ECMO to happen. I think something like 700, 800 American babies go to ECMO today. Even though we have NO. But that's a second story. **[00:14:53]**

LZapol: I'm – in my mind I'm thinking about how, you know, we spoke about your interest in sort of taking apart radios, then translated into your interest in biology and kind of the systems of the human body, and now you're working with experiments, and with people. And so, you know, I'm just curious, for you, if you can remember what it was like for you to begin that. It must have been a very exciting time, with the success with --

WMZapol: It was a very exciting time, because Ted was a good scientist, and he taught me about gases and diffusion of gases. It was all about putting oxygen into the body through an artificial lung. And taking out carbon dioxide. The impedence of the [solid] membrane, the importance of [blood] flow patterns. So Ted Kolobow really was my teacher, and he was this very quiet man, we'd go a meeting and he'd say, 'Don't speak, just publish.' And so he only – he would almost never – he was painfully shy, and couldn't even stand up and speak unless he had to. He could in the lab, of course, but not with people he didn't know. He was very cautious. But highly respected in the field.

And of course about the time we were doing the babies, the Vietnam War is booming, and the US Navy says, 'Hey, we have this thing called Vietnam lung, soldiers with terrible lungs; can you do ECMO in Da Nang?'[41] And yours truly said, 'I could try.' We'd do some sheep first and then do ECMO, that's where I met Tommy Wonders, corpsman, medical corpsman, for the NSA, Naval Support Activity Da Nang, where luckily we did [sheep studies]– we could only make teeny little membrane lungs, but the war was on, and so money could be spent by the Department of Defense, so they could build big membrane lungs. And that was the drive to make big membrane lungs. So the Litton Corporation was given a contract to make big lungs, two and a half square meters [surface area], ten square feet, a square meter, you know, a ten, square meter is three foot by three foot.[42] So two and a half is a lot of square meters of rubber. And they all leaked, and they weren't, the technology wasn't – but at least the government drove it, and 'We care about it, and industry should work on it.'[43]

And I went to Vietnam for a month or two. It was quite a remarkable experience. It was in March of 1970. The war was still on, but it was very much a guerilla war. I ended up with wonderful people in Da Nang, at the Naval Support Activity, which was a, really a little mini hospital, with a helicopter base next to it.[44] And injured, severely injured people, both civilians

[41] WMZ addition on 12/17/16: Commander Brodine of the Naval Medical Center in Bethesda contacted us about the soldiers with terribly injured lungs.

[42] WMZ addition on 12/17/16: Mr. Kenneth Abel was at the Litton Corporation.

[43] WMZ addition on 12/17/16: The membranes all leaked blood, the technology wasn't excellent, but the government drove it forward.

and military people would be brought in, we'd operate all night on them to try and save their lives. I was surrounded by very good anesthesiologists. I think that gave me the idea also of anesthesia and breathing. So breathing, artificial lungs, I had to end up in anesthesia in intensive care 'cause it's all about breathing and artificial lungs. Well, lungs. And ventilators. And eventually, forty years later, artificial lungs. But at that time, it was just starting. So we – it was an exciting and depressing time, it was --

LZapol: In Vietnam.

WMZapol: It was awful, I mean, it was awful. Just an intensive care unit where nobody was older than eighteen or nineteen years old? I mean, here you walk around in intensive care and everybody's seventy or eighty, ninety [years old]. In Vietnam, they were all nineteen-year-old Iowa farm boys. They'd never had a French meal. They had come from the farm and they, you know, or the South, African-American boys, they're all missing arms and legs. They had been blown up by various things. If they got really sick, they were septic and we put them on an airplane and sent them, by [Medevac] plane, to Yokosuka, Japan, if they were healthy enough. It was awful. It was awful. And we would also take care of civilians, and [if] the civilians survived [surgery], we couldn't maintain them in our hospital, so we'd send them to the US Overseas Mission Hospital [in DaNang], USOME [Hospital Ships]. And I would go there Saturday and Sunday and work free, just take care of them, but the Vietnamese were so poor that if you hung up an IV on somebody and didn't watch, somebody else would steal it for their relatives. So it was terrible. Terrible. **[00:20:07]**

LZapol: And what had been your impressions of the war before that? Did this change your vision --

WMZapol: I think I was always a pinko liberal, and never had really thought it was a great idea. And I think most of the doctors were also pinko liberal, but we didn't say it, cause we took care of these poor, injured boys, who weren't pinko liberals but had gone at their country's call. So you're in a very, you're in a very interesting position. And a difficult position, but nevertheless, our job is to save lives, and that's what we did.

So Jack Ratliffe now a thoracic surgeon in North Carolina – all these names are popping back into my head. They're wonderful people. Ray Fletcher. [Captain John Raymond Fletcher M.D. Ph.D.], who then ran the Navy Hospital surgical unit. Killer [Charles] Kopriva we used to call him, the [*laughing*] anesthesiologist; he was an MGH resident, and who said I should go to MGH. He had finished the residency.

So although I didn't get drafted as a general medical officer, I volunteered and spent two months [in DaNang]. It was awful. We would get rocketed. The people who dropped rockets on bases didn't care if there was a big red cross on the roof. And the guerillas would rocket us. And so I'd crawl out of my bunk, a little air conditioned bunk, and I'd go into a [an attached] little [underground] cellar, with the rats and the mice, just a hole, and sleep in the hole until they stopped rocketing.

LZapol: Oof.

WMZapol: And then of course they would walk the rockets across [the base], and they rocketed the operating room one night, you know? It was, war is very messy, and the helicopters would go

up as soon as you'd hear the rockets cause they want to get them off the ground, and a lot of the cleaning ladies would be caught with a little map, they'd be mapping the inside of the base and the cleaning ladies would go out and tell the guerillas where the things [operating rooms] were, right? And it was very – it was a very unpleasant time.

The food was good. They had lobster and steak and Vietnamese, pretty Vietnamese girls in áo dais would serve the officers' mess. When I could, to get out of it, because the pressure was great, I would sleep, I would go out to the *Sanctuary* or the *Repose*. Those are the names of hospital ships and they would be quite far out, because they were always afraid that sappers or bad guys would attach bombs to your hull. So they kept them maybe a mile or two off shore, as I remember, maybe three. And then we would go out, and I would sleep – I would eat at the Navy mess, and sleep. And on the *Repose* and the *Sanctuary*, they had an amateur radio, and I would call California and then get a phone patch and call Mom from the *Sanctuary* or the *Repose*.

LZapol: So --

WMZapol: I could tell Vietnam stories for a long time. [*L Zapol laughs*]

LZapol: Well tell me, you mentioned Tommy Wonders, and I know that he recurs in your life. So tell me about meeting him, what your first impressions were of this young man.

WMZapol: Tommy was amazing, because we knew we had to practice [cannulation and ECMO] in sheep first, so Tommy found sheep, and I think they were Thailand sheep that were then flown into Vietnam for us, and we kept them in a little cage around the hospital. So it was a little barbwire cubicle or whatever it was, with food and whatnot. And I can't remember why, but they [the sheep] were all painted blue. I don't exactly remember why. You never knew with Tommy if there was a little wink in his eye. So he was the [medical] corpsman, he was perfectly healthy at the time, and he helped prepare the sheep, helped me catheterize them, and we did oxygenation studies – so everybody kind of knew what we were doing. When somebody came in with blast injury or Da Nang lung, we would be able to put them on ECMO.

So we got pretty good with sheep, and then I said to Tommy, 'Tommy, if you ever want a job when you get home, I'll give you one,' cause I could use – in setting up, I knew my grant would be setting up artificial lungs and testing them at Mass General Hospital, instead of Da Nang, we would test them in people of [for acute] respiratory failure of various reasons. And Tommy said, 'Fine, I'd be glad to think about that, and maybe do that.' **[00:24:51]**

And I left, finally went home, because they were no [patients with] blast injury [to their] lungs when I was there. We took a sailor or two off the ship, and I helicoptered the sailor out with respiratory failure, but it was generally drug overdoses. The kids would get drugs somewhere and then shoot up on the ships, and then they'd stop breathing and then they'd be blue and then they'd worry about me. So I'd get blue sailors, but they're almost all drug overdoses and not lung injuries. I had pretty good chest x-rays. Nothing you'd want to put on an ECMO machine. But I also realized, flying over Vietnam in helicopters – first of all, there were no windows in helicopters, cause you'd shoot them out. So they're incredibly noisy. And you couldn't hear the heart; I listened to breathing. And so all you could do is feel the pulse. And it was so – how do you take care of somebody in a noise machine?

LZapol: So as they're medevacing someone with an injury --

WMZapol: Off the ship to our naval [support] activity hospital in Da Nang.

LZapol: -- you weren't able to hear the lungs, necessarily.

WMZapol: Couldn't hear [the patient], or couldn't tell much. You couldn't tell much. [laughs] You looked to see if they were pink and had a pulse. It was really, it was tough, taking care of people in a noise – in a vibrating noise machine. It would vibrate like crazy from the great, you know, there were two helicop – two props, and it was a big, open, breezy helicopter. Wow. So you had some medics, you were with 'em, and you'd bring 'em in from the ship.

So it was Marines, Navy, it was, yeah, yeah, it was Navy, so we were coupled to the Marines. And I Corps [00:26:47] was first Corps, the northern part of Vietnam. Beautiful country. I remember it from helicoptering over it. You'd see the little pock holes from all the bombs. But you'd realize that someday it would be [like] Miami Beach; it had gorgeous palm trees and gorgeous shore, and coconuts – absolutely gorgeous bays. It, someday, when the war was over and long forgotten, please, it would be, you know, Hawaii, it would be a beautiful spot.

LZapol: So you mentioned, when you went out to the ship that you called Mom, but in the narrative, we, you kind of, we haven't met her. [*laughs*]

WMZapol: No. This is true. This is true.

LZapol: So I --

WMZapol: But I did meet her in Japan [to travel] on the way home.

LZapol: Ah, uh huh.

WMZapol: So we were allowed to stay in the, in the Sano Hotel, which was the military hotel, in [Tokyo], for officers and bachelors, and I think she was allowed to stay with me there, I believe. And it was quite cheap, cause Japan was getting pretty expensive in 1970. So in April of '70, I think it was, I remember coming out to go to Japan and stopped in the Philippines and my suitcase was stolen in the Philippines, and all my pictures.[45] And then I went to Okinawa on a little, you know, turbo prop [*laughs*] and then I, and then we flew in a big DC whatever to Tokyo, in April, and it was about the 1st or 2nd of April. It was cold is all I can remember, and snow had fallen in Japan. And I was the only passenger on the plane. So the co-pilot said, 'Come sit up in the cockpit with us,' and I remember going up into the cockpit, and it was a clear night, and as we flew over Japan you could see all of Japan from the south island, all the way to Tokyo, all the lights, you know, in, from the cockpit you get a great view. And we landed. And unfortunately I had my shorts and short sleeves on, cause I had taken off from Da Nang, where it's about ninety degrees and ninety percent humidity. I was cold. And I went right to the bachelor's officers' quarters and the first thing in the morning I went and bought myself clothes --

LZapol: You had no suitcase still.

[45] WMZ addition on 12/17/16: I remember flying out of Da Nang on a C-130, and then to Tokyo in a big DC 7.

WMZapol: -- at the PX, yeah, and I had no suitcase, I had no baggage, and they never found it. So, you know, it's in the Philippines somewhere. [laughter]

And I met mom. Mom came in a day or two later, at the Sano, and we then went to, I think, Hong Kong, and maybe the Philippines, I don't remember.

LZapol: Huh.

WMZapol: And Singapore, and went home, so we had our – that was our first Asian trip --

LZapol: Together. **[00:29:54]**

WMZapol: Together, cause we, I remember, she flew PanAm, we all flew PanAm across in those days, and then we had a great time together.

LZapol: That must have been quite a contrast after flying out of Vietnam, too.

WMZapol: Oh, it was, but boy, it was wonderful.

LZapol: Welcome. [*laughs*]

WMZapol: Oh, it was wonderful. Yeah, no, I can understand why Obama doesn't like wars. [*laughs*] Oof!

LZapol: Yeah, yeah.

So let's go back a little bit, then, to how you met mom. And kinda --

WMZapol: So, I was going to NIH --

LZapol: -- your first impressions.

WMZapol: I was going to NIH; I'd never been near Washington, I don't think. Except driving through to go to Florida as a kid with Marty Rich or something, and my parents, so my internship was getting near the end, I'd served my year, I knew I would go to NIH, and I had known Joe Silk since we worked in camp, and I said, 'Joe, who do you know in Washington?' And in those days, we didn't have the Internet, but we had little black books, and they were Harvard coop books. And in the back of it his Harvard coop books he had a list of young ladies and their phone numbers, and their cities. And Joe was very active at picking up young ladies, and he had met mom in Woods Hole walking on the beach. And she said she was busy at the time, but she'd give him her phone number, and perhaps in the future. So he gave me a list, and Nikki was one of them, and some of her other, I can't remember their names, some of her other Vassar classmates were in it, too. I don't exactly why, but he had a penchant for Vassar students. I think it was an ophthalmologist's daughter, the other one.

Anyway, [*L Zapol laughs*] I got to Washington, I met a friend from medical school, who was also working in biochemisty [at NIH], Larry Aaronson. And Larry and Joan, had married Joan in Rochester, and I think they had a baby [Carl], I can't remember, and Larry was from Maryland, and knew how to catch crabs and knew all the kinds of things people from Maryland know how to

do.[46] So I think I lived, or roomed, with them for a couple days as I looked for a place, and I eventually found a place, 3215 O Street, in Georgetown, where I lived for the next two years. And I would commute up and back. I bought from a rather large young lady who was selling it, a BMW. So I had a BMW, I had a Triumph TR4 that my father had allowed me to buy and helped me, for like a thousand dollars, when I was an intern [in Boston], and so I had the TR4 and the motorcycle, and I lived on O Street, next to a playground, and I started to work my way through the list [from Joe Silk].

And I called Nikki's number, I remember, and she was at the CIA at the time, and you called XY123456, and they answered the phone and said, 'Hello!' And you said, 'Hello!' And, or they answered it '123456,' and it was a strange way, and then I said, 'Nikki, is Nikki' – not Zapol, Kaplan, 'there,' and they said, 'No,' and then eventually I got her, and she said she was busy at the time. But I should call her back in a few months, maybe. [*L Zapol laughs*] And so I did. And we went out on a date, and I think, I don't remember if the first or the second date, I think I took her to the [DC] officer's club, the navy officer's club, and we went dancing, you know, to think, since I rarely dance with her, I think she's never [*laughing*] forgiven me for that. For duping her to think that I was a dancer.

And there was the time I got my thumb caught under the hood of the TR4, but I didn't want to say 'Unlock it,' cause it would be a sign of injury. I don't know. Went to a Chinese restaurant, and, near DuPont Circle. I don't know, we had a good time. We got – once we finally went out, we had a good time.

LZapol: What do you – what was your first impression of her?

WMZapol: Oh, I think she was wonderful. She was wonderful. Gorgeous, wonderful. Just terrific. You know, I think, it got into religion a bit. It actually worked out that she was of the right religion. [*laughs*] And my previous girlfriends hadn't been. And my mother said, my mother always worried a bit about that, but I wasn't serious enough with any of them.[47] Before that. And I think the seriousness of Nikki was the fact that her father was dying of cancer of the lung.[48] And I think it was quite – she had a quite – it was quite difficult for her living at home. Her mother and father obviously had a hard time, with one of them checking out, and I think she was very dedicated to her father. And she loved her mother. And I think it was quite, a very difficult time for her to live there. To be there. And I think there was a great desire in her to be married by the time he died. Which was maybe nine months later? **[00:35:42]**

And I think I was a bit ambivalent. I hadn't married anybody in nine months before. But it seemed like a very good idea, and she was a very special lady, and so I did. We got married. And her dad just was kept alive for that and died, really, a day or two later while we were, for honeymoon we just went to the beach, maybe sixty miles away.[49] And Gabe died. So it was a very

[46] WMZ addition on 12/17/16: Larry was also working at NIH, and was originally from Baltimore, MD. He knew how to catch blue belly crabs! I also forgot to mention Jeffrey Rosenfeld, who I also knew from Rochester who was at the NIH, and is now a professor at UCSD.

[47] WMZ addition on 12/17/16: My mother worried *a lot* about the religion of my girlfriends.

[48] WMZ addition on 12/17/16: Nikki's father had kidney cancer, metastatic to the lung.

[49] WMZ addition on 12/17/16: We went to the Maryland Shore for our honeymoon, in Ocean City.

– it was a very difficult time, is all I can say, those nine months. She was very dependent, and it was a very difficult time for Nikki. And her mom.

And we got married, we bought a house in Bethesda, where I could walk to work from NIH. We got a dog. Danny. A Brittany Spaniel. And then Danny eventually had a sister. I think we bought his sister from the same family. Jujy. And they were both killed shortly after we got to Cambridge, where it's very hard to keep unchained dogs, you know, they would dig their way out, and while she [Nikki] was pregnant with David they [the dogs] were killed, and it was awful. Just awful for her.

And so, so then, in a nutshell, was, I think we were very happy in Bethesda over the next – so we were there for another year, maybe? Year and a half?[50] Very happy, I went to Vietnam, but I realized, they wanted to give me a job at NIH to be a researcher for the rest of my life and stay there, and work with Kolobow and do these sorts of [respiratory] things, but I really felt I needed to know more about being a good doctor.[51] I needed to know more about lungs, and how they broke, and how they developed adult respiratory distress syndrome. Or severe pneumonia. You know, what were the, what was the composition – how did that happen, what broke, how could I fix it with an artificial lung? So I wrote a grant [in 1970, for MGH], and we got the grant. As a resident, you can't have a grant, so my chief and the chief of surgery were the official principal investigators[52]. But everybody could see through it [to me].

And I was – I then negotiated for my residency. And they told me to wait for Kitz, who was just coming from Columbia to Mass General, and Harry Beecher by then had left [as chief of anesthesia]. And Dick said, 'I'll support you, Warren, I'll take care of you, I'll help you.'[53] And it was his bond to me that said, 'I will make sure you succeed' that made all the difference. It made me say I would throw in my lot at the Mass General. I looked at California [UCSF], I thought they were more theoretical, UC. I looked at Columbia, I looked at half a dozen places --

LZapol: And --

WMZapol: -- but MGH had Pontoppidan and Laver, two very key men who worked in the intensive care field and really knew injured lungs. So I came to the MGH for injured lungs.

LZapol: So by that time you were sort of, you were sought after because of your success with --

WMZapol: Artificial lungs.

LZapol: -- the early ECMO --

WMZapol: Right.

LZapol: -- work.

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[50] WMZ addition on 12/17/16: We were in Bethesda from 1968- 1970.

[51] WMZ addition on 12/17/16: Donald Fredrickson, the Director of the NIH, and Assistant Director Robert Levy wanted to give me the position at NIH.

[52] WMZ addition on 12/17/16: The principal investigators were Kitz and W. Gerald Austen, the chief of surgery.

[53] WMZ addition on 12/17/16: Dick Kitz said this at my interview.

WMZapol: In fetuses, in adults, Vietnam. People knew. People knew, and so I left surgery, sadly, for Bill McDermott, told him. And came to anesthesia, which was a two-year residency, and they made a deal, they said you could do four days a week [clinical residency], put an extra month in at the end, but I'll give you Friday, Saturday, Sunday to do your [ECMO] research. So I worked four days in the clinic, learning how to anesthetize, and then I spent three days in the lab. And eventually got Tommy Wonders. **[00:39:52]**

The Tommy Wonders story was, he kept reenlisting [in the USN]. And finally he ended up being billeted with the South Vietnamese Navy, on a riverboat, where he was the medic, or the corpsman, and one night his base was rocketed; someone was injured. The medic went out, Tommy went outside to get the injured person, and when he got to the injured person, he was rocketed. And so his body was full of shrapnel. And they called in a medevac, and helicoptered them out. Tommy remembers these horrendous episodes of being thrown in with a bunch of bodies on top of him, and not being able to breathe, and then eventually getting to the [Da Nang] hospital and then having a chest tube, and all these, all these interventions, and then being sent to Great Lakes Naval Hospital, and I got – and I was always wondering how he was doing, so he gave me his dad's phone number or something and I called his father and his father said, 'He's in Great Lakes Naval, but if he recovers, he would truly like a job with you.' So he then, Tommy then joined me – I guess, Virginia Schmidt was my first technician, and then Tommy joined me, I think it was second, two years later, or three. She babysat for David. They both did, I think. And Tommy then had a limp, he had, for the rest of his life, he had full disability from the Navy for the rest of his life. For his injuries. But worked for me for about twenty-five years, until he went off to the [*laughing*] Dominican Republic with another fourteen-year-old girl, or something.[54]

Tommy was something else; went to Antarctica, was a very big piece of our life. Very strong support, very loyal supporter, who ran the laboratory [for 20 plus years].

LZapol: So, well, probably another time, we'll have to talk about Antarctica, and your stories about Tommy and Antarctica, too --

WMZapol: Yeah.

LZapol: -- but I, you know, you've arrived in Boston and Cambridge at the same time as you're in a relatively new marriage. What were your expectations of what a family, what family life would look like, what were your expectations of --

WMZapol: I think our fam - my plan was not to have babies for a while. Partially because Mama was trying to sort out what she would grow up to be. And she first went to the Ed school [Harvard Graduate School of Education] for a year. Got an M.Ed. because she had worked for the Academy for Educational Development in Washington, on technology and education, the Commission under [President] Johnson, and she loved the people she worked with there.[55] She worked with a TV station before that, she didn't like that. She liked this a lot, so she thought education was the way forward. She met the Hoopers [Richard and Meredith Hooper], she wanted to go forward in education. She did that, and then at the end of that, she worked for Tony Oettinger [Anthony G.

[54] WMZ addition on 12/17/16: Tommy died in October 2016 of a stroke in Santo Domingo.

[55] WMZ addition on 12/17/16: The Director of the Academy for Educational Development was Sydney Tickton.

Oettinger] who was a math professor [at Harvard], also somehow interested in education, and a consultant for various environmental organizations, and Tony was great, was a great person.

And then, I think, her father was a lawyer. I think following the traces of your parents are, is one of the things she wanted to do, so she, so after her M.Ed. she wanted to go to law school. I remember calling the [Harvard Medical School] dean and saying, 'It's really expensive tuition, and I'm an assistant professor now at the medical school. Do you help assistant professors?' And he said, 'No.' 'Is there a break for those of us whose wives want to go to law school?' 'No, it's Harvard.' 'Oh.' [*laughter*]

So she goes, she went to the law school. Let's see, how many years is that? '72, right? We're married in '68, so four years or so after we get married, Mama becomes pregnant with David and I think we decided that we wouldn't have a baby until I was done with my residency, so I could be useful. Because even the residency was every third night, so I was exhausted and tired and doing research and trying to keep my grants alive. And writing grants. And David shows up [*laughs*] some weeks early; mom's water breaks in the bed, and I say, 'Mmmm,' and she calls Holly or something and Holly says, 'Your water's broken [*laughter*], you better get to a hospital.' **[00:45:01]**

So we go to the Boston Lying-In Hospital, and David is born, but I get my best friend anesthetist there to be our anesthetist [Ed Rolf], and David's cord is wrapped around his neck, and he needs resuscitation, and he's perfectly resuscitated by this doctor. And he did a really good job on him, and then he looks like he has [chest] retractions, and I think he's going to develop respiratory distress syndrome, and I'm going to have to put him on ECMO. And I'm scared out of my bananas [*laughs*] and I keep watching him in the premature nursery, but he puffs on fine and he does great. And he's just a little baby, that's all. And so mom stayed, I think, a full week or something in the hospital before she came home. It was a scary time. Cause we had a little tiny little boy. And that is in May, of '72, and in June I finished my residency. So I'm one month away from the end of my residency. And at the end of June, I'm a free man.

I'd finished the two-year residency, I passed the [Anesthesiology] boards very shortly – well, I guess a year after, I passed the oral boards, and then I'm a boarded anesthesiologist. I know not a lot [laughs]. Ed Lowenstein is my next-door neighbor in the laboratory. And we went and visited Lowenstein's while I was a resident; he was very, very positive, you know, he may be ten, twelve years older than I am, but he's very thoughtful about my career and helping me advance.

LZapol: So tell me about your first – well first of all, you talked about being a new father, so just talk a little bit more about what that felt like, to have a new baby, and --

WMZapol: It was kind of amazing. Kind of amazing. It brought family together; my parents came up for the *bris*. The *bris* didn't have to be on the fifth day cause he was premature, so prematures can have a *bris* whenever they want. And Nikki's family, mom and uncles came up, Bernie, they compared David to a little chicken. [*laughs*] I remember he went and bought a chicken or something, and said, 'Oh, David weighed about the same thing!' Cause he was what, three pounds or something like that. Three pounds and a bit. I don't know, it was just an amazing time.

I think we liked Cambridge, living on Prentiss Street, just two or three blocks up, in Cambridge.[56] We liked it here, could walk to the [Harvard] T, or drive. It was a smaller world. But I think we knew we wanted to move. We knew we wanted to have country. Cause we lived in Bethesda, which was a little bit rural. We had a backyard and a place for dogs and whatnot, so we wanted a backyard and a place for dogs and whatnot. We really didn't have – we had a not very good shared yard. We decided we wanted to go to, to move out, and Virginia, my technician's uncle, Ted Heuchling lived in this strange colony of MIT, Harvard professors called Conantum. So Virginia said, 'Why don't you look, go visit Ted.' So we visit Ted Heuchling, who was perhaps the nicest man in the world, who lived around the corner from us, Ted and Cappy, his wife at that time, who died of breast cancer shortly thereafter. And Ted showed us some houses and we kind of, I don't think we looked – we looked at one other house, closer, that was very expensive. And we decided, uh uh, we want that, we want the, I think it was fifty thousand for the house in Concord versus seventy-five for one near, on the hill, as we left Boston. It was, I can't remember the town's name anymore. Hm. But, you know, it was closer, a closer house, but it was seventy-five. We didn't think we could afford seventy-five, but we thought we could make fifty. I think I made twenty-five thousand dollars the first year out. Or maybe thirty. That was my salary, in 1972. So it was so many times your salary that you could afford, maybe. Twice your salary or something. And I think her mom and my dad gave us maybe five or ten K each, to pay the mortgage. So we bought the house, and then we got Mr. Sun, [00:50:05] the Chinese-American architect, to redesign it, and Henning's [Henning and Yanna Pontoppdan] House was Danish modern so we put in the stained glass and the stuff that you grew up with in Concord over the door, and put in the big smoke pot, indoor, conical, two-wheeler --

LZapol: Fireplace. **[00:50:27]**

WMZapol: -- fireplace, ceramic, and put in the pine trees. Cause he lived in the pine trees. So I think a lot of it was Pontoppidan's insight, and then, and then Virginia's uncle. But I think we loved it, and I think it probably was the wrong decision for where we were going, cause it wasn't hard to commute in those days; you could do it in a half hour to the MGH and Route 2 was a tiny little road with two lanes or three lanes, two lanes, I think, and it just grew, Acton, Boxboro, all grew. And Lincoln and etcetera etcetera, so then it took an hour. And it was just too much. I mean, two hours a day commuting. Forget it! That was just too much for a busy family, and with many things to do, so, unfortunately it was not until, what was it, 2001 that we decided to move out. We lived there '72 to 2001. Twenty-nine years.

LZapol: I think it was 2000 you might have sold it.

WMZapol: Hm.

LZapol: So, so there's definitely more to talk about in terms of that house, and moving to that speak, but you also spoke about Ed Lowenstein. So tell me about maybe your first impressions or a memory, an early memory of Ed.

WMZapol: Of Ed?

LZapol: And his character.

[56]WMZ addition on 12/17/16: Two-three blocks from Nikki and Warren's home from 2003 on Shepard Street.

WMZapol: So Ed was an extraordinary guy. He was next door to my lab, on White 4. And, in the White building, and we each had a lab, and his lab, he was studying cyclotron-produced oxygen, so it had a very short [oxygen] half-life, like minutes, and it was made in a cyclotron in the Bulfinch building. And Ed had a fellow who went on to be an extraordinary surgeon, Joel Cooper who invented lung transplantation, and made it happen. And Joel was a surgical resident, maybe two years ahead of me. Three, four years ahead of me. And also was a close friend, and then became an enemy later on.[57]

But, at this point, he was, he was – he and Ed would run down the hall, screaming 'Gangway!' Cause they'd come all the way from the cyclotron, running through the Bulfinch building, the Gray building, and then the White building, and there'd be patients and people on stretchers and things like that, and these guys'd be pulling a [shielded] lead pig, they were called, so it's a, it's wheels and a great, big box of lead, which had this radio[active], hot radio-isotope in it, and then when they got to the lab they [intravenously] injected it quick in the dog and they took [blood] samples of its decay. And you could estimate how much water was in various places, and the lung when it becomes edematous, or injured, has water in it, so they were measuring lung water with radioactive oxygen. H_2O. But O [with] some number, short half-lived isotope. So I remember Ed and Joel in their white suits, cause you'd wear, we wore greens in the O.R. and then we had little white suits that you'd pin, you know, with snaps. Running down the hall.

And then, so Ed, like his office, was a little messy. He had two technicians that took good care of it. But the story I remember, that I think is most remarkable, was that, I can't remember the name of his technician, but we, Ed was studying [IV] narcotics and their ability to produce [deep] anesthesia, and [he used] very large dose of narcotics. So in his lab he had a refrigerator full of narcotics. And it had no lock. Because this was 1972. And one day, I think Ed gets a call from the Boston Police Department. They found a guy on the side of Beacon Hill, and he had a tray from Ed's refrigerator. And he was injecting himself with every substance in the tray. And luckily, the first substance, you know, he got to a substance that put him to sleep but didn't kill him. But he had all these [relaxants and] narcotics in there that could easily have killed him. And that was I think the first time we realized that laboratories could be a source of dangerous [street] drugs, and they needed to be kept under lock and key. And people who stole drugs were pretty smart, and knew where to go. But that was an event, a horror that could have happened that didn't happen, that we were really lucky on, and Ed was really lucky on. **[00:55:33]**

Trudy, I think, was his lab technician who didn't – and then of course the next day there was a bolt that looked like a door bolt and a [pad]lock on the [lab] refrigerator. We have, we keep our narcotics with a, in a safe now.

LZapol: How did your friendship with Ed develop?

WMZapol: I think cause he was so warm and so kind, and thought a lot of my research, and I thought a lot of his; I think we just hit it off beautifully. I didn't work with him 'til I got to cardiac, and had a great time with him on cardiac anesthesia.

Were it not for the obnoxious surgeons, I would have been a cardiac anesthesiologist, but Mort Buckley, [Mortimer John Buckley] this rather unpleasant man who said, 'Oh, Warren Zapol,

[57] WMZ addition on 12/17/16: Joel Cooper became an enemy over Nitric Oxide later on.

I know him, I invented everything he'll ever think of.' Oh? [*laughs*] So, he said things like that, and, you know, he was just the king, and there was no way – I don't know how anybody stood him. I don't know how Ed stood him. But they did. And he drove two of my anesthetists to [visit] the psychiatrists, and made them blabbering idiots for a while. No, he was horrendous. ABC - assess, blame, criticize, we used to call him, [ABC] Buckley. He was a terrible man. And he terrorized the cardiac group for twenty-five or thirty years.

LZapol: But Ed worked with him?

WMZapol: And no one did anything about it.

LZapol: Did you try to do something about it? Yeah.

WMZapol: Minimally.

LZapol: Yeah.

WMZapol: You couldn't. He was protected by the aristocracy of the hospital.[58] He had either operated on them or they had been his boss and thought the world of him. They would not listen.

LZapol: Was that the first really difficult personality that you'd had to --

WMZapol: Yeah, I --

LZapol: -- deal with.

WMZapol: -- met him almost immediately. Although there were others. I think Mike Laver was a difficult personality. But I think he was right about most of the things he said. He just would say them – he walked in on my first ECMO and he said, 'What's the pulmonary vascular resistance?' I said, 'Six or eight.' He said, 'Game's over! Give up.' And, you know, it's a seventeen year old girl, or something like that, you know, so, and, but he was right, eventually I figured that out, that the pulmonary vasculature was destroyed and she would not come back [to life with ECMO]. You might need a, eventually a lung transplant or something, but we hadn't invented them yet. Joel Cooper hadn't done them [successfully yet, until November 1983].

So, so I think, there are people who can crush you as a young person, crush your spirit, and I think part of surviving is [*laughing*] not getting crushed.

LZapol: So you must have had your champions at the same time. You said that Dick Kitz found --

WMZapol: Dick Kitz!

LZapol: you

WMZapol: And his, the chief of surgery, Jerry Austin [W. Gerald Austin] and the chief of transplant surgery, Paul Russell and Ed Lowenstein and Reggie Greene [Reginald Greene] in radiology, and then Lynne Reid [Lynne McArthur Reid], who I met, an English pathologist who then came to Children's Hospital and, when we were in England, when you were born, I wrote a

[58] WMZ note on 12/17/16: He was protected by W. Gerald Austen, MD.

grant with her that was [for] a specialized center research grant [in ARDS] that got us a million dollars a year for ten years.[59] So Lynne was very important as the first, one of the first women professors at Harvard. And an extraordinarily brilliant pathologist. And a delightful human being.

So, I mean, when, but it took years to develop those kinds of relationships and strengths, that made it impossible, really, for me to leave Boston. I mean, people would try to lure me away, Columbia tried to lure me away with a [chaired] professorship to New York. I certainly thought a lot about it. And then as chairman, you know, to Los Angeles, various places – but I'd already done human studies here, had so many friends here, collaborators, people who'd pop out of the woodwork and I'd work with happily. That – moving is such a double-edged sword, I mean, you get a new – you lose your history, to some extent, and you have to find new friends who are flexible and want to work with you. It can happen, and it can work well, but I never, I never made that trade. I think Mom and I seriously, the Hopkins deal was the last one, and LA, were the two important decisions – you were involved in the LA one – 'I'll need an agent!' [*laughter*] And so UCLA was one where we almost did.[60] And I found it very hard, once people recruited the hell out of you, to tell them no. And then Hopkins. To tell them no. And maybe that was right and maybe it was wrong, but nitric oxide would have had a hard time coming along if I didn't stay [on] as chief at the MGH. **[01:00:54]**

LZapol: So before we get to [talking about becoming] chief and then those choices as well, and nitric oxide – which may be for another day, too – you talked about, [how] you come against these challenges, and difficult people, and it took a while to develop those relationships that really helped you thrive. So what kept you going? You know, in those moments where you might hit difficult people.

WMZapol: Well a lot of it – I mean, there are two things. One is the students, who are great, and who go on in their own light. Konrad Falke, one of my colleagues, not really a student, but in a student, in a sense, he knew nothing about ECMO and whatnot, then goes on and carries out ECMO and does it quite successfully in Europe.

LZapol: How did you meet --

WMZapol: Jesper Qvist --

LZapol: How did you meet each of those people?

WMZapol: There were fellows at, in the intensive care unit or the cardiac anesthesia unit at MGH. So they're all people who are working next --

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WMZapol: -- to you. Jesper, where we decide, 'Gee, Antarctica looks interesting. If you get cold, a lot of good things can happen, and maybe it's the cold that's useful.' So we decide to go to Antarctica in 1974? And then get funded in '5.

[59] WMZ correction 12/16: Lynne is an Australian born pathologist, who I met at the Brompton Hospital in London where she was Chief of Pathology. Lynne brought Rosemary Jones with her to Boston and to MGH eventually.
[60] WMZ addition 12/16: We contemplated moving to Los Angeles in 1989.

LZapol: How did that come, you know, what had you known about Antarctica before --

WMZapol: Almost nothing. George Llano, a wonderful man who ran the program in biology and eventually all of it, I think, but in biology, and was a Cuban botanist, Cuban-American botanist who had worked in the Harvard forest and, on fungi or something, was the head of the biology program [at NSF Polar]. He had found a number of brilliant young physiologists to study animals, seals, penguins, and when I wrote [him] – he wrote a book called *Man in Antarctica*, I don't know, something like that, in about 1974, National Academies Press, I think. Not sure. And we read it, and we learned there were seals that would hold their breath for an hour, and fish that were at, below the freezing point, minus two Celsius, and at that time there was a lot of interest in [ideal areterial blood] pH, what the pH of a human should be when it was cold on pulmonary bypass [for heart surgery]. At twenty Celsius, versus thirty-seven, where you and I live. And so we, there are many who said we should be like fish, and our pH should shift [upwards] as the fish's pH shifts [upwards] as it cools.

LZapol: Because you cool people down as you're operating on them.

WMZapol: On them, to slow their metabolism. And, of their heart and various other things as we're operating on it. So Jesper and I basically decided to write a grant on pH and fish, and George said, 'Go and learn with somebody who's very good so you won't hurt yourself when you go.' And so they sent us with Art [Arthur] DeVries, a grand old man of the fish world, and the seal world, actually, as it turned out, and so I, we wrote the grant, and George fixed it so he [George] visited us in Concord and [he] brought David, who was two years old, some books and things. He was a lovely man, brought his wife, I think, he was on vacation, maybe. And we chatted, and he got us [into] a collaborative grant. We were a little [grant], just air travel and a hundred dollars or something.

And Jesper went down first, and figured out how to put arterial lines in fish, healthy fish in the tank, and then we drew blood samples and studied them, and studied fish as they were caught and as they adapted to life in a fish tank in Antarctica at McMurdo, and then I joined him and measured lactates and pyruvates and we published!

LZapol: So this is your first trip to Antarctica.

WMZapol: This was our first trip. Jesper and I learning how not to get killed. [*laughter*] And I met Don Siniff [of University of Minnesota, an ecologist], who had worked on seals, and I spent a day looking at seals with Don Siniff. And I said, 'Fish are great. Seals are better.'

LZapol: Why?

WMZapol: Oh, they were warming babies and they were lactating and yipping and swimming and diving and holding their breath, and I was interested in lungs and breath holding, so it was clear.

LZapol: Closer to human --

WMZapol: It was clear, it was closer to humans, and fish are fish, and, you know, seals came along thirty-five million years ago and fish are, I don't know, a billion? A half billion? [*laughs*] So they're closer to us. So we went seal, for seals on the next grant. Took us a cycle or two to get

in, but that one, I think, the brilliance of the second, of the seal grant was Bob Schneider, who was reading *Science* and said, 'Gee, there's this guy Peter Hochachka who writes about hypoxia and low oxygen levels and all this other stuff; I wonder if he would go with us [to McMurdo].' And we would study metabolism as well as the pulmonary circulation of seals. And Bob, I think, called Peter in Hawaii, and Peter said, 'Sure, I'd love to work with you!' [*L Zapol laughs*]

And so we wrote a grant. Peter had a piece. I had just been in Argentina, talking about artificial placentas, and met this strange little New Zealander, who must have been fifty-five or so at the time, and he had been working on the time of birth and use of steroids to prevent respiratory failure in premature babies. And his name was Mont Liggins [Sir Graham Collingwood Liggins, an obstetrician]. And Mont said, 'Gee, I, my grandfather was a provisioner to Shackleton and Scott [in Christchurch], and I've always wanted to go to the Antarctic.' Don't really -- **[00:05:23]**

LZapol: So Mont Liggins --

WMZapol: So Mont Liggins is an extraordinary man, and brilliant man. Very great thinker. But had the beauty of being [an] English-trained [scientist], and was simplest. So he didn't need a lot of instrumentation, and measurements. But he knew his endocrines. He knew progesterone, he knew estrogen, he knew the adrenal --

LZapol: Which you didn't know.

WMZapol: No, no. He was an obstetrician! And so he brought so much to it all. And so, so we were allowed then to do captive diving, actually bring a seal into our operating room, operate on it, wake it up, and force it to dive with a box on its head. That I'm sure would no longer be approved, but it was approved then. So we had a little railroad car that they sat on, and Mont, and we brought Tommy, who was always our technician, in Antarctica as well, and Mont, Tommy, Peter Hochachka, Robert Schneider, myself, and we took Mike Snider, [on the] first year. He was a great physiologist [and anesthesiologist]. Ran into [personal] problems later, but he was brilliant for memory.

LZapol: And Jesper --

WMZapol: And anesthesia.

LZapol: -- didn't come that second time.

WMZapol: No, Jesper came too, I think. I think.

And basically we put catheters in the seals and measured forced diving, for two years. And we also did caesarean sections on seals that were pregnant, so Mont had to figure out if the seal was pregnant, which involved putting his arm up the vagina of a seal, an awake seal, while we held the flippers on an ice skating course.

LZapol: At that time you couldn't take – you couldn't give a seal pregnancy tests, I imagine. [laughs]

WMZapol: Not that year, but he figured it out the next year. And so he built a [special] coat with a removable arm piece, and he had a rubber glove inside, we would grease it, and Mont would feel the fetal head. And be thrown about on the ice. Cause seals don't volunteer for this sort of thing.

[laughter] Anyway, how he didn't break his arm, and how he did that, I will never know. [L Zapol laughs] But it was total Mont Liggins.

LZapol: How did you track, get these --

WMZapol: We never got a non-pregnant seal. We always got pregnant seals. And you really can't tell, they're so big, you can't tell if they're pregnant. It's only a fifty-pound baby, in a 1,000-pound seal. So, Mont figured it out.

LZapol: And so --

WMZapol: And did the blood test second year.

LZapol: And was this also when you were creating these huts farther away, or that happened later?

WMZapol: That happened later.

These times, we brought the seals back, we injected radioactive substances, measured blood flow to various places, which was what the world was interested in then, and then when we were done, we would gut the seal, throw away the guts, and take it over and throw, to Scott Base, where they still had dogs, and the dogs ate seal. So we put the seals in a crack, in an ice crack. They would freeze solid. And – they were dead, of course, so they, the bodies would just freeze solid, and the isotopes would decay. And I think sixty days was the longest isotope we had, half-life, so 300 days they were gone. So 300 days later, they would basically take a buzz saw, a gas saw, cut off cubes, throw them into the micro, and feed it to the dogs. So it was perfect ecological use of – I think we were allowed twenty seals or something like that, and there were 1,000 seals there, I mean, we didn't influence their population at all.

LZapol: Right, right. And at that time dogs were on --

WMZapol: Were allowed.

LZapol: -- were in Antarctica, yeah.

WMZapol: And over the next five, ten years they disappeared, but they were gorgeous. Gorgeous. Sledges.

LZapol: Ah. What kind of dogs did they have there?

WMZapol: Sled dogs.

LZapol: Some big --

WMZapol: Alaskan huskies, I guess. They were gorgeous. Gorgeous. One of the most pretty sights in the world is watching a dog team crossing the ice in Antarctica [in a Nansen sled]. Oh! No more, but it was gorgeous. And the Brits had them, had dogs at Rothera, I think, on the peninsula. And they really didn't go 'til maybe ten years later [1994]. The Brits were, love their dogs. And they had a, I think they had a – I'm not sure what they did with the dogs. **[00:10:10]**

LZapol: And those, the Brits loving their dogs goes back to the explorers, which then you also started to have a real love for the Antarctic stories, and --

WMZapol: I started to collect Antarctic books.

LZapol: When did that happen? How did you kind of fall in love with that, with those stories around Antarctica?

WMZapol: Because they're all around you at McMurdo. There are the huts, and the cross, on Obs Hill [Observation Hill], and Scott's hut in the middle of McMurdo, and Shackleton's hut, and Scott's other hut, and I was working the coast, and you would get the key from the Reverend, and you would let yourself in and look around. There was no real care in those days. Of the huts. So, it was extraordinary, it was an extraordinary – how could you not be interested in the story? Why is this place named this? Or that? And the answer is some seaman had drowned there, or, you know, someone had died. I mean, you knew there was risk. So these were stories of the risk, and how it was managed in 1905 or 1900 or 1914 or --

LZapol: You knew – would you like to take a break?

WMZapol: I'm ok for a few more minutes.

LZapol: You knew there was risk. What kind of risks were around when you were there? I mean, did you --

WMZapol: Well, there was the ice. There's always the ice, and we rode around on track masters, or cars, so cars could go through the ice. And Jerry Kooyman lost a graduate student, I remember. And the cars, the track cars all had a little roof hood that would pop open, and the story was that it [the vehicle] went through the ice near the glacier, so there's the tongue of the glacier, which comes off Mount Erebus, goes out on the sea, and it's between that and the sea, where it freezes, is dicey [support], and he apparently went through a crack near there, and as the car cracks through, you gotta get out. [*laughs*] And everybody got out, and I don't know if there are other people in the car – doors fly open. But he went back for his camera. That's what they said. Of course, it's five hundred meters or four hundred meters deep, twelve hundred feet down, so no one's ever going to do much [to retrieve anything]. It was terrible. Terrible. Gloom and doom.

LZapol: Was it --

WMZapol: I think that was the year after us. I think it was after our two years. We would always go [for] two years. The first year you'd figure out your problems, the second year you'd solve your problems. And publish well.

LZapol: And I remember, was it Jesper telling a story about a helicopter accident? Was that?

WMZapol: Helicopter accidents. Oh yes. And George Denton. Helicopter accidents. Yeah. Terrible winds, no GPS yet --

LZapol: Thin, thin air.

WMZapol: -- weather changes very quickly. Actually, the air is dense, it's cold, so it's actually not too thin, but it's weather and wind, wind I would say, and then ice fog [laughs] you know,

suddenly you can't see anything, which way's up, which way's down. You know, that sort of thing. Scary, scary. So they'd land a helicopter and just sit there 'til the weather cleared.

LZapol: And there are some stories about sledding in Antarctica, with Tommy Wonder?

WMZapol: Yeah, well, the famous story - we'll cut to that case – is that I think I land, this is maybe '85, and we have Roger Hill, who's now building microcomputers [at MGH] to study seals underwater, and we land, and Tommy Wonders comes up to visit, to greet us, and he's wearing his hood right over his face, so I can only see one eye. And he says, 'Hey, wonderful, Warren, I'm glad you're here!' He shakes my hand, and pumps my hand, and he says, 'See you back at the base!' And so we all climb into – I can't remember whether he climbed into his trackmaster, or, I think maybe it was that, and so the plane is still there refueling and reloading to go back to Christchurch, and he keeps his hood on and he doesn't show me anything, and then finally when we get back to [McMurdo] base he opens the hood up and he's got a big black eye. He has sutures running down the front of his face. I said, 'Tommy, what happened?' He said, 'Well, long story. I was afraid you were going to send me back on the plane, so I waited 'til it took off.' [*L Zapol laughs*] I said, 'Oh, what happened?' He said, 'Well, I'm here a month early to build our operating room' And to set up the house on the ice, right, cause at that point we shifted to a field location, to, they didn't want us doing these studies, release studies [near] the base, they wanted us to do it out on the [frozen] ice [surface]. And I don't remember whether it was [near the] Stranded Moraines we were at, or one of the places out there. And Tommy said, 'So I was here [at McMurdo], and the corpsman and I decided we would go sledding one day. So we took the ambulance' – so that's the McMurdo Hospital corpsman, and Tommy, who had been a corpsman but was now a technician for me – the two of them took the ambulance up a long path on the side of the glacier, parked the ambulance, got out, and got onto banana sleds. So banana sleds are plastic – they look like banana peels – and they're hard plastic banana peels. They have no steering capacity. They have a place to hold on, a rope, [*L Zapol laughs*] but they have no, no, no guides, no glides, no skids. They're just a smooth, plastic bottom. And, you know, the, they would take off, go down a ways, and then the corpsman would drive down [in the ambulance], pick him up, and they'd drive back up, and they'd take [turns], one of them, the other one would take off. **[00:16:36]**

So they did it once or twice and it was fine, a lot of fun, you know, you got up to twenty-five, thirty miles an hour. So Tommy, obviously, got up to thirty miles an hour [on the last trip down] when he [his face] hit the rocks or the ice or whatever he hit. And the corpsman threw him in the back of the ambulance, and they sewed him up [at McMurdo]. But he was, he was quite repentant for his sins.

LZapol: But – and I imagine that as kooky as Tommy Wonders can be, or could be, that there's also this kind of mischievousness or madness that kind of takes people, over people --

WMZapol: Definitely. Definitely.

LZapol: -- in Antarctica.

WMZapol: Definitely.

LZapol: Do you have other stories about that?

WMZapol: Yes, well you've seen Bob, Bob Schneider took off all his clothes and went sunbathing on a warm day. [*laughter*] And there's a picture of all these guys in their skivvies running out, sunbathing [with penguins], no clothes on, you know, Miami Beach, without clothes? Forget it. It's minus ten or something. But if the wind stopped, you could get a lot of solar radiation and feel quite warm. [*L Zapol laughs*] And then we put that [photo] next to some penguins, you know, we wondered what they thought of [us]. [*laughter*]

LZapol: People weren't dressed in their normal red attire.

WMZapol: No, it was skin, skin --

LZapol: Just pink. [*laughs*]

WMZapol: Yeah, just pink.

LZapol: So, and then, you know, what was your – what was daily life? I mean, you have a long time of seeing Antarctica, and McMurdo, in particular, change over time.

WMZapol: We never loved McMurdo, cause it was [so] administrative, and there were rules and courses [to take] and, it was just an administrative place which got worse with the advent of Internet and, you know, ways for Washington to control you even more, whereas when you're out on the [sea] ice you're really alone and can do what you want to do. Check in at eight in the morning [with McMurdo], they know you're well, and they don't worry about you 'til the next day. So, being on the ice was always the most fun.

LZapol: You would check in by radio?

WMZapol: Yeah, yup.

So being on the ice was the most fun. No one watched you. You had your skiddoos, you had your track masters, you had your seals, and you'd try to solve your problems and learn as much as you could about the seal and get your blood samples. Mount your devices, make your measurements, and what happened was between you and the seal. And it was much better, and we would cook for ourselves, and Richard Elliot, Mont's technician at home [in Auckland at National Women's Hospital], was cook and bottle washer, like Tommy, he was like Tommy on the ice, and he was superb, and very humorous guy, and told lots of jokes, and he made duck a l'orange with a, I remember they figured out how to make it with a red infrared lamp [*laughter*] and you could get frozen steaks and lobsters and you just threw outside and they stayed frozen, and you brought them in when you wanted to thaw them, and so we cooked for ourselves. We melted water, melted ice, to make water for ourselves, brought as much as we could, but then we'd melt ice, and it was a good life. **[00:20:17]**

Mont snored a lot, so sometimes he would sleep outside. [*laughter*]

LZapol: You would ask him to?

WMZapol: Yes. [*L Zapol laughs*] But I think the rest of us were kinda ok. So we'd get four to six guys in a hut. The back end of a hut was an operating room for implanting things [in seals] and doing things and the front was our living quarters for cooking and living.

LZapol: How did you keep that all sanitary? It must have smelled something.

WMZapol: We did ok. No, no, I --

LZapol: Yeah?

WMZapol: Actually, I think, after a while you didn't notice. [*L Zapol laughs*] And I remember sometimes we would go back to McMurdo to pick up a meal, and we'd all sit down at some table, and everybody would leave the table. [*laughter*] Everybody else would leave, cause you had little bits of seal [poop], seal smell on you, and nobody – and when it warmed up, it was pretty obvious, but when it was cold, you never even noticed. [*laughter*]

LZapol: And, I mean, you talk about being left alone; that's about as alone as you can be. Did it ever feel homesick, or, you know, longing for what –I mean, you're a city boy from Brooklyn, how --

WMZapol: Well, every Sunday --

LZapol: -- did you end up in the --

WMZapol: Every Sunday we'd crank the [HAM] radio up, and [via phone patch] I'd talk to you and Mom and David, and you'd usually, Mom disliked it because it was public, anybody could listen in, and 1,000 people would call us when we hung up, but it was a way to say we love you, we're here, we're well, we're studying seals, all's going well. And she couldn't tell me the trials and tribulations of life in Concord, probably, but, and didn't, in general. And that worked for America quite well.

LZapol: So you didn't necessarily feel homesick or estranged because you were absorbed in the work.

WMZapol: Terribly absorbed. Never had enough hours in the day. Never could sleep enough. And there were physical challenges: getting cold, shivering, getting exhausted. You were a wreck – if you're tired, you really don't have much cold tolerance. So. It was challenging.

LZapol: Because, you say never could sleep enough, or never enough hours? 'Cause it's a problem to sleep --

WMZapol: Both.

LZapol: -- and it was mostly light.

WMZapol: It was only light. Yeah, after mid-October you have pretty much twenty-four hours of light.[61] And we'd get home early December.

LZapol: So that's a problem in terms of setting up camp, is making sure --

WMZapol: Halloween and Thanksgiving at McMurdo: not the best. [*laughter*] But, better than nothing.

[61] WMZ note 12/17/16: After early-October it was full daylight at McMurdo.

LZapol: Do you have a particular memory of either of those?

WMZapol: Halloween was costumes. People were very, would invest in costumes and bring them there, and they'd have a dance and whatnot. In general, I spent five minutes at the party.

LZapol: You were more interested in --

WMZapol: Seals! Get done!

LZapol: -- your – seals, and your gang, too.

WMZapol: Yeah, and publish, and get your work done. And we all had wives and families, we weren't single, we weren't looking for girlfriends.

LZapol: But were there girlfriends at McMurdo?

WMZapol: Eventually. There were none when I went in '75.

LZapol: I mean women, by, when I say girlfriends.

WMZapol: Yeah, we brought Annie Schuete [in 1983], our [MGH] technician then was a young woman who went to University of Wisconsin Medical School, she's great, Annie. Oh yeah. We were one of the first to take a woman, I think, in our group. And now it's fifty percent women, or sixty percent women; it's no problem now.

LZapol: So your first trip was '76, you said?

WMZapol: Yeah, I think my dates are a little off now. '75, then '77, '77, '78, and then '82, '83, '85, '86, while we were in Paris, and then '93 and '94, and then, and Konrad joins to do much of the nitrogen studies on free samples, and gets the *Science* paper and makes his career in Germany.[62]

LZapol: Hm.

WMZapol: So, it was a very productive science, scientific time, series of expeditions. You know, scientifically, it was well worth it. It cost a lot, I mean, in terms of hours and days and weeks away. Hard on Mom.

LZapol: Mm. So --

WMZapol: I think I'm going to have to take a break. **[00:24:55]**

LZapol: Yeah, let's take – let's break for now, and we'll resume perhaps in Miami Beach. [*laughs*]

[62] WMZ note on 12/17/16: Konrad joined us in 1983 to do the nitrogen studies on free diving blood samples drawn by the computer, which made his scientific career in Germany.

[BEGINNING OF SESSION THREE, Joint Session with Warren Zapol, Nikki Zapol, David Zapol, Diana Laird, Elliot Zapol (later) and facilitated by Liza Zapol]

Oral History Interview Transcript

WMZapol: -- or used to be. And my grandfather, my father and I would go out, and we would fish. We'd bring back fish, and then we'd gut them out back, and clean them, on the stoops, stairs back there.

NZapol: Like in the back alleyway?

WMZapol: Yeah.

She didn't want to muck up our front garden with my fish guts!

NZapol: That may be the beginning of when the cats started. [laughter]

WMZapol: No, there were some cats. Not so many.

LZapol: What kind of fish would you catch?

I'm just doing sound check right now.

WMZapol: Huh. I don't remember.

NZapol: Oh yeah. We used to talk about the fish. Were there snapper? There was a fish --

WMZapol: If you were lucky you got a snapper, but more common to get rather a [kingfish], a rather common fish. It was kind of like a bluefish, the equivalent, Southern equivalent of a bluefish.

NZapol: There was a name for the fish that they used to say, and I don't think you would get it.

WMZapol: There was jack, there was the big stuff, there was the little stuff.

NZapol: I remember your father getting it.

WMZapol: I can't remember things. I remember once I was bringing it in slowly, too slowly, and another, the, whatever predator fish came along, and it cut it right in half. And half the fish fell away, and I got half, the top half of the fish. [laughter] I remember, this is, it's rough to live in the ocean here. [laughter]

LZapol: Barracuda?

WMZapol: Cuda, right, a cuda cut my fish in half.

DL: There's gotta be some analogy with the Miami bar.

WMZapol: Yeah, just a flying cuda, wham!

DL: Reeling in this beautiful catch, and – [laughter].

LZapol: Got away. And got cut in half. [laughs]

WMZapol: Sawed it right in half! I mean, obviously it thought it was hurt, injured, trapped. It was tracking it, and [makes decapitation sound].

LZapol: Do you remember when we went fishing out in Haulover Beach? [00:02:08]

NZapol: No!

LZapol: I can't remember, Davey, if you were there, but when we kept on, we only caught barracuda? Like, and --

DZapol: I wasn't there.

LZapol: -- then --

WMZapol: We went sail fishing, or marlin fishing. We were actually out there trolling.

LZapol: We caught a barracuda, and then the guy tried to pick it up from its eyeballs, and it slipped away?

WMZapol: Yeah.

NZapol: Yeah, and that was that, the following week that you and I went and rented a sailboat down [in Miami] and --

WMZapol: It sank.

NZapol: -- it tipped over, and you went for the corned beef and I was afraid [laughs] that the barracuda was after me.

WMZapol: It sank. We rented a sailboat and it sank. It just had so many leaks. It was just something else. [laughs] There was just no way you could bail fast enough to keep it afloat.

NZapol: I mean, I still think about that, and I can't believe it happened. Dad saying, 'Bail faster, bail faster!' And I'm on my knees, water coming up to here [laughing] going like that.

WMZapol: Your biboo! [*I.E. "Up to your bellybutton!"*]

NZapol: And then finally we tip over.

WMZapol: Finally over it goes.

NZapol: And then --

WMZapol: And then they say, 'Oh yeah, it happens all the time, just leave it there.' We said, somebody stopped to pick us up, you know, and I said, 'It sank, it sank, it leaked. We rented it from that' – it was the Miami Beach, Miami Boat Club or something [Miami Yacht Club, off Coral Gables], which gave a member's rental, and we were members of, I think, a [WORD UNCLEAR] [00:03:37] or something that allowed, they allowed us to rent there.

So we rented, and it sank, and then we have this upside down turtle boat, right, I say, 'Stay with the turtle, right,' so we're on top of the turtle --

NZapol: That was after we retrieved the corned beef sandwich.

WMZapol: -- and then a couple of speedboats come past, cause we were right in the main entrance to, you know, Coral Gables Harbor, or whatever it was --

NZapol: Yeah, it was close.

WMZapol: -- that the Miami Boat Club was in. And sure enough, somebody picked us up. And we said, 'Well, can we pull, can we drag the boat?' And of course it was a light motorboat, with mainly motor, and it can't drag anything. So he said, 'No, no, it happens all the time, they'll come out and get it.' So we just, they brought us back, dropped us off, we told 'em, and they said, 'Oh, yeah, it happens all the time, we'll go out and get it.'

NZapol: And, well –

WMZapol: Reminds me of our trip out in San Francisco.

NZapol: -- we tried to get the coordinates of where it went down from the boat --

WMZapol: The GPS --

NZapol: -- that towed it, the boat that helped us, and when we told the boat club, they seemed [laughing] not at all interested in figuring out where it was. I don't think they ever bothered to get it. I think they just let them all sink!

WMZapol: They could care less, though, I mean --

NZapol: Really. They couldn't care less. Anyway --

LZapol: So what's the corned beef sandwich part of the story?

NZapol: So, we'd gotten --

WMZapol: Some Epicure sandwiches that we went out with --

NZapol: That was lunch.

WMZapol: -- and when the boat sank, they floated, cause there was gas in the bags. [laughs] The sandwiches were floating, and the boat was upside down. So we grabbed a couple of sandwiches. **[00:05:08]**

NZapol: No, who grabbed! Who grabbed a couple of sandwiches?

WMZapol: I did.

NZapol: As we went over, you said, 'Where's the corned beef sandwich!' [laughing] I said, 'I don't know! What am I supposed to be doing now?'

WMZapol: You were bailing.

NZapol: No, I was swimming at that point! And the sandwiches were drifting off, and that was clearly the most disturbing part of the story. [laughs]

WMZapol: Yeah, you could have lost your lunch.

NZapol: Right.

DZapol: I think that's coastguard protocol.

NZapol: First get the corned beef sandwich? One, the corned beef.

LZapol: Yourself, and then the person next to you. [laughter]

DZapol: [laughs] "Please help your corned beef sandwich before you help the corned beef sandwich of the person sitting next to you."

NZapol: You said, 'don't swim away from the boat, go back to the boat.'

WMZapol: Right.

NZapol: And then we got on the boat, and you said, 'Where's the corned beef?' [laughter]

WMZapol: It was hard to have a sandwich upside down, turtled.

NZapol: That was one of the --

WMZapol: It was not nice.

NZapol: -- fun trips.

LZapol: You must have been hungry.

WMZapol: I think I realized, from that and our trip in San Francisco Bay --

NZapol: Do you remember that?

WMZapol: -- when the tiller wasn't firmly attached to the steering arm, that rental boats

NZapol: Oh my god.

WMZapol: -- are unreliable, period. I just underline that.

NZapol: Were you there?

LZapol: No, I wasn't there.

NZapol: Who was in that boat?

DZapol: We were.

NZapol: It was us, no, and Amy?

DZapol: Maybe.

NZapol: It was Amy. Or was it Heather?

DL: I'm not sure which sister. I just remember --

NZapol: It was a sister.

DL: -- watching the rip tide under the Golden Gate Bridge and wondering --

WMZapol: Wondering if we could steer.

DL: -- what it was going to look like from the other side.

NZapol: [laughing] Right. Hong Kong, here we come! [laughter]

WMZapol: We were going past Alcatraz, you know, and it was just so hard to steer! That you'd go to the right, and the tiller would flip all the way over, that sort of thing, and you'd suddenly be going that way. Hm.

NZapol: Oh, then we were in the middle of the boat race, remember? And the guys say, 'We're going for the mark! We're going for the mark!' And I had no idea, you probably knew what they were talking about, but I had no idea, but they came swooping up, right? Right next to us? We barely missed them? That's when I went under. [laughs] I came, I think I came back up when we came to shore.

WMZapol: It wasn't a big boat. It wasn't a long way to go.

NZapol: I looked up and I saw Alcatraz [laughing] oh well, at least it's land!

LZapol: Other people have met their end here before. [laughter]

NZapol: Right.

WMZapol: Wow.

DL: It's possible to swim from here. [laughter] It's been done! [laughs]

WMZapol: Were we aboard with [David] Bangsburg? Bangsburg? We met Bangsburg, we were sailing, and he had a rental from Boston Yacht or whatever and we had just come back from [sailing] Bermuda [together], and we said, 'Well, you know, we have this special slot right above the tiller, if you ever lose steering, mechanical steering, you pop this open and you put this connector on, and you can steer.' He said, 'Oh, that's what that's for, that's how that works.' And we went over to his boat, and showed him where it was, and he took off, and sure enough, [later] his steering went out.

So it's that kind of thing, when you rent. Whoa. Of course, our steering went out on the way back, Ryan and I lost steering on the way into Marion [Massachusetts].

NZapol: Right.

WMZapol: Just [snaps] bingo, out it went, we were stuck, and you could sail with your sails, to an extent, you can keep it on course, with no tiller. But then we put the tiller in, and there was a big swell, and it was very hard to hold with a simple, you know, with maybe a three-foot lever holding it. A major boat's tiller is very, very hard, especially with any lateral action from swell or waves. So you needed an extension, and we [Ryan] got one extension on, and one of us is, so he's on the tiller, and I'm calling the mark on the compass for Marion, and I figure I got this thirty-six

foot boat, if I go into Marion with this thing, there's a harbor full of, I don't know, a hundred million dollars worth of boats in there. The odds of me polling one is very high. So I called the Marion harbormaster, and he came out, and he just tied his [boat] to ours, they just wrap it on with a little tight wrapping, and they brought us in, under, you know, no power. Just in neutral. Just brought us in. And no [PHRASE UNCLEAR] steering. [00:09:38] And then, you know, it's so easy to lose something.

DL: My grandfather used to quiz me on those scenarios.

WMZapol: Yeah!

DL: So the answer to that situation?

WMZapol: yeah.

DL: Is you take two buckets and a rope, and you tie them over your boom, and you fill them with water, and you drag one. And then that will make you turn. **[00:10:00]** You drag one on the left, and you'll turn to the left. You drag one on the right, and you'll turn to the right.

WMZapol: Oh! Oh!

DL: That's your tiller loss.

WMZapol: Right. It's ok, if you can imagine a nice calm river or something, but when you have a wind and a cross current, and a swell, in three directions, and you want to go there, cause that's where your rescue is, it's hard --

DL: Then you have to drag your corned beef sandwich. [laughter]

WMZapol: That's right. Or your wife or something, yeah.

DZapol: No.

NZapol: Or your wife! [laughs]

LZapol: Then the corned beef gets to the barracuda, and then they start a whole tug of war.

WMZapol: It's really, there's a lot of variables in this experiment.

LZapol: Nice job.

WMZapol: Also, just holding on the pail is something.

[END OF FIRST AUDIO FILE '160102-000;' BEGINNING OF SECOND AUDIO FILE '160102-001']

LZapol: So today is January 1st, or, January 2nd, 2016, the new year. And we're in Miami Beach, and in the room is myself, Liza Zapol, and maybe each of us can say our names?

DL: Diana Laird.

DZapol: David Zapol.

NZapol: Nikki Zapol.

WMZapol: Warren Zapol.

LZapol: Great. And we're going to start just telling the story, maybe, of how the two of you met, and we can have some of the, as we were talking about before, some of the fishing stories, and the, maybe when some things go awry. I know there were some stories about a car and a thumb in the hood of the car, and so on. [laughs] We'd love to hear all the stories you want to share.

So tell us about, first, how you first heard about each other, and where that began.

WMZapol: Well it goes back a little ways. You need just a minute or two of introduction, which is, when I was a sophomore at MIT, perhaps a junior, so [19]60, I was working at Camp Surprise Lake, a Federation of Jewish Philanthropy camp, outside of Poughkeepsie, for the summer. And it was very poor children, mainly African-American, from Harlem. And I was the Peter Pioneer counselor in this camp; they paid us almost nothing. And there was an Englishman who was a Cambridge undergraduate in physics by the name of Joe Silk who somehow had, was working for the Federation as a counselor. And he had a hair-raising summer, I remember – all those kids had switch blades, and they would land on the tent floor, and it was an exciting summer, it was a summer when a young boy was bitten by a [rattle]snake, and I ended up on Pete Seeger's ranch, and he brought us [by truck] to the hospital, carried the kid out, medevac'd him, saved the kid with a rattlesnake bite. It was a long summer.

But Joe and I became fast friends, and we stayed in contact, and we set up the MIT Southwest Asian Expedition of 1962, when we would drive form England to India together. And that was the plan. Now fast forward, to 1966, I've just graduated from medical school, I'm an intern in Boston, at Boston City Hospital, on the Harvard Service, when Harvard, BU and Tufts all had [a] City Hospital [service]. I'm an intern there, and I don't get something called a "Berry Plan", so we all lottery in for the Berry Plan, which allows us to finish our residency in surgery, mine was, and I didn't get it, and maybe one in four of us got it, and the rest were going to be GMO's, general medical officers, and go to Vietnam, cause it's the Vietnam War now, and they're collecting doctors. So, I look at the Peace Corps, I look at NIH [National Institute of Health], I end up going to NIH, and I therefore have to leave at the end of June, when my internship is over, and go to Washington. I don't know anybody in Washington. I think I had maybe driven through with my parents once. So I asked Joe Silk, who happened to be living in Cambridge and was at the Smithsonian Astrophysical getting his Ph.D. in astronomy. I asked Joe Silk if he had any ideas, and he opened up a Harvard Coop book, because before computers, we all had Harvard Coop books, these little two-inch by two-inch books with dates in them, and we would fill in every phone number and every date we had planned, and every person we ever met. And Joe Silk had a series of names in his phonebook, and those names were all of young ladies that he'd met, and met and greeted over the years, and he had their names and phone numbers, and he had them listed geographically, cause he traveled a lot, and he had [laughing] Washington, DC in a nice clump. And there turned up Maddie somebody or other, the ophthalmologist's daughter, and Nikki Zapol.

NZapol: No. [*laughter*]

WMZapol: To be, to be. Nikki Kaplan.

NZapol: It was under 'K.' [laughter]

WMZapol: So that's my half of the story.

I, when I got to NIH, I was living with colleagues, Larry Aronson and his wife and son and then [I] eventually got a flat in Georgetown, 3215 O Street. **[00:05:11]** O Street in Georgetown, and I bought a motorcycle from a young lady who lived nearby, a BMW R27, and I would commute out in my R27 motorcycle from Georgetown to NIH every day. And things got more and more busy, but nevertheless I knew I had to have a social calendar, so I started to call these phone numbers. And I just kind of worked my way through the list, right? Yes, no, maybe, yes, no, maybe [laughter] and I started booking my social schedule, and when I finally got to Nikki's number, I called a number but it was the first time I ever called a phone number and got the phone number back. So instead of calling some number and they would say, 'Hello, this is so-and-so,' or 'You're calling so-and-so Associates, who would you like to speak to,' you just got the, you know, 301 or 40, 415 blah blah blah blah blah blah, and you said, 'Huh, yes, that's the right number, that's the number I'm calling.' And it was the CIA, obviously, and they don't say, 'Hello, CIA,' they just repeat the number that you called back to you, and if you know you're calling the CIA and that's the right place then they answer, and I asked to speak to Nikki, and she can probably tell the rest.

LZapol: So how did you end up in Joe Silk's black book? [laughter]

NZapol: Well, so I was, this was after I graduated from Vassar, and I was taking a summer weekend up in Cape Cod, and the person I was with had to go back to New York, and I said, 'No, I'd just as soon stay, it's my car anyway [laughing] I'll drive back, you get your own way back, and so I'll stay for a couple of days.' And we were actually staying in the dorms at Woods Hole, at, and person that my friend was visiting was, his name was Isaac Gamow, who was George Gamow's son, and I remember a lot of – George Gamow was the --

WMZapol: Science fiction writer.

NZapol: -- Nobel Prize winner, *One Two Three…Infinity* was his book. Anyway, I remember there was a lot of sort of glitter about who he, this young man was. And I thought it was just so beautiful down there on the Cape, I didn't feel like going back to New York right then and there. Or Washington, actually. I was going to go to Washington, then New York. New York, then Washington. And then so I said I would just stay for another couple of days, and I was walking along the beach, which is the beach we all know, by the lighthouse, the long beach north of the steamship line, and I was walking along the beach and a young man came up to chat with me. And he was, he [Joe] had very dark, penetrating eyes, and he was full of questions, and I found out that he was an astronomer, an astrophysicist, which I thought was fascinating, and I remember asking him questions about the universe. And I had just remember being, an engaging conversation, and he said, 'Well, so how long are you going to be here?' I said, 'Well, I'm going, I'm leaving tomorrow.' And that's all I really remembered about the encounter.

And then, fast forward, I went back, I was working at the CIA and living in Washington, and I got a call at work. And this person said, after he figured out that I was the person he was trying to call [laughs] and I don't remember, I actually don't remember that exchange, about the numbers, but he said, 'Do you remember Joe Silk?' And I said, 'Oh, hi Joe!' And I couldn't recall having given Joe my phone number, so I didn't quite know how Joe found me, but anyway, I said, 'Hi, Joe! How are you?' He said, 'No, this isn't Joe. This is Warren Zapol, I'm a friend of Joe's.'

Said, 'Oh, okay.' And I do not remember the subsequent conversation. **[00:09:57]** Other than can we get, you know, is there a time we can meet --

WMZapol: Well you had a boyfriend at the time.

NZapol: Right.

WMZapol: So you said, 'Not now. Maybe in a few months,' or something like that.

NZapol: Okay, so that's the part I don't, I can't remember the sequence of.

WMZapol: 'Call back later.' I got a call back. From you.

NZapol: Okay, so I hadn't met you before I told you to call me back later, right? I didn't first meet you and then say, 'Don't bother, come back later.'

WMZapol: No.

NZapol: That's good, that's kind of --

WMZapol: No, no, no, you weren't quite sure, and you said, 'Call back later. Some other time.'

NZapol: So I said 'Call back later' --

WMZapol: In a few months, or something.

NZapol: Right. And so I had a boyfriend at the time, and then that broke up, and then I remember --

DZapol: But the handwriting was on the wall.

WMZapol: I think so.

NZapol: Which wall?

DZapol: Well, apparently the other boyfriend was questionable, so you were keeping your options open. [laughter]

NZapol: Yes. At the time – I sort of knew. When Warren called, I said, 'You know, this is probably a good fallback.' [laughter]

DZapol: Whoever he is!

NZapol: Whatever it is, it'd be nice to know that there's somebody there. And then when it broke up I thought, 'Yeah, it would have been nice to know, but I have no idea how to get in touch with him!' And I remember talking, I have this vision of being in our living room in Arlington with my mother and father, and my mother or father, or both, were tracking the situation, and remembered that I, I must have told them that I'd gotten a call from a man who was at NIH, and they said, 'Well, don't you know how to get in touch with him?' I said, 'No, I really don't know how to get in touch with him.' And at that point, my father had already been diagnosed, we already knew he had a serious problem.

WMZapol: Cancer, yeah.

NZapol: He had cancer.

WMZapol: [WORD UNCLEAR] [00:11:47]

NZapol: And I had already done some research to know that the one place where they were doing some experimental treatment was at NIH. So that made it all the more important for me to try to find Warren, cause I knew he was at NIH, and that would have been helpful. So, but meanwhile, I didn't know how to get in touch with him. I just didn't. So, I remember you calling, in Arlington, you actually called me – well, that was where I was living, so – oh no, I was living with Holly [Cratsley], but we, I remember the phone call in Arlington. And you called, and I remember how relieved I was that you had called, and, 'Oh, yes, yes, I can, I am free to go out now.' [laughs] So that's what happened.

WMZapol: Yeah.

NZapol: And then, so our first date was --

WMZapol: I think it was the O Club.

NZapol: At the Army Navy Club, or whatever it was.

WMZapol: At the officers' club at the Navy Yard in Washington.

NZapol: Right.

WMZapol: And I've never done it since, but I took her dancing. At the Oak Club, in Washington. And I had a car at the time, a Triumph TR4, which my father had me buy for a whole thousand dollars, I remember, in whatever it was, [19]65.

DZapol: What color?

WMZapol: Black, was it?

NZapol: British racing green.

WMZapol: There you go.

NZapol: That was the color then, British racing green.

WMZapol: British racing green Triumph TR4.

NZapol: Yeah.

WMZapol: So it was a newer one, rather like the TR2, but it was the 4 version. And it had a lot of defects. It had had, you know, Boston [weather] was hard on it. As it can be, for low vehicles that don't have a lot of clearance in the snow, so it had some defects. And one of which is that the hood would pop open. The front hood would go, 'bop!' You'd have to push it down. And pop up, you push it down. You'd stick your arm out.

NZapol: It was a convertible.

WMZapol: Yeah, it was a convertible, so it had, you stuck your arm around and grabbed the hood, and then if you couldn't plop it down, you'd pick it up and then drop it down. Somehow I got my finger under there, so, [laughing] I don't remember exactly how it was. And the release latch was over on the right side, near Nikki, and I remember feeling this kind of, how can I ask her to release my finger, which is stuck in the hood, so I could, I can't pull it, cause then I have to let go of the steering wheel, how will I get her to release that? So I think eventually what happened was I stopped at a light or something and I was able to get my arms far enough apart to pull the release and get my finger out, but my finger then proceeded to swell [laughter], to double its size, I remember. It was not a happy, happy date as I remember.

NZapol: So that's interesting, cause that's right, you pulled it open, and then, and then you said to me, cause what I remember is you told me to go around to the other side of the car and push the hood down. **[00:14:56]** Said, 'Would you just push the hood down,' and I had no idea that all of this had transpired. [laughs] That you'd already cut your finger --

WMZapol: And it was already much too large to do anything with. [laughter]

LZapol: So was this the beginning or the end of the date?

WMZapol: It was the end of the first date, I think.

LZapol: So what do you remember at the officers' club itself?

NZapol: Well I just remember it was a very, it was a happy event, I mean, there were a lot of people dancing, and it was --

WMZapol: Overlooked the harbor [river], it was a pretty place.

NZapol: Yeah, it was very pleasant --

WMZapol: Lots of glass windows.

NZapol: -- and it was not noisy. It wasn't wild, but it was people having a good time, and I remember thinking you were an okay dancer. [laughs] A little delusional.

WMZapol: Wow. You must have drank a lot of stuff.

NZapol: I don't know about that, but we were --

DZapol: What were you wearing?

NZapol: Oh boy.

WMZapol: I can't remember.

NZapol: What would we have been wearing?

DZapol: Uniform?

NZapol: It was in the summer – huh?

DZapol: Uniforms?

NZapol: No, he didn't wear a uniform.

WMZapol: No, I was non-uniform services.

NZapol: Right.

WMZapol: When I went to Vietnam, they got me a [US Public Health Service] uniform.

NZapol: Right.

WMZapol: Which people would look at and look at, and it was because the anchors were upside down. The Navy guys just had a hard time with the public health service. Cause the anchors are upside down, and they would kind of keep looking at you, and, 'What's the matter with you[r uniform], sailor?' [*laughter*]

NZapol: Yeah, no, no uniforms. So that would have been – that was 1967, right?

WMZapol: Yeah. '67. No, '67, yup, that would have been probably about October, '67, and we got married in '68, so, there you go.

NZapol: Right.

WMZapol: Fast forward.

I think for the second date I cooked her dinner, swordfish with hot sauce. It was the worst meal we'd ever had, either one of us.

NZapol: Only you didn't admit it. [*laughter*]

WMZapol: It was absolutely awful.

DZapol: Is that why you love swordfish now?

NZapol: We didn't have swordfish for many years. [*laughter*] Oh my god.

WMZapol: And I remember that I was a classical music nut, even at that point, you know, I remember, and we would listen to, was it Bloch?

NZapol: Lalo.

WMZapol: Lalo and Bloch. Violin concerto. That was in the days of 33 1/3's, right? Every eighteen minutes, you'd get up, you'd flip the record over.

NZapol: So I think the first date was, was when we went out dancing, but I think the Triumph date, the --

WMZapol: The Triumph disaster.

NZapol: The Triumph disaster was, we went to a Chinese restaurant on Wisconsin Avenue, and --

WMZapol: That was the second.

NZapol: Yeah.

WMZapol: And then I cooked for you. You found my apartment, which is right across from the little public school on O Street, still there.

NZapol: And there was a lady in the Banana Parlor.

WMZapol: Across the street, the lady in the --

NZapol: The Pineapple Parlor.

WMZapol: -- Pineapple Parlor was it, or something?

NZapol: Well it was a gift shop --

WMZapol: It was a gift shop across the street --

NZapol: -- and they had sort of fritzy things in it, and we used to call it, is the lady with the pineapple pall there?

WMZapol: Yeah. Yeah. That was fun.

LZapol: So when did the first kiss happen?

WMZapol: Probably therein.

NZapol: Uh – in that – there? Maybe. I don't remember the first kiss.

WMZapol: A very turbulent time. I mean, Nikki's daddy was going down, and it was just a really tough, turbulent time.

NZapol: Yup.

DL: Do you remember your first impression? The first moment that you laid eyes on each other?

NZapol: Mm, good question.

DL: Was there anything you thought?

NZapol: Good question. I thought – well, I thought he was very handsome. I thought he was very smart. Well, first time I laid eyes on him, I thought, 'Not bad.' [*laughter*] Not bad! Very, very – well I think – what did I expect? I didn't expect that, what was surprising was how much of the world Warren had been to. So I sort of had expected someone who was more geeky, doctory. I had had a boy – right, so this is what I remember. I had had a boyfriend before that, not the one that I, who was a doctor in New York, who lived right near New York Hospital, actually. And he was very uptight and straight-laced and diff – just insular. And so I thought, 'Oh, a doctor? I'm getting into it with another, you know, another doctor thing here.' [*laughs*] And I remember thinking how much, how interesting Warren was about all the places he'd been to, and the fact that, I don't even know if we established the fact that you were Jewish at the time. **[00:20:05]** But I remember thinking that that wasn't a big deal for you, so that was good. Cause it wasn't a big deal for me. And so that I remember.

And, no, but yeah.

WMZapol: You were the first Jewish girl I think I took out.

NZapol: Is that right?

WMZapol: Yeah.

NZapol: Well did you go out with Maddie Sherman [00:20:34] first before me, or not? [*laughs*]

WMZapol: Can't remember.

NZapol: That was the Maddie you were trying to think of.

WMZapol: Oh, was it? Oh yeah. Classmate of yours?

NZapol: Yeah! [*WMZapol laughs*] So if you went out with her first, I was not the first Jewish girl [*laughs*] --

WMZapol: Might have been the second.

Yeah. But you had wonderful... I don't know when we saw Mattie [Matila Simon], but I remember how --

LZapol: Your cousin? [*To Nikki*]

WMZapol: Your cousin. How nice she was, and she was just living near the State Department, and was a lovely lady, and you always got a decent French meal when you went to her house, you know, it was that sort of thing.

NZapol: Well she sort of added a funny flair to our relationship, because we had a sober thing going on with my parents, and Mattie was sort of out of that --

WMZapol: Historical, and knew the family, and knew everybody, and

NZapol: And she really liked you so much. And she was the one who sort of picked up on what a special person you were.

WMZapol: She was great.

NZapol: You know. I mean, my parents were just so, so engrossed, involved with my father's health that it was –I mean, they were very happy about Warren, but they just couldn't lift themselves much out of that world.

But Mattie was the one who just thought Warren was the cat's pajamas, she just picked your brain, and --

WMZapol: She was great. She was great. Nice lady.

NZapol: -- and had us over, was with us quite a bit. That's true. I hadn't remembered how much --

WMZapol: She's an author --

NZapol: -- she had to do with those early years.

WMZapol: She's an authoress, and has written several books.

NZapol: She was the one who did the first book on the battle, one of the first books written about the German --

WMZapol: The German thefts, Nazi art thefts.

NZapol: Called *The Battle of the Louvre,* was her book.

Anyway that was right, that did have a lot to do with --

WMZapol: Spent half a year in Paris, had a French lover, you know, she was --

NZapol: Yeah, she was very interesting.

Anyway, that's right.

WMZapol: A very interesting lady.

NZapol: That's right.

DZapol: Did she come to visit us in Paris? Or did she --

NZapol: Yes.

WMZapol: Yeah, you probably met her then.

NZapol: Yes, yeah, we saw her in Paris. Right?

Right. Well you still haven't said what your first impression of me was, other than that I had this nice cousin. What else? [*laughs*]

WMZapol: It was love at first sight, you know? Didn't take me long. We were quite mature. I was --

NZapol: Twenty-five. [*laughter*]

WMZapol: Twenty-five, you're twenty-three, what were you? You know --

NZapol: It was '68.

DZapol: When you know, you know.

WMZapol: Yeah.

NZapol: Yeah, that's right, I mean after that, I don't know how many other women you went down the book with. [*laughs*] I don't think I saw anybody after --

WMZapol: No.

NZapol: That was it.

WMZapol: You're too busy. We're both too busy.

DZapol: How long was it between then and when you moved in together?

WMZapol: Uh – a couple of months?

NZapol: A couple of months, right. So I was living in a – oh yeah! I was living in --

WMZapol: In an apartment, somewhere.

NZapol: With three other women. All, none of whom I can remember anymore. It wasn't Holly – no, I was not living.

WMZapol: No, she was upstairs with John, wasn't she?

NZapol: Yeah, eventually, but when we first met, I had not, what happened. I must have moved out of there, because she was going with John, and she had moved in with John.

The sequence is interesting, cause when I first met you, I was with all these other women. And my parents used to call. My parents would call, find me, and I had all of these girls, who I lived with, to say, 'No, she's not in now,' and so I was never in, because [*laughing*] I was living with Warren. But, but then my mother would say, 'Why do I call you? You're never there; whatever hour I call you, you're never there.' 'Well, I'm out.' [*laughter*]

So yeah, so how long was it?

WMZapol: Well, we got married in --

NZapol: '68.

WMZapol: -- September, so.

NZapol: Must have been together maybe at least six months by then. **[00:25:01]**

WMZapol: '68, and we met in --

NZapol: '67.

WMZapol: Late '67.

It was only nine months or something like that, it wasn't a long time.

NZapol: So it must have been that I lived with Holly, she went and married John, I, we, I couldn't keep that apartment anymore, so – I forgot that – and then I moved out into this other place, which I was almost never, never at.

WMZapol: Mm!

NZapol: Yeah, yeah, that's funny, I'd forgotten that.

My roommates, who, they didn't like me anyway, so I was never really sure whether they were going to say, 'Oh, she's over at Warren's place.' Which is probably what they did say. [*laughs*]

Anyway. Yeah. A couple months.

LZapol: Do you remember the first time meeting each other's families beyond – you talked about Mattie, and --

WMZapol: Yeah, had to meet the family. So you invited me over to Arlington, and I met her dad, who was quite ill. And mom. It wasn't strained or anything, it was ok. It was --

NZapol: What do you remember about that, when you first met them, do you remember anything?

WMZapol: Mm. Well, your father was very diplomatic and controlled and thoughtful. And your mother was supportive of him, to a great extent, I remember they had couches, their feet were always up, and they had, they served beer. In those tall flute glasses, and, oh, I can't remember much else. There was a table and a nice view. Over the garden, or whatever it was. I don't remember very much.

NZapol: Do you remember --

WMZapol: They were very --

NZapol: -- any of your conversation with them?

WMZapol: -- very nice, and they were very positive, and no problem.

NZapol: Yeah. Huh. Yeah.

So I think the first time I met your parents was when they came to visit, meet my parents?

WMZapol: Probably they were driving through to go to Florida, would be my guess. And with or without my grandparents, then they would have stopped.

NZapol: Yeah, I think that was the first time I met them, was when they came up to Arlington.

WMZapol: And did we go to Bloomingburg, or no? Did we go to Bloomingburg?

NZapol: We went, but they weren't there. When we first went, they weren't there.

WMZapol: Oh, was that winter or something?

NZapol: It was cold!

WMZapol: Yeah, so they would be, they would have been here.

NZapol: Right. So you took me up to see Bloomingburg. But, we went, when they came to Arlington, I'm pretty sure that was the first time we met. I met them, and they met my parents. Because by then, we had decided, that would have been, by then we would have decided we were getting married, so I must not have met them before we had decided to get married. Must have been.

WMZapol: Mm, I think you probably did meet them.

NZapol: I don't remember.

WMZapol: There would have been some handshaking in there. The dowry, you know.

NZapol: I don't remember. But I do remember them coming up to that apartment, I remember that event, because I've also written about that event, but they came up – a couple of things I remember is that they sat down, and they were fine with, chatting with my parents, and my mother is, I don't remember any of the conversation, but I remember my mother saying, after the door closed, 'He doesn't look at all like either one of his parents.' And I said, 'What? He looks like his father.' 'I don't see it.' That of course all vanished over the years, until the whole story came out. My mother never knew; I never told her, cause she was never really of, in her right mind after we knew. Or she was, but I didn't feel like she needed to know. It's interesting, I never told her.

And the other thing I remember is my mother saying, 'Florence had a pretty big diamond ring on.' [*laughs*] I said, 'What's that supposed to mean?' She said, 'Well, there must be money somewhere.' [*laughs*] **[00:30:03]**

DZapol: Yeah, brown paper bag in that closet. [*laughter*]

WMZapol: Oh, god.

LZapol: Spread among twenty different banks. [*laughter*]

WMZapol: Oh dear.

DL: This ring?

DZapol: That's that.

NZapol: It's probably that one.

LZapol: Diana's ring.

DL: One carat. [*laughter*] Looks smaller in this setting, sorry.

NZapol: Yes, yes, no, it would be that one, exactly! Oh that's great, to make that story come round. That's great. Exactly. Yup. [*laughs*] Yeah. Oh yeah.

LZapol: So, your trip to Bloomingburg, was that your first trip out together? Do you remember any kind of --

WMZapol: I don't remember any of it.

LZapol: -- trips, or excursions, traveling together? Before you got married?

NZapol: Well, the trip to Bloomingburg, among other things, was the first time we traveled together. The second, it was also [*laughs*] do you remember that you [*laughs*] you had the model airplane? Remember your own model airplane? The Ford tri-motor?

WMZapol: Yeah.

NZapol: Remember the Ford tri-motor? The aluminum thing?

WMZapol: Yeah.

NZapol: Your big model airplane.

WMZapol: That we got when I went to Cuba. Or Mexico, Mexico City, yeah.

NZapol: Yeah, and you decided --

DZapol: Is that the one that hung in my room?

WMZapol: Yeah, I think it hung in your room forever, it was a Ford tri-motor.

LZapol: I remember it.

WMZapol: Yeah, the one that --

DZapol: We repaired it.

WMZapol: All through the South Pole, yeah.

NZapol: Yeah. Oh, it was the model that went to the South Pole?

WMZapol: Yeah.

NZapol: Oh!

Oh, so anyway, you decided that you had to bring it back with you on that trip, and that was in the Triumph, and there [*laughing*] wasn't a lot of room in the Triumph.

DZapol: Were you holding it the whole way back?

NZapol: It was between us. [*laughs*] On the seat.

WMZapol: I can't remember that. She remembers everything.

NZapol: And I remember – I remember! Looking at you and thinking, why had you decided that you needed to bring this thing back now? [*laughs*] And you were very defensive about that thing.

WMZapol: Yeah, I can't remember --

NZapol: It was very important, and it straddled – the tail was in the back seat --

WMZapol: And did we go up to the mine, and did we climb over the hill and go into the mineshaft?

NZapol: I don't think so.

WMZapol: No, ok. Just wondered. Cause it was a mine, a mine.

NZapol: No, cause it was pretty cold when we went up there.

WMZapol: I still think we could have done it, maybe not. No, it was cold, lots of snow.

No, but I remember, we decided at some point we weren't going to get married. Definitely decided that, and then you went to California.

NZapol: Oh yeah. I forgot about that.

WMZapol: And then I said, 'I'm not getting married,' and then we both decided we were going to get married again. [*laughs*]

NZapol: That's right, I went out to California. I forgot about that. That was when there were the riots in Washington. When I was there, was when the riots were in Washington. And you were there, at NIH at the time, but I remember being in California and hearing about the riots. And --

WMZapol: You mean the death of Martin Luther?

NZapol: Was that right --

WMZapol: That was kind of what set it off.

NZapol: It was Johnson, and the riots.

WMZapol: Well there's the war --

NZapol: I'll have to look at it. It was '67.

WMZapol: -- there's the war marches, and then there's the death of Martin Luther King.[63] We'd have to look and see the date of --

NZapol: Right.

WMZapol: -- Martin Luther, I think, is later.

NZapol: I guess, yes, yes.

LZapol: I thought --

WMZapol: In the '60s.

LZapol: We'll look at the chronology.

WMZapol: Yes, yes.

NZapol: Yes, I had said – right, cause you said, 'I'm not getting married, because your father's dying, and there's too much --

WMZapol: Yeah, wait 'til this blows over.

NZapol: -- it's too traumatic --

[63] The March on the Pentagon was in October 1967. Martin Luther King, Jr. was killed April 4, 1968, and the riots in Washington were most severe in the week following King's assassination.

WMZapol: It was too traumatic a time now.

NZapol: -- let's just wait 'til this is over,' and I said, 'You know, when it's over I'm going to be gone. I'm not going to, I mean --

WMZapol: Strong-minded --

NZapol: -- it's just too hard for me --

WMZapol: Zapol women! [*laughs*]

NZapol: -- I can't deal with this,' and you said, 'Well, that's too bad.' So I said, 'Ok, I'm going to California.' And I was, I just went to California thinking I would maybe stay in California. But I didn't.

LZapol: Then what happened?

NZapol: You know, I just remember visiting friends in California, maybe Alana was there, Panter, my roommate. [00:34:21]

You met Alana. Years, just – it was before you and Diana got married. You were living out in California, you met her and you met her daughter.

Anyway, she was a dear roommate from Vassar, who left in the middle of Vassar, and she was living in California, so I would have probably stayed with her then. And I came out, and I thought, I don't know what I'm doing here. And you called, you said, 'Come home.' I think you said, 'Come home, let's get married.' Maybe? Yes? Cause I think maybe that was the proposal?

WMZapol: Seems to have worked out that way. [*laughs*]

NZapol: I think that was it. **[00:35:02]**

DL: I remember you using a little bit – there was a story about you using some leverage, with your California trip.

NZapol: With California.

WMZapol: She did, she --

DZapol: Like calling from California and saying, 'I'm never coming back.' Was that, that's how I remember the story.

NZapol: Oh.

WMZapol: Mm.

NZapol: Well that could have been. Whether I said it before I left or after I got there? I'm not sure. But I told you it was after I got there? Well, it was probably closer to the truth.

I just remember the song, 'I'm leaving on a jet plane, don't know when I'll be back again.'

WMZapol: Yeah, a lot of us listened to that song.

NZapol: What?

WMZapol: A lot of us knew that song.

NZapol: Right, and that was the story about that moment.

WMZapol: Right.

NZapol: So do you remember, then? I remember you saying, 'Come home.' Does that ring a bell?

WMZapol: It sounds good. You don't remember it.

NZapol: You don't remember any formal anything.

WMZapol: I do remember. And then leading up to the marriage, and all the little arrangements. I mean this is, maybe it was eight months or something.

LZapol: Did you do any formal permissions, or --

WMZapol: I don't think so, did I?

NZapol: I, so this is --

WMZapol: Ask your parents?

NZapol: You went to Arlington, right?

WMZapol: And spoke to your dad.

NZapol: Do you remember that story?

WMZapol: No.

NZapol: So I don't, all I remember is my mother telling me that you said, 'Nikki and I want to get hitched.' [*laughs*]

WMZapol: Hm.

NZapol: That's what she told me.

WMZapol: My western – my western drawl came through. [*laughter*]

NZapol: And he thought that was a great idea. My father thought you were great.

WMZapol: Yeah --

NZapol: I said, and I said, 'You know, he only, he's so interested in his work. All he wants to talk about is his work.' And my father said, 'What do you want him to do, look at his *pupik*?' [*laughs*]

DZapol: His biboo. [00:37:02]

NZapol: His biboo! [*laughs*]

WMZapol: Yeah, it was a different world.

NZapol: Contemplate his *pupik*. Yeah, contemplate his *pupik* is probably the way he put it.

WMZapol: Different world.

LZapol: What else do you remember about your dad's impressions of our dad? [*laughter*]

NZapol: Well, I think they were both extremely impressed with him. I remember my mother on the phone saying, to one of her friends, or, 'He's very handsome, and you would just never know how accomplished he is. He just doesn't, he doesn't show it, he doesn't act like that, he is really wonderful,' something. Said, 'Mm, ok. Yup.'

I think they were very impressed by how you were not self-promoting. You were not, you didn't come and say, 'I graduated three years younger than everybody else at MIT, and am working in this great laboratory at NIH,' and you just weren't like that.

WMZapol: Mm-mm.

NZapol: You were kind of low key. And, yeah. And until they found out that your grandfather insisted that I have a Jewish name [*laughs*] they didn't know that they were bringing much of an impact of religion on this [*laughing*] marriage.

LZapol: So what's the story there? What was your family's impression of --

WMZapol: Well, I think they were relieved that she was Jewish, cause they expected me to come in with an Indian. Cause I'd been to India. And I think they were surprised, and, but positively so. And I think it was kind of, whatever I wanted to do was ok with them. I think they were mellow.

LZapol: What was your --

WMZapol: Marry a Kaplan? I mean, it was pretty safe. For them, so they didn't have any, any vibes that I know of. I never even heard a vibe from their side, I mean. They're positive. They're do what you want to do, do, sure, fine, it's fine.

So we had green flags, both sides. So it wasn't, that wasn't the problem. The problem was Nikki's psyche in a very difficult time, losing her father, wanting to keep people in her life, and he dies three days, two days after we are married. They obviously are just running him long enough to get through the marriage, and then pull the plug and off he goes, two days later. And he's dying a very visible, hemoptysis, he's coughing up blood all the time, so it's awful to watch. **[00:39:59]** And he's just terrible. He had a terrible end. So there's this, you know, it's kind of like a symphony with a lot of components going on at the same time, it's very complicated. And then you got to run this marriage, in the middle of this, with, we decided not to have a happy marriage, just to have a marriage, right? So there was a ceremony, and there was a dinner, but no dancing, no nothing, it was just a formal dinner, and that's it. Right? Do you remember?

NZapol: Oh yeah. Yeah. I mean, we had the party at our house the night before.

WMZapol: We had a party at our house the night before, which I was very – we did our first ECMO patient at NIH that night, and all I can remember is coming home and Nikki saying, 'Well, your best friend said he would marry me if you don't show up tomorrow,' [*laughs*] --

NZapol: That was Bob Sigman.[64] [00:40:55] He said, 'If he doesn't show up by midnight, I'm marrying you tomorrow.' [*laughter*]

WMZapol: I gotta blow my nose.

NZapol: A minute before midnight.

DZapol: For the party?

NZapol: Mm.

DZapol: Ah.

NZapol: Looking rather pleased with himself. Not at all contrite, just, 'We just did this great thing at NIH.'

LZapol: Did you think about walking?

NZapol: No. No. I remember, what do I remember? I don't remember being particularly upset about it. I thought it was rather funny that Bob Sigman said that he'd marry me, I thought, that would be amusing. [*laughs*] No, we had a great group of people there.

LZapol: Before you talked about the grandfather having a problem with your Jewish name. What's that story?

NZapol: Well, he was just very by the book, right? And so when we, when we had to get the ceremony together, we had to give the rabbi the names, and so the – and the rabbi, so we got married at the, a synagogue that was between where we lived and NIH, which was all of about a half a mile distance, and there was a new synagogue between the two.[65] And we went and found the rabbi there, and said, 'You know, we don't know what this is going to be like, because my father's dying, I don't think he's going to make it to the ceremony, so we just sort of have to keep this pretty simple.' And, anyway, he said, 'Well, anyway, just tell me names.'

And I, actually I don't think that the rabbi asked for my Jewish name. But Warren's grandfather, when he was getting ready to come, said, 'So what's her Jewish name? And it turned out I didn't have one, right, so he said, 'She has to have one!' So, we made up a name, and I got a Jewish name. So the end of that story was when we got a dog, about that same time, my father called me up and said, 'What's its Jewish name?'

DZapol: And? Didn't have one.

NZapol: [*laughing*] Didn't have one. [*laughs*]

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[64] WMZ note: Bob Sigman was a Harvard Boston City surgery colleague, now of Hartford, CT.
[65] WMZ note: Rabbi Samuel Kolnick married us at the Congregation Beth El in Bethesda.

DZapol: So, what's your Jewish name?

NZapol: Nahama. Peace.[66]

DZapol: How did you choose it then?

NZapol: I think --

WMZapol: The rabbi and you.

NZapol: The rabbi and I? Oh, that's interesting. Is that right?

WMZapol: Yeah.

NZapol: Probably, right.

WMZapol: It was a great – the party before was a great night. We have lots of photos of it, which we can find. Stanley Greene [00:43:48] was there, I think he was a patent attorney in the patent office then. I think. I'm not sure.

NZapol: Yeah. Holly and John are in that photo. Tasha.

WMZapol: Yeah. Marty wasn't there. That was so wonderful.

NZapol: Tasha. A lot of your NIH friends.

WMZapol: And I had my radio room out front, right? I had a radio and a beam.

NZapol: In Arlington, right.

WMZapol: Not in Arlington.

NZapol: Bethesda.

WMZapol: Bethesda. And we were within, we were within half a mile of NIH, so we would just walk to our little house on, what was the address?

NZapol: Linden Avenue. 9313.

WMZapol: 9313 Linden Avenue. So we lived on Linden Avenue, which was, you'd walk past the NIH director's house, and then you'd go down, and of course it was only the second director or something, and it was made by – my boss started the NIH, with Shannon, and my boss was Bowman, he was an editor of *Science*, the boss of my lab, who had invented something called the Aminco Bowman spectrofluorometer, which had changed the whole world: allowed people to look at two prisms, and, a light source and two prisms and a receiver? Anyway, it was brilliant, and it changed [optical] biochemistry, which was the main support of biology at that point, you know, that's where the action really was. **[00:45:19]** So Bowman had invented this as an intern at NYU, or something, and then became an editor [of Science]. And he was into optical NMR, all kinds of stuff, he did all kinds of great stuff.

[66] Nahama also means 'sweetness'.

So we just walked home. We didn't drive from NIH, we just walked. And there was no security on the campus, you could just walk. Building 10, just go right down the street and walk across Wisconsin? No.

NZapol: No.

WMZapol: Whatever it was, the cross street there, and then we were in our little, it was rather like Conantum, it was mainly trees and little houses. I think the whole house was worth thirty thousand at the time, we didn't buy it, cause we didn't have any money, and I was paid eleven thousand dollars a year. It was pretty, it was a very wonderful place, cause we had a yard, we had our dog – remember, I, we were so poor, I made the kitchen table. And I pasted, I don't know, some three-ply teak or something to the top, and of course I didn't realize that it was very humid in Bethesda, you know, we had one air conditioner or two for the whole house. And one morning I came down [*laughing*] and the whole table --

NZapol: It was wavy.

WMZapol: -- looked like a cup. Because they had shrunk at different rates than the table, so that didn't work.

And you would come down and skid, because the dog would poop all over the rug.

DZapol: Oh!

WMZapol: Remember that?

NZapol: Oh yeah, it was a rug that you got in Morocco, and it was hard to see poops from --

WMZapol: [*laughing*] From the colors.

NZapol: From the colors. [*laughs*]

WMZapol: So we had an upstairs/downstairs kind of event. It was kind of fun. We were there --

NZapol: You'd still smell it first. [*laugh*]

WMZapol: -- three and a half years?

NZapol: Where is it?

WMZapol: Three and a half years, and they were good years, I thought.

NZapol: Was it three and a half years? Wow.

WMZapol: Yeah --

NZapol: No.

WMZapol: -- I came in '67, and we didn't leave 'til halfway through '70.

NZapol: Mm. Right.

WMZapol: Three, anyway, three and a bit.

Yeah, no, they were great years. Great years. Great.

Different world, NIH. I wrote my first grant as a resident. And, no, I wrote it at NIH with Kolobow and everybody else was the PI, and I was just kinda a part-time worker on the bottom. And the chief of surgery and the chief of anesthesia were the PI's, we got the grant. ECMO for ARF which lasted – extracorporeal membrane oxygenation and acute respiratory failure, and it lasted, mm, ten, ten plus years. And so, and then it was an MGH SCOR, specialized center [of research] at a million, million and a half a year, so one almost went, ECMO, the story went twenty years, almost.

And you hid yourself in the bottom, and it didn't make any difference anyway, cause they weren't going to do the work, you're going to do the work, they were just the PI's. And it's still, the largest study section at NIH – I don't know if it gives out the most money, but it's one of the largest, surgery, anesthesia, trauma, it's called, S.A.T.

NZapol: Mmhmm.

LZapol: What do you remember from that home, mom? And those years?

NZapol: It was a great little home. We took a – we had some old furniture, we had a child's desk, a school desk that we had, that I had repainted and was sitting as this little chair that we had in the kitchen, remember? Had one of those little --

WMZapol: Yeah.

NZapol: -- platforms that you write on, and we had a backyard, the dogs would run in the backyard, we would barbeque in the back, it was a sweet place. It was really – and we used to go, we'd go on your motorcycle out fishing.

WMZapol: Catfishing. On the Potomac.

NZapol: Right. And --

WMZapol: Probably a toxic wasteland at that point. [laughs]

NZapol: -- you did not like handling the fish, nor the worms, so – you liked catching the fish [laughs] and you liked me to put the worm on the hook --

WMZapol: And you liked gutting the --

NZapol: -- and take the fish off the hook, and gutting it.

WMZapol: And you'd come home and they'd still be alive, cause they're, you know, they're catfish, and you'd come home and there'd be all these catfish – we'd line 'em up in the backyard.

NZapol: On the railing there.

WMZapol: And they go arp, arp. Arp.

NZapol: I don't know why they were called a catfish, cause they bark.

WMZapol: Yeah.

NZapol: Bah, bah!

WMZapol: And we'd have catfish fry, catfish and fries and stuff. **[00:50:02]**

NZapol: Yeah. Yup.

LZapol: And you got to gut them.

NZapol: And you know what, we made mock turtle soup, and that was Mattie, Mattie taught us how to make mock turtle soup, and I don't know how we made it, but I do remember that that was a big deal, figuring out how to make --

WMZapol: And we'd go crabbing with Larry Aronson.

NZapol: Crabbing! With stinky crab necks.

WMZapol: No, stinky chicken.

NZapol: Chicken, chicken necks! You'd leave the chicken --

WMZapol: We'd buy a chicken and --

NZapol: -- do you know this?

WMZapol: -- leave it outside for a day or two, until it got really ripe, and then you'd tie a string on it, and you'd put the rotten chicken down on a string, and the crabs would all come over and grab it, right?

NZapol: And you'd get underneath it.

WMZapol: And then what you'd do is you slowly bring them up off to the surface. And they'd be [*makes snapping sound*] and then you'd have a, just need a net, crab net 'em, pick 'em up, drop 'em in the bucket, go get another one. And these were blue crabs.

NZapol: Maryland blue.

WMZapol: Like the Chesapeake, Chesapeake blues. And, you know, you'd catch fifty of 'em or sixty of 'em and then we'd go stick 'em in the bathtub and then wash 'em out, remember over at Larry's place, and then they would, you get Old Bay spice --

NZapol: Right. Boil them in Old Bay spice.

WMZapol: Boil 'em in Old Bay spice --

DZapol: Classic.

WMZapol: -- and you'd eat, you just, you eat 'em outside really, right? And we just put paper napkins --

NZapol: Newspaper!

WMZapol: -- and everybody got a hammer, you would crack 'em open and eat 'em.

NZapol: Yup.

DZapol: That's why you had Old Bay spice in the spice cabinet in Concord, probably --

WMZapol: Forever.

DZapol: -- cause we never used it. [*laughs*]

NZapol: Right, we thought it was just

ElliotZapol: Everybody would get a hammer to crack you. To crack the crabs open.

WMZapol: That's what we used --

EZapol: And then if people were mad, they would whack other people.

WMZapol: No, no, no, no.

NZapol: We didn't ever get to that point. [*laughter*]

WMZapol: No, no no no.

DZapol: Close.

LZapol: Were those parties, where everybody would, or would it be just the two of you having the crabs?

NZapol: No, we might have a couple of people over.

WMZapol: Our friends Larry --

NZapol: Yeah, Larry Aronson --

WMZapol: Joanie.

NZapol: Joanie, that's right, Joanie.

DZapol: Did the family ever come over?

NZapol: Say that again?

DZapol: Did the family ever come over? Did your mom come over, at that point?

NZapol: My mom would come over. I had a very tumultuous relationship with my mother at that time. It was just really difficult. She had such a hard time with my father's death, and she just really never got, it was just such a hard time for her to have me get married, and leave. I mean, I wasn't living with her --

WMZapol: Right.

NZapol: -- but my life had changed --

WMZapol: That's when every Saturday, phone call, or Sunday. That was one of those phone calls.

NZapol: Yeah, I had to call her at a given hour.

WMZapol: Had to call her every --

NZapol: It was hard. It was a very hard time. I think the time that she really kind of came more around was after you were born, and then that was a relationship that bonded her back. You know.

WMZapol: To us.

NZapol: Way to us. Yeah. Yeah.

So she didn't see us very, we didn't see her that much. Well, I must have visited her every weekend while we were living in Washington, but, in Bethesda, but, yeah, she wasn't, wasn't a happy time.

WMZapol: Hm.

DZapol: And your parents? Did they ever come visit?

WMZapol: Only going to Florida, or coming back. And we would go up there sometimes. I remember we were up there for the moon launch.

NZapol: Right! When, the first landing on the moon, we were in --

WMZapol: Bloomingburg.

NZapol: In Bloomingburg, we were watching in Bloomingburg. Yup. We were sitting around in the living room in Bloomingburg.

LZapol: Is this post camp Zapol? It was just the family?

NZapol: It was post-camp. This is after.

WMZapol: Was that before we got married or after?

NZapol: It was after.

WMZapol: After. What year – I don't know that.

NZapol: Well, we'll know, from the moon landing.[67]

Elliot Zapol: You went to the moon?

WMZapol: '70, '71, probably.

[67] The Moon Landing of Apollo 11 was on July 20, 1969.

NZapol: I'm not sure. Yeah.

WMZapol: David's still a dream.

NZapol: Right, right. Yeah.

LZapol: So --

NZapol: Sorry, one other thing, I was thinking about impressions, that I remember dad being more interested in my having lived abroad, and being in the Philippines and that whole, that part of my life, than almost anybody I had ever met.

WMZapol: Hm.

NZapol: Because most, you know, most people just didn't even know how to relate to that fact, and Warren had traveled so much.

WMZapol: Overseas travel wasn't common yet then.

NZapol: When, Warren had already traveled so much that he could think about what was it like growing up --

WMZapol: But I'd never been to the Orient, and then that, in 1970, in March of '70 I ended up going to Vietnam to test ECMO machines. And met Nikki after I was in Vietnam, so I went back to the Hotel Sanno in Tokyo. **[00:54:58]** And you showed up.

NZapol: I came out. Right, and that's when you came to the Philippines with me --

WMZapol: April, May --

NZapol: -- met Ramon [Binamira] then, and --

WMZapol: April '70.

NZapol: -- that was a great trip, because Warren was a great celebrity in Manila, they just really treated us, I mean, they were happy to see me, but they were so excited about Warren and Warren's, what you'd done in Vietnam, and remember Chino Roces had the big dinner party for us there, and it was just all a wonderful time. But it just the idea that dad could relate to this other world that had been in my world. And that, as I say, it just was a totally foreign landscape and universe for almost everybody I knew once I got back to the States and lived here. So.

LZapol: Do you remember stories of mom's worldliness when you first met her?

WMZapol: Mm…no. I don't. Offhand.

LZapol: But, and do you remember the trip to the Philippines?

WMZapol: Yeah, I do.

I was just thinking, the other story that popped in my head was the Indian, the Pakistani girl. And the American Friends of Pakistan, you remember? And somehow that's all integrated in

this, but I don't know exactly where. But talk about our other-worldliness, we, I was – why did that happen? How did I get his name?

NZapol: Somebody sent him to you.

WMZapol: Somebody – maybe Abdul Hassan had sent him to me, maybe. So I had had a roommate who was Pakistani in medical school, when I was at BU, in that interim year, in 1963. And he told me that there was a young lady in, in Rawalpindi who had very bad heart disease, and needed valve surgery. And I was at NIH, and NIH did free valves. If you could, you know, they had a good cardiac surgeon, a reasonable cardiac surgeon, and they would do free valves. So I think this is after we're married already, right?

NZapol: Mm, yeah, we were living in Bethesda.

WMZapol: In Bethesda.

NZapol: Yup.

WMZapol: And suddenly a, I'm faced with how do I deal with a young lady in Pakistan who needs her heart fixed? And she got nothing. And her father is colonel? Yeah, was a colonel in the Pakistani Army. So Gary Powers had been --

NZapol: Major. Major. Major. Major --

WMZapol: Akbar?

NZapol: Yeah, Major --

WMZapol: Major Akbar. And Gary Powers had been shot down at this time, and I knew there was an American U2 base in Rawalpindi. And he had flown from there over Russia somewhere. And had been shot down. And so I knew there was a U2 base, and we had driven through there, and we knew you could get – like, they let me in the PX, and we could buy potatoes and onions and things like that, which were flown from Iowa, you know? God forbid you ate anything that was grown in Pakistan.

So, so, long story short, I convinced some associates of mine, who were young docs there, to let her, to admit her [to NIH]. And the US, we convinced, with the American Friends of Pakistan, and somehow we convinced the US Air Force to fly her free, with her father. So they flew her from Rawalpindi to Rams, Ramdel? [Ramstein Air Force Base] Whatever it is, in Germany? The American air base, and to --

NZapol: Houston?

WMZapol: No, no, to Washington. To Virginia, and [to] where Obama flies out of, and then the NIH ambulance went there, picked her up, brought her to NIH. And I stayed out of it, I, and the American Friends of the Middle East, the American Friends of Pakistan are taking care of her, and there are all these retired ambassadors and rich ladies who give money for Pakistani, and we start having parties with them, remember? And you used to get, their Indian houseboy would make --

NZapol: Samosas! And pakoras.

WMZapol: And pakoras for you, and we started to become very friendly with this rather old ambassador, ex-ambassador from the State Department to Pakistan, and I don't hear much anymore, and then I hear one day, 'She needs three valves.' They can't fix three valves here. Only Houston can do three valves, but the NIH can't release her, and they never go to Houston, because that's kind of a loss of faith, so NIH says, 'Just send her home, and have her come back in three months.' **[01:00:08]** So, they're saying, 'I won't be here in three months, you're fixing her now! Or she's history.' So what was her name, Zamir? Was it?

NZapol: Fatima, wasn't it?

WMZapol: Fatima! So Fatima's a very nice young lady, with a cover, and her dad. We somehow, on the weekend, get her into an ambulance, get her back to Washington National, the American Friends of the Middle East fly her to Houston, and Denton Cooley says, 'I'll fix her.' For nothing.

NZapol: You know who Denton Cooley was?

WMZapol: He's a famous American heart surgeon, did the first [transplant] --

NZapol: First heart.

WMZapol: Like [Michael] DeBakey and Cooley were the two great American heart surgeons of the '60s and '70s. But Cooley was really good, I mean, he was like, fast fast fast.

NZapol: He was legendary.

WMZapol: Legendary. So Cooley fixes her. Long story short, Cooley fixes her in Houston, she comes back [to Bethesda], she has three valves, and you could almost hear them in her chest, you hear chatter chatter chatter chatter, it was these little three artificial valves are going click click click. But her pulmonary edema goes away, she has exercise capacity, and she can pray, and she can do her stuff. Father's happy, family's happy, she goes back to Pakistan, lives another --

NZapol: Five, six years?

WMZapol: Four, five, six years. And dies of, you know, managing her anticoagulation was always the hassle there with the valves. Which, she maybe twenty years old, twenty-one years old, she was really young. With rheumatic [valvular] heart disease, right, like we're seeing now and fixing in China.

But it was, it was quite a saga in the middle of this, and I remember, they found out that she [Fatima] went to Houston and the associate director, not Frederickson, but the associate director of the Heart Institute called me in, [Robert Levy, MD] and I had written a paper with him, he was very unhappy, cause I'd published it in a surgical journal --

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WMZapol: -- but he liked me and I knew him well. And he said, 'Zapol, if you ever do anything like this again, I'll have you on an ice breaker in the Artic.' [*laughter*]

DZapol: Fast forward. [laughs]

LZapol: How fantastic! Can't wait!

NZapol: There you go, that was the key! [*laughter*]

WMZapol: Remember that?

LZapol: Bing!

NZapol: I forgot that story, but as part --

WMZapol: I have, he's on my CV, I could look him up again.

NZapol: Oh, interesting.

WMZapol: He [Bob Levy] died subsequently. We studied lipoprotein denaturation by [gas/liquid] interphases, and he [wanted to] put it in the *JCI,* [but I] put it in the *Journal of Surgery,* or something, I dumbed it out. He never forgave me.

NZapol: But that's not what he was mad about you for --

WMZapol: No, he was mad at me cause I, well, because I --

NZapol: Because you snuck her out of [NIH], against orders.

WMZapol: At NIH against orders, and sent her to Houston --

NZapol: Right.

WMZapol: -- and these people, other people then took care of her and paid for her. Then she came back through, as I remember, on her way home.

NZapol: So part of that story

WMZapol: Cause they put her back on the Air Force plane and took her home, it was cheaper.

NZapol: Part of that whole social scene was --

WMZapol: What a scene.

NZapol: -- we went to parties, remember the party we went to and Hubert Humphrey was at the party?

WMZapol: Yes!

NZapol: So we're on a receiving line, with Hubert Humphrey down the line --

WMZapol: The Vice President --

NZapol: -- and I'm wearing this lovely little powder blue dress that was sort of A line at the time? And coming along, and I know I'm about to meet Hubert Humphrey, and I'm all smiles, and he takes my hand and says, 'When is it due?' And I looked at him like --

WMZapol: Huh? Who's due?

NZapol: -- what are you talking about? I said, 'Oh, I'm not pregnant.' [*laughs*] So they say he had a knack for putting his foot in his mouth [*laughing*] and that's where it was.

WMZapol: Yeah.

NZapol: It was like, do I really look I'm pregnant? I'm not. So that was that, part of that whole world. We went back to visit them in Pakistan.

WMZapol: With you.

NZapol: Do you remember going to their house?

WMZapol: Riding down motorcycles.

NZapol: In Rawalpindi?

DZapol: Yeah. They taught me how to make the best paper airplane ever. [*laughs*]

NZapol: Really?

DZapol: Yeah. They were throwing them up into --

NZapol: Oh, the yard outside.

DZapol: -- the yard --

NZapol: Right, there was an outside yard.

DZapol: -- forever. For days.

NZapol: Right.

DZapol: And we went away somewhere; we were there, and then we went somewhere and we came back to their house.

NZapol: Right.

DZapol: I don't know where we went.

NZapol: Right. That was a very complicated trip, because dad went up to find them, because you weren't sure that you could find them near Lahore, right?

WMZapol: Satellitetown.

NZapol: Satellitetown.

WMZapol: I think they lived in some strange place.

NZapol: Right. And you left David and me in Delhi, because you weren't sure how, whether you were actually going to find them, and then you

WMZapol: Lahore or Pindi?

NZapol: Pindi, in Pindi, right. And so you then got in touch with us and told us we could come back --

WMZapol: You were in Lahore, yeah.

NZapol: -- and come up --

WMZapol: And then you came over to Pindi with the bus --

NZapol: -- went out to the airport, I don't know if you remember that airport, I still remember that incredible airport scene, trying to get up to Pindi with you, and it was, just crushing, like epic, movie crowd. Crowd! At the airport, and no way to figure out how you were going to get a ticket, how you were going to get on a plane, and I think we found some guide who could navigate it, us through the whole maelstrom there. It was just incredible. And we got on that plane and got up there.

DZapol: And is that where I left Donk, in the airport? And then Donk was flown up to meet us?

NZapol: It may have been that, somebody, maybe the man who showed us around.

LZapol: Who was Donk?

DZapol: Donkey, my donkey.

NZapol: His little stinky animal. [*laughter*] Oops. [*laughs*] Smelled just right.

EZapol: He smelled like coffee.

NZapol: No, it didn't. [*laughs*]

DZapol: He had a tail.

EZapol: Did you eat him for dinner? Was he fish, did you name him that name?

NZapol: Donk. It was for donkey. Obvious, donkey.

EZapol: Oh, it was just Donk.

DL: Daddy had a Jonah.

NZapol: Yeah, exactly.

EZapol: Daddy had a donkey. [*laughter*] Not a Jonah.

LZapol: So it got left at the airport? And how did some, how did you retrieve it?

NZapol: Well, somehow or other, we were still in touch – it must have been the guy who showed us around. I've forgotten that link, but yeah, we had somebody who was helping us through that maze, and it must have been he who found it. Anyway, that's [*laughs*] yeah.

LZapol: So it sounds – before we close up the Bethesda years, is there any other stories that come to mind about that particular time or home? Friends? Each other? **[00:05:06]**

WMZapol: Went to the air show with Reichert.

NZapol: Peter Reichert, yeah. [00:05:10]

WMZapol: Peter Reichert, an old friend.

We fished, air shows, crabbing.

NZapol: Yeah, friends, a lot of --

WMZapol: Aronson a lot.

NZapol: We, yup, and we saw Steph and Stanley a fair amount.

Oh, we went --

WMZapol: Washington was a small town then --

NZapol: We went to the Washington symphony, and when I was pregnant with David, and he was kicking in time. [*laughs*] Remember that. Remember, and who was, it was, the, it was a famous pianist and a famous conductor at the time --

LZapol: So you were pregnant in Washington, you got pregnant in Washington and then moved to Boston after?

NZapol: Mmhmm.

WMZapol: Mm --

NZapol: Maybe Hubert Humphrey was right, maybe I was pregnant. [*laughs*]

WMZapol: Maybe. How could that be? It started in August. Of my first year, and he's born in the second year; we weren't in Washington.

NZapol: Oh, then we must have gone back down to Washington. We must have been to the symphony after I was pregnant.

WMZapol: Was it your mother, or something?

NZapol: Yeah. That must have been it.

WMZapol: No, we went to the Philly – you got the wrong city.

NZapol: Oh, it was the Philly! Wrong city! That's where I was – ah, of course.

WMZapol: I went to CHOP, Children's Hospital of Philadelphia, Boston Children's was terrible for anesthesia teaching in those years, it's since a hundred --

NZapol: Pedi --

WMZapol: -- eighty degrees. Pedi anesthesia. So I went to CHOP, and they tried to recruit me. And they're very good. And --

NZapol: Yeah.

WMZapol: -- so we did pediatric anesthesia there, and so we went away for two months, and we lived in some lawyer's house --

NZapol: Oh, a great house! He became a judge. He was a friend of Stanley's. And they were leaving the house, this beautiful town house in Chestnut Hill on the main line, at, totally spoiling for us.

WMZapol: Yeah, that's right.

NZapol: A lady who had every – she had a guest, a little guest book, and she listed every dinner party she had, and everything she served, and the, sort of the way she laid the table. It was this perfect, Henry, Harry Bartle III. [00:07:17] [*laughs*] Bartle!

And we almost didn't – oh, yeah, so the sad part of that one was we almost didn't get to that house because we had dogs, and they wouldn't let dogs in. Unfortunately, our dogs both died before we --

WMZapol: Got to go.

NZapol: -- got to go, so we got to go, but we lost our dogs. Anyway.

WMZapol: Yeah.

NZapol: But that was a – Philadelphia was a really lovely time.

WMZapol: Good experience for me.

NZapol: And that's when we wrote, I edited your first big piece, "Buying Time for Artificial Lungs."

WMZapol: For *The New England Journal [of Medicine]*.

NZapol: For the *New England Journal*.

WMZapol: She did the *New England Journal* editorial.

NZapol: Right.

WMZapol: And then I --

NZapol: I remember, it was about that long, Warren wrote it in about fifteen minutes, and I edited it for about seven hours. [laughs]

WMZapol: Fifteen days, yes, probably.

NZapol: Said, no, what is all this language, what are you talking about here? And my father had gotten, coined this term 'buying time for democracy,' and I thought --

WMZapol: Oh, is that where it came from?

NZapol: Yes.

WMZapol: Oh. It's been used a hundred times in the field.

NZapol: Yes.

WMZapol: Since then.

NZapol: Since then, but that was the title, "Buying Time for Artificial Lungs."

WMZapol: "Buying Time with Artificial Lungs."

NZapol: With artificial lungs.

WMZapol: Right. To allow the lung to heal. And it was very interesting, yeah, that was a great time --

NZapol: And we were sitting --

WMZapol: Philly was a really great, for me, a good experience; I saw a lot of babies, a lot of blue babies, and I really got into blue babies there, and I saw you could measure them well, and do various things to them well, and I, and I worked with a surgeon whose name was C. Everett Koop. Who then becomes Surgeon General of the United States, and he's an act all by himself. He ends up at Dartmouth, but I think at that, he was a very good pediatric surgeon. That was the first patient I ever lost on the table, I remember. With him, was a young child who'd swallowed [an open] safety pin that had eroded through his esophagus and aorta, and I remember trying to transfuse and keep the baby going while he operated on him. It was an awful experience. But they [also] did pedi hearts, and it was just a great, it was a great two or three months.

NZapol: It was also, they had, it was a wonderful little town, Chestnut Hill, and they had little restaurants and bars, and I remember going into the bar, and they asked me, they carded me. Now, I was pregnant with you, so I was twenty-eight at that point, and you had to be, what, twenty-one? Or eighteen – to drink? So I was so excited that they thought I was not yet twenty-one. And I was twenty-eight. I thought, 'Oh, my god, I still look young!' [*laughs*] **[00:10:06]**

LZapol: What do you remember about --

NZapol: Why was I drinking when I was pregnant! [*laughter*] Is the question. [*laughter*]

WMZapol: No more!

LZapol: What do you remember about being pregnant, about being pregnant with David?

NZapol: I remember it being a ridiculously easy --

EZapol: Grandma

NZapol: -- pregnancy. I mean, I just was not ill, and also, I mean, that's, this is the crazy story, where there was no, nobody said to me, 'You should eat, eat, eat, eat, eat,' and I thought, 'Oh, it would be nice not to get fat like all those ladies get when they pregnant, why do I have to be ugly

fat?' So I didn't try to eat, I just thought, you know, if I'm not hungry, I don't eat. So I didn't. And so I gained just ridiculously little weight.

So, I remember feeling fine, we had this wonderful trip to Martinique, that's the --

WMZapol: Right.

NZapol: -- that's the, I got this wonderful pregnancy bathing suit [laughs] it was a little Tahitian pattern on it, and I felt just so happy and fine --

WMZapol: We had fun.

NZapol: Fine!

WMZapol: We had fun.

EZapol: You went in the water?

NZapol: I went in the water with your daddy in my belly.

WMZapol: Like a little seal!

DL: There's a story --

EZapol: And that's how you learned to swim?

NZapol: Yup!

EZapol: Because there was water in your belly, and --

NZapol: Well there is water in the belly, anyway.

DL: Yeah, swimming.

EZapol: Yeah, you're swimming forever.

NZapol: Yeah.

DL: Wasn't there a story about when your dogs died, and you were pregnant with David, and weeping as you were walking down the street?

WMZapol: Oh yes.

NZapol: Yes, that would have been right before we went to Philadelphia, yes. Right. So I was at the Graduate School of Education [at Harvard] then, I was getting my --

LZapol: This is in Boston.

NZapol: In Boston --

LZapol: Cambridge.

NZapol: -- we're back in Boston, and the, one dog, one dog had been killed by a car, and then the second one went missing, and I'd gotten the call – it was Scandarian Pharmacy [00:12:12] --

WMZapol: Oy yoyoy.

NZapol: -- on Cambridge Street, and they called and they said their truck had hit. Jujy, Jujy.

WMZapol: Jujy fruit.

NZapol: And I just lost it, and I had to go to class across the Cambridge common, and I was just, just crying the whole way. To --

WMZapol: This is ed school time?

NZapol: Ed school.

And I remember somebody stopping me on the common, thinking, here's this pregnant lady, she's crying, this must be terrible, and they said, 'Can I help you?' And I said, 'No, my dog just died.' And they go, phh! [*laughs*] Went right on.

But yeah, it was just awful. And I remember saying at some point, to my mother, 'I don't know how I could love a child more than I love my dog.' I remember thinking, 'Oh, my god!'

DZapol: You are pregnant. [*laughter*]

NZapol: Yeah. Two gorgeous Brittany spaniels. Boy, it was great.

EZapol: You can't be pregnant.

NZapol: What's that?

EZapol: You can't be pregnant now.

NZapol: You're right, I can't be pregnant now. I am not pregnant now [*laughter*], I have no plans to be pregnant now.

EZapol: But you, mom.

NZapol: It's over. [*laughter*]

Wow.

WMZapol: Hm.

LZapol: So then, of course, from studying blue babies, you had a blue baby.

WMZapol: Yes, yes. The young man arrives. In the middle of the, of a May morning. Fast asleep. I'm exhausted, I've been on for like three days before. And there's an elbow in my side, that says, 'Warren! Warren! I think I'm --

NZapol: I'm wet.

WMZapol: 'I'm wet.' I said, 'You're wet?'

NZapol: He said, 'Don't worry about it.' So I called Holly, said 'Holly, I'm wet.' She said, 'Your water's broke, get to the hospital!' [*laughs*]

WMZapol: Whereupon [I'm] woken up, and we go to the Boston Lying-In, as it's so-called.

NZapol: Well, we go to the doctor's office first.

WMZapol: Did you?

NZapol: We went together to the doctor's office. And you and the doctor are having a philosophical conversation about early birth, and the doctor's saying, 'Don't worry, she's just, you're just, you know, you're on time, and two weeks early, it's not a problem.'

So we leisurely make our way to the Boston --

WMZapol: Lying-In.

NZapol: -- Lying-In.

WMZapol: And I say - I've already had OB there, so I find John Roaf [Ed Roaf] who is the best anesthetist in the whole damn place, and I said, 'Take care of her.' **[00:15:00]** And him, eventually. David, eventually. So, so, it worked out well.

NZapol: Well, after a while it worked out well.

WMZapol: After a – was it a long? It was an epidural, right?

NZapol: Well, it was twelve hours of labor --

WMZapol: Right.

NZapol: -- and then they lost his heartbeat, and they frantically got --

WMZapol: [PHRASE UNCLEAR] [00:15:21]

NZapol: -- webbed him in [?], he was born blue --

WMZapol: His cord around his neck.

NZapol: I'm - yeah. This is a very fast version of the story, but, you know, and I look up at you and you're like, you're behind me, and I look up at you, and you're white.

WMZapol: And Rofe does everything! He resuscitates you just instantly. And --

NZapol: Cause I said --

WMZapol: -- he was so cool.

NZapol: -- 'I don't hear the baby crying.' And you

WMZapol: They didn't section you though, they just --

NZapol: No!

WMZapol: -- pulled him out. This little --

NZapol: Well, they tore me. He was rather clumsy.

WMZapol: The obstetrician, but not the anesthetist.

NZapol: No! But that's when you, you know, the anesthetist saved the day, but David was born with an Apgar of what, two? And then he went to --

WMZapol: No, four, I think he was four.

NZapol: Then he went up to perfect rather quickly, but anyway.

WMZapol: Four to ten! And he's this tiny little guy. And they put him in the premie nursery, cause he only weighs three pounds, a few ounces, right?

NZapol: Three thirteen.

WMZapol: And I go there, and I watch your ribs, and I look for retractions between your ribs. If you're intercostal muscles pull in on respiration, that means your lungs are non-compliant, and I'm trying to determine whether you have respiratory distress syndrome or not. And you don't. You percolate along, I think I got a picture of him in there, and, don't remember exactly, here somewhere. And then I rack out, I go home to sleep, you stay there.

And they kept you in there for a couple, a week or something? You're there for quite a way.

NZapol: Not very long, a couple of days. And they kept David in for another week or so. 'Til he got --

WMZapol: And we would transport --

NZapol: -- a good sucking reflex.

WMZapol: -- milk to you.

NZapol: Right, I would pump my breasts, at home, bring it to the hospital, they give you my milk, but that, but you didn't have a strong suck reflex, cause you were six weeks early.

WMZapol: In those days, daddies worked. Didn't get --

NZapol: I kept telling my doctor --

WMZapol: -- an hour off.

NZapol: -- I'm six weeks --

WMZapol: Got a day off, if I remember --

NZapol: I don't think you're right --

WMZapol: -- for the --

NZapol: -- I don't think I'm two weeks early, I think I'm six weeks early. Well, I was right. So that's why he wasn't so alarmed when we came in, but --

WMZapol: But since he's premature, he doesn't have to have his bris on the fifth day. You're allowed to temporize, which was good for our families, cause none of them lived in Boston.

NZapol: [laughing] It gave everybody time to get there.

WMZapol: So you had a crowd. You had a great crowd for your bris.

NZapol: We couldn't wait 'til you got out of the hospital and came home.

WMZapol: So it's like, two or three weeks later, and your, that's when the famous chicken! Bernie said --

NZapol: Well, when he was born, Bernie went to D'Agostino's in New York and picked up a chicken weighing three pounds thirteen; he said, 'Oh, my god, that's really small.' [laughter]

You fit between there and there.

WMZapol: But all kinds of cool people: Kitz came and brought him a present, Hassan --

NZapol: Here's your daddy, between here and here. Feet were here, head was here.

WMZapol: Hassan Ali came, Mike Laver came, Ed Lowenstein came. Did Ed come? Think he came.

NZapol: I think so.

WMZapol: Yeah. It was a good crowd. From the hospital side. Did Tony [Oettinger] come?

NZapol: I think so.

WMZapol: Tony

NZapol: Yes I think I hung out at, behind the door with Tony, and I said --

WMZapol: During the bris. 'I'm not watching this.'

NZapol: -- 'I don't blame you.' [*laughter*]

WMZapol: Surgery without anesthesia, it's really not fair.

NZapol: Ok!

LZapol: So, it may be a good time to stop, we've been talking for about an hour and a half now. And it's getting kind of warm in here [*laughs*] --

WMZapol: Puff puff.

LZapol: But before we wrap up, cause we probably won't get a chance to do that before the D's head out tomorrow, and, I just wonder if you might share one thing that you feel most grateful for

about each other, and about finding each other, if you don't mind me putting you on the spot. I can give you a moment.

NZapol: One thing. One thing?! Oh, there's a – yeah, I'm just grateful for mutual support.

MWZapol: Mm.

NZapol: Being, really, being there when things get tough, and, for both of us, and really a lot of guidance through life. **[00:19:59]** A lot of navigating hard times that, even though we – some of us – both of us have each created our hard times, either because that's the way we, the choices we made, like going to Antarctica [*laughs*] but being supportive through that. Yeah.

WMZapol: Hm. I certainly agree. But, but your mother's support is really extensive! You know, whether it's editing [*laughs*], you're doing a journal piece, or I remember her saying, 'If you can't write well, you can't think well.' And I remember that one drilling right through me. But I think she's been a teacher in many ways, of understanding, of, and then of course a pillar at times when the world shakes, you know. You need that kind of support and hope. So, all of those things, all of those things.

And a lot of fun, too, you know what I mean, when she starts, her sense of humor gets going and she can be very funny. So all those things, I think, kind of make a delightful mix, and forty-seven years later, you know, we still can face the future.

NZapol: I think two things: you and David. [*laughter*]

WMZapol: Yeah, we're thankful. That combination seems to have --

NZapol: And everything that came along with that!

WMZapol: And then the progeny!

NZapol: Yeah, huge.

WMZapol: And the family! Yeah.

NZapol: Right.

WMZapol: Ok.

LZapol: All right. Thank you.

WMZapol: Cool this place off.

NZapol: Whew! That was great.

END OF SESSION 3

BEGINNING OF SESSION 4

Liza Zapol: So, this is the Dr. Warren Zapol Oral History Project. It is March 20, 2016,we're in Miami Beach, Florida, Flamingo Place.

Warren Zapol: 2449.

LZapol: 45. [*laughs. The address is 2445-49. There had recently been packages that weren't delivered because they were addressed to 2449 Flamingo Place.*]

WZapol: Apartment 6, I think it is.

LZapol: And I think this is our fourth session. And when we last spoke it was with mom – Nikki Zapol, and my brother David Zapol and his wife Diana Laird, and their son Elliot Zapol poked in, and we were talking about family stories and how you and mom met. And our previous session before that, in December, we'd gotten through stories of Antarctica, up to, as we said, like the mid [19]70's. So I'm interested in discussing how things shifted in the mid-70's in terms of your work and thinking, and maybe you can explain to me why I was born in England and what brought you there.

WZapol: So, mid-70's brings us to a period when I'm working in the laboratory at MGH four days a week, one day a week clinically, doing thoracic anesthesia, putting people to sleep for chest surgeries, usually for cancers, biopsies or lobec [lobectomy] – taking out lobes, or parts of their lung, one day a week. And then four days a week in the laboratory, studying ECMO, building better ECMO machines at MGH. And with Jesper, who I've described in an earlier talk, we write a grant, first work with Art DeVries, which I also spoke about, and then we go and work in Antarctica, but we're still doing what's called anesthetized animals or semi-, semi-awake animals in the laboratory, diving them in the laboratory. And that was '75, '6, and then we take a year or so off and then Roger Hill comes from England.[68] So before we have to get to England.

So we're doing the laboratory diving studies, and in the second year of laboratory diving, with Peter Hochachka and various colleagues, we decide, since I have an NSF grant to support the Antarctic work, with an NIH grant we will go around the world. So we go to Hawaii, and in those days, when I flew, I had to fly military airlift command (MAC flights). So I fly with mom, and we take David, who is five at this time or something like that, and we go to Disneyland in California. Then I catch a [USAF] flight to Hawaii, out of one of the Air Force or the Navy bases on the West Coast, and mom takes United.[69] And we both meet up in Hawaii [*laughter*] and then we had a great vacation in Hawaii and went to the Red Beach and Hana, Maui, where [Charles] Lindbergh had had a house. And David and Nikki and I stayed in Maui on the red sand beaches, and then one night she and David fly to New Zealand, and I have to go military airlift command,

[68] WMZ noted on 12/17/16: Roger Hill came as a research fellow to MGH after finishing an Oxford PhD in bioengineering with Brian Bellhouse.
[69] WMZ noted on 12/17/16: I flew out of Port Heuneme, a US Navy base near LA. They had a bus for sailors going there from the LA Airport, which I took.

standby, so I go MAC to Pago Pago and then Christchurch, New Zealand, and then I flew up to Auckland, and mom was already with David in Auckland. And we stayed with Mont Liggins, and I think we started out in his mother's house; his mother had gone into an old age home, but she kept climbing over the back fence looking for her sherry. So didn't work out terribly well.

And we went up to Opahi and we fished with Mont, and David liked watching the fish, catching the fish, gutting the fish, he liked watching, anyway.[70] And then we had a great time there. And then we, mom had some kind of exposure to the law school at the University of Auckland. So we spent about a month, eating trout with Mont, and Celia would cook it. Then we drove to the South Island, we had one of these teeny cars, Morris Mini-Minors, they were tiny, tiny; they were roller-skates with motors. And we drove to the South Island, and got me basically to Christchurch in the South Island. Wonderful, David in his pajamas sitting out in the beautiful sunshine over the lake [Tekapo], I mean it was just a gorgeous place. And I went off to Antarctica and came back after our time on the ice. Then as opposed to going home, I think we went to Thailand. And then to India, where we met, we stayed with the family of a man whose daughter I had saved when I was at NIH and almost got put on the icebreaker, Colonel whatever his name was, and his daughter.[71]

LZapol: Yeah, we spoke about that with mom and Davey.

WZapol: We did. So we stopped there on the way home, and David --

LZapol: Cause he lost Donk, right.

WZapol: -- David got a, I remember David had some wild experiences on this trip. In Bali, when we stopped, he saw a tooth filing ceremony, and almost fainted. And then when we got to Pakistan, the Colonel, his son had a motorcycle, and David loved riding on the backs of motorcycles, so he was fine there.

And then we caught a plane, I decided I had to get to England, I couldn't waste all this time, this was December of '77, it must have been. And then we went to Oxford, to see Brian Bellhouse. And we learned, we got there on something like the 16th or 17th of December, maybe the 20th and of course England closes from the 15th to the 5th of January, they're just not even available, and I was ready to work, but nobody else was. And so we were there, had a great time, with the Bellhouses. We were adopted by them, Brian and his six daughters, Elsbeth, Katherine, Mary, Anna [*laughter*]

LZapol: Emily and Maggie?

WZapol: Yup, there you go. [*laughter*]

LZapol: And then Tom came later.

WZapol: And Tom came later.

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[70] WMZ noted on 12/16: We ate huge NZ lake trout caught in the lakes by family members.
[71] WMZ noted on 12/16: We stopped in Rawalpindi, Pakastan and Satellitetown, to see Major Akbar and his daughter Fatima.

LZapol: But what brought you to England, what was the arrangement or the agreement?

WZapol: We had a meeting that I ran in Denmark, in, must have been '74, on ECMO, called ECMO for Acute Respiratory Failure, it's a little orange book we published, Jesper and I. And we'd invited– Bellhouse was king of the English oxygen, oxygenator inventors. We had met him in Denmark at Runstedgaard, where David had all these cute babysitters and ran around nude, at the age of four or whatever he was. And we, Brian said, 'Come and see me on your way, come and visit on your way back from Denmark,' and we did, and we said, 'Gee, this place would be a neat place to go and spend a sabbatical.' So we decided to spend from December to September of the next year there.[72]

It's always a little tricky when you leave your laboratory, but I did. And luckily while I was there I wrote with Lynne Reid, who someone told me was coming to Boston from London. So we met Lynne Reid, and she joined our specialized center in research in adult respiratory failure. We were writing a grant which would go from '78 to '88 – about a million dollars in those years, was a lot of money, and it ran for ten years. And it allowed me not to focus so much on ECMO machines but to study how lungs broke down and didn't work in bad pneumonia. And I focused on the pulmonary circulation, and the pulmonary vascular resistance, and I was very interested in why it was elevated. I published papers on that in America [with Koichi Kobayashi], but at this time I was in England cooking it up.

And we'd go to London, where Lynne had a boyfriend, and she and the boyfriend lived there. Morris Megrah, Mr. M, Morris M., and we went to a famous club [the Athenaeum], I remember, where women weren't allowed in the front door, they had to slip in the back door.[73] I can't remember the name of the club, but it was a fancy London club.

And we had a great, we had really a terribly good year. During this time, of course, mom realized she was pregnant with Liza Zapol, not yet named, and is getting bigger and bigger, and has a GP. We live in the little town of Yarnton, north of Oxford about three miles, four miles, not very much – on the Woodstock road, halfway to Woodstock, where Churchill was from. So it's all north of Oxford. I enjoyed Oxford; I didn't teach, I worked, with Brian, and Lizzie [Elisabeth Bellhouse], who you're named for. And Lizzie was my technician. I don't think she really liked it; she liked to work full-time, at home, and take care of the family. But she did, and she learned how to operate on a sheep with me, and we anesthetized sheep together.[74] We got a permit to anesthetize. It was harder to get a permit to work on animals in England than it was on humans. Animals are very well protected in England. And so we did sheep, awake sheep, and we wanted to work on the oxygenator but Brian at that point was working on a dialyzer, a blood cleaner, a hemodialyzer, a blood washer. So we worked on the blood washer and did some nice studies with washing sheep blood. And I worked closely with Brian's dad [Francis Bellhouse], who was the machinist and who was always there. Brian was traveling a lot, taught, and was always bicycling around Oxford.

LZapol: Tell me a couple of stories about Brian, about his character.

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[72] WMZ added on 12/16: I stayed in Oxford as a visiting foreign fellow of Magdalen College.
[73] WMZ added on 12/16: Morris Megrah was a barrister in London.
[74] WMZ added on 12/16: We worked on study lambs, which were 25-35 kg.

WZapol: Brian was a remarkable man, you know he – first of all, absolutely poor. Poorly paid, poor. So he and the family had no central heat, they had an AGA [stove], they used to dry their clothes over the Aga. Brian, very enthusiastic, very smart, had been lucky. He had had a great paper on how blood fluid dynamics occurred over valves, and had a good friend who was a heart surgeon. He had built a very fancy fluid flow oxygenator and Francis, his father, would build the devices and build the machines. Francis called it 'fiddly stuff.' So the whole family was involved in this; Elizabeth, Brian and his dad all worked in the same [lab], on Woodstock Road, I think it was, or on the Banbury Road? Can't think of the address; in the bioengineering building.

And he'd always have his lab meetings on Monday morning, and people would talk about his heart valves, he was building heart valves, he was building hemodialyzers, he was making oxygenators, he was making too much, but he was very busy doing lots of things. I enjoyed it. He was very positive. He loved Oxford. He had himself, I think, been a chorister in London at one of the famed churches there, and then --

LZapol: Westminster Abbey, no?

WZapol: Maybe Westminster. And then his father, Francis, who was a mechanic, a car mechanic before Brian really had him running the machine shop in Oxford. Brian went in the military, was in Germany, served in the British Army in Germany and then came back and went to Oxford. And did splendidly, and stayed on, and was a prize fellow and then stayed on and became a fellow, senior fellow of Magdalen College. Which was a wonderful college, and he got me a visiting fellowship, which meant I got free meals. And the meals were very good, and the wine was better, and the port was superb! So, the problem was your mum was pregnant at the time, and would get sick at the thought of food. So about the best we did at home was a boiled egg. But I would go into college, and of course at college you'd have dinner, and then you'd stay to port, and they would have a little summer port room or a winter port room, where Francis built this little gadget that would transfer the port bottle across the table at the end and you had blue cheese and crackers and fruit. And pears, and port. Or, if you didn't like port, you could have some other dessert wine. But the port was very good. And the president of the college liked to stay to port, so he would stay. I can't remember his name.[75] And it was quite a show – so – and then there was kind of a sobriety test at the end, if you could drive through the gate with your car without knocking your fenders off you were likely to make it home alive.

LZapol: Cause it's a very narrow gate, eh?

WZapol: It was an ancient gate, you know, with a wall that was six foot thick and this enormous gate. I mean, the college was new in 1400 [*laughter*] but it had a few years.

LZapol: It was considered one of the newer colleges, though, right?

WZapol: The New College next door was like 1500.[76] [*laughter*]

LZapol: So different from MIT in terms of a --

[75]WMZ noted on 12/16: The president of the college was James Griffiths, a physicist who liked German wines.

[76] Magdalen was established in 1458, The New College was established in 1379.

WZapol: Different, unlike anything --

LZapol: -- or Rochester –

WZapol: Yeah, it was very nice, cause as an American, I was totally classless. I had no – you know, the British are very class structured, you either have an Oxford accent or a poor person's accent from London or something, or you sound like Scottish or you sound like Irish, but I sounded like nothing. Although I was from Brooklyn, at this point I was nothing. So they considered me classless, and we could invite people to our house – a few, we didn't do many. And we enjoyed it. I enjoyed it very much. I think mom did, too. Because when you'd go to dinner, you'd sit at High Table, at the front of the big room, and then you would, around you were people who weren't medical researchers and anesthesiologists; they were people who were professors of Egyptology or Assyriology or words I didn't hardly know what they meant. Or a law professor or somebody from molecular biology, or somebody else, but almost nobody – there was a physiologist who was very busy with the 500th anniversary of Harvey's discovery of the circulation, you know, holy moly, William Harvey. I don't know, America hadn't been found yet, or it'd just barely been found. So, I mean, it was, there was something wonderful about it. You started with a sherry before dinner, in the college dorms, then you went across the roof and you descended onto the High Table and all the students were out there in their gowns, there'd be two, three hundred students out there talking, and then all of us would sit out there and they'd say grace, and I wouldn't, but they would, and then I would say the 'Baruch Ata' over wine and start dinner. And it was all served, and on silver, you know, and you didn't have to clean up or anything, it just happened, as this place had been there for hundreds of years had been doing it, and would be doing it for another hundred years. You know, it was kind of like being part of this ancient machine.

No, we enjoyed it a lot, I think Oxford was a – and then we did a lot of traveling on the weekends, and then mom was very closely guarded by her GP, who checked her weight, and made sure everything was good. David had been premature, we didn't want you to be premature. And once we went to Switzerland to give a talk, and she went to the doctor, and he said, 'Oh, you've been to Switzerland!' And we said, 'Uh, yeah.' [laughter] Because in a little village, everybody knows everything, and our neighbor had told somebody who had told the GP that Nikki Zapol had gone off to Switzerland pregnant. Yeah. So, I mean, it was an interesting – and then you were born. And you're born on the, in the JR II, the John Radcliffe, the new John Radcliffe. The old John Radcliffe was someplace where, I don't know, oxygen had been discovered by [Joseph] Priestley in-I don't know, 15- 1700 or something.[77] And there was a new hospital that was quite fancy, looked like a giant toilet, up on a hill, and it was the JR II, and we, you were born there.[78]

All I can remember is mom's classical story of, she goes into labor and we decide she'll have an epidural and Sister Timkin says, 'By the time they get the epidural in, the baby will be here.' And then I said, 'I'll go off to lunch at college and be back after,' and she said, 'You will have a baby daughter, or a baby child, when you come back,' and I said, 'Oh, I better not go,'

[77] Joseph Priestley discovered Oxygen in 1774.
[78] WMZ noted on 12/16: A "new hospital"was built in the 70s and much nicer than the old hospital, though it looked like a white faience toilet.

and your mother was flagging me, stay put. So, no lunch that day at college. [*Yawns*] And it was, as I remember, a very smooth midwife delivery in the lateral Sims position. American women never deliver laterally. In England, they all deliver laterally. So, you were delivered in the lateral Sims, and it was great. And you were healthy, and a great big chunking girl, and we went, mom had her room up on the fifth floor, overlooking the fields, and this is no HMO world, this is England.[79] I think she got five days on her back and resting and breast feeding and having a good time up there. And Elizabeth came up and said – Brian's wife, who had six children – and said, 'I'm jealous.' That's Tom, I guess. Yeah, so, I mean, it was a wonderful time.

And then my mom came, to meet you, and then we couldn't have a bris, so we had a bris party, a bris equivalent. Lynne Reid came up from London with Morris Megrah. They took the train up, and she gave you something, I don't remember exactly what, but it was great, cause there was Lynne Reid, soon to be the second woman professor at Harvard, and Brian and Francis and all of the Bellhouse girls were there to be your babysitter, so you had no worries. You were ok!

What else. So it was really a good time. I don't think I, I published maybe one paper when I was there, it was the least publishing I'd ever done, but I published a whole bunch of Antarctic papers and I came back and we got that grant. The SCOR grant, '78, which went for ten years.

LZapol: With Lynne Reid.

WZapol: With Lynne Reid, Reggie Greene, Tom. And somebody else, you know, there are a couple – Bob Trelstad, a wonderful pathologist. Yeah, no, we had a very good A team. And Claude Lenfant said, 'You did a very good job, Warren!' The head of the [National] Heart, Lung and Blood Institute [of NIH] came on the site and said, was reading his *New York Times* – 'You did a very good job.' That's all he said. And then he left.

LZapol: When was that? What was that story?

WZapol: That's a site visit, when they come and everybody presents, we're all talking about what we know and what we want to do. He said, 'Very good.'

LZapol: And that was high praises from someone like that.

WZapol: That was Claude Lenfant – there's a Lenfant Square and a Lenfant everything, so this was the great relative of the Lenfants, who was at, then Director of the National Heart, Lung and Blood Institute.

LZapol: So you returned to - I was born in August, August 12, '78, so you were, you then returned --

WZapol: We had to get you a passport. You looked like every other baby in the world, so, you know, I don't know. But you, we got an American passport. I thought it would be good if you didn't come as an immigrant. [*laughs*] We got you a passport in London, it's where the American Embassy is – not so well guarded in those days. And then we went, yeah, that's right,

[79] Elisabeth B. Zapol was born August 12, 1978, at 6 lbs, 9 oz.

cause we stopped in Tehran, I remember, before the revolution, on the way up from Pakistan, to Turkey, to Cyprus, to England, coming up with David --

LZapol: Oh, before, yeah.

WZapol: Yeah, we stopped in Tehran.

LZapol: What are your memories of that?

WZapol: I remember putting snow down your brother's jacket or something. We had a snowball fight on the north of, northern side of Tehran. They got snow there, I didn't realize that. Yeah. We had a great time; we met a friend, Joe Silk, and another Iranian friend that worked in a camp with me [Nadir Movassaghi], and he and his wife [Anne], a French lady, went back to Iran and still live there.

LZapol: Did you feel like revolution was afoot at that time? Did you know?

WZapol: Well, you know, you didn't feel comfortable, but we didn't know anything. Iran was never a place a woman would ever feel comfortable. I felt all right cause I'd done two summers there and I thought their craziness was their craziness. But I didn't know what it was. I knew there was those who loved the Shah and those who hated him.

LZapol: So then, I guess, continuing in that vein –I mean, you talk about saying grace at Magdalen, I mean, England is a fairly Protestant country, but --

WZapol: Yeah, it was Benedictus, da-da-da-da-da-da-dum. They said it in Latin and I had no idea what they were saying.

LZapol: Did you feel – did you ever feel like an outsider as a Jewish doctor scientist there?

WZapol: No. I went to a lot of churches, and saw a lot of knights frozen in cement; I, you know, I always managed to not notice this kind of stuff. I could never be a Christian. But I think perhaps even, I don't know, I think they're pretty, the Church of England was pretty non-invasive, didn't really bother people. I mean, it didn't seem to me to be a pervasive thing in England. It's there, but we didn't notice it. I would go to chapel sometimes, to listen to the Evensong. They had a Magdalen Chapel School, I remember, with a chapel choir of little boys who sang each evening in the Magdalen Choir. So I came, maybe once, twice, three times I went.

LZapol: I'm sure that Brian was a fan of that music as well --

WZapol: Eventually, when he became wealthy–So ten years, after I leave, he invents a company called PowderJect which is going to use positive gas pressure to blow gold particles into you with something that will immunize you on their surface.[80] BOC buys them for a hundred million pounds, or whatever, two hundred million pounds, of which he makes thirty or fifty million pounds. Which is a lot of dollars. That converts the Bellhouses from a family making fourteen thousand pounds a year, to a family with fifty million pounds. It totally changed their lives. Totally. But that, now you're talking '85, '88; son-in-law [Paul Drayson] is president, marries

[80] WMZ noted on 12/16: It would blow gold particles into your skin dermis.

eldest daughter [Elsbeth Bellhouse], blah blah blah blah blah; it's a kind of – a wonderful story. Wonderful. Rags to riches. Rags – but [Brian Bellhouse is] a teacher, dedicated teacher, who loved it. And in fact he tried to convince me to come back in the middle of this, like in the late '80's, to be a [next] President of Magdalen. They had had one American, and his wife Dixie, or something, who had put, I don't know, shag carpets in the place or something, but they wanted another, and so he tried to convince me to go, but luckily I was not elected.

But it was a very peculiar feeling to go back for a viva, I had to meet a bunch of them and talk to them if I was going to get their votes or not.

LZapol: What's a viva?

WZapol: An exam. An oral exam, a viva.

LZapol: So you were given an examination?

WZapol: Yeah, well – it's like an interview for what would you do if you were President. And clearly I would have driven it into biotech and science. Which is what I cared about. And Brian very much wanted it. But, another man who was head of the British Film Institute was selected [as President of Magdalen]. A large portion of the faculty were gay, and so it was time for a gay member to be elected a President, which was ok too. Yeah, no, no, honestly, it was really good I didn't do it. It would have changed my whole life; I wouldn't have had a laboratory, I would have been an administrator of a college --

LZapol: Yeah, which is to come, in your story, too, your experience more in administration, but --

WZapol: Right, so that gets us up with SCOR into the mid-80's. A few more trips up to Antarctica, perhaps the most successful one was Roger Hill and his computer that could go diving, published in *Science* that says yes, seals have diving heart rate changes, brachycardia on diving, it's not fear of the scientists, it's real![81] It's what they do. Using microcomputers, [we were] the first to use them on seals to record physiologic parameters, and make careful measurements, draw blood samples under water. Konrad's paper on nitrogen in *Science*.[82] So we, in these ten years, probably my most useful years, '78 to about '90, and then there's, '90 is nitric oxide, so that's the next border of my life.

In '88 I lose all my grants, somehow.[83] I guess I didn't write the next ones well, and I had no money. But I had the most loveable chief; the reason I stayed at MGH was my chief Dick Kitz. He said, 'Don't worry, I'll support you. Keep doing what you're doing, don't change anything. You'll have a home run again.' He believed in me; and so, having someone believe in you is the most important thing, I think, and keeping your job.

So I started in '70 at MGH, as a resident, '72 as staff, and now, in '88 I wind up losing all of my money, and I write all my grants again and again and again, and not getting them. Three times, you're out. And then finally I say, 'Whoa, let's keep doing' – I wrote some kind of

[81] WMZ notes on 12/16: Roger built a 57kB memory diving computer at MGH.
[82] WMZ notes on 12/16: Konrad's paper was on blood nitrogen levels of diving seals.
[83] WMZ notes on 12/16: I lost my NIH grants, it was the end of SCOR.

human study that got funded, and Dick kept my secretary, Shirley, at that time, to become Missy [Flynn], Shirley Barry, he kept my secretary and he kept Tommy Wonders employed. And me.

For about two years I was dry. And that taught me, when I was chief, to say I believe in people. I'll take care of you. Just keep writing grants. You're smart, you're bright, and you have good things in you. And so I was working. Then a Swedish Fellow came over, Claes Frostell and I were working on–we were always interested in ways to dilate the lungs' blood vessels. And I tried all kinds of drugs, giving them intravenously. And the problem with intravenous drugs is they lower your blood pressure. And your heart can stop. I was doing a young girl, must have been a fourteen-year-old girl, with Prostacyclin, which was a newly discovered drug at the time, and I gave her Prostacyclin intravenously. Her pulmonary pressure and her blood pressure came down, and then her heart stopped, and then I could never start her again. [0:35:13]

And I said, 'You know, this is not the right way to do it. Going to kill people if you do this.' And I did.

So, we went back to the books, and then along comes Los Angeles, and we're thinking about being Chief [of Anesthesia] in Los Angeles, and I go out there and the guy who's trying to recruit me is Ken [Kenneth] Shine, the Dean of the medical school, and a number of people, [including] the Chief of Surgery.[84] But I know there's also this guy out there working on something called endothelium derived relaxing factor, which is, turns out, is nitric oxide, and Lou [Louis] Ignarro is there and he's trying to scoop me up and carry me out there with him.

And then I open the *LA Times*, and I'm reading it on the way home, and there's the weather report, and next to it, there are all the gases you breathe, right? Carbon monoxide, pollutants, particles, and then it goes nitric, nitrogen dioxide. And I think, nitrogen dioxide, that's what he's working on. I wonder if you can breathe it. And I'm thinking. I come back to Boston, and I call the EPA, and I say, 'Can you breathe NO? I see there's NO2 in this newspaper. And nothing makes NO2; it makes NO and then it oxidizes in the atmosphere.'

And they said, 'Sure you can; if you work at McDonald's, you fry hamburgers, you can breathe 25 parts per million all day long.' Hm. Cause I thought if you could breathe it, it would dilate the blood vessels of the lungs, but it would instantly be destroyed by the hemoglobin in your red cells. And never circulate around your body, cause the hemoglobin would convert it to nitrate, nitrite, stuff that they preserve bacon with.

LZapol: So you had thought that it wouldn't circulate.

WZapol: So I thought that it wouldn't circulate, because the red cells would destroy it. So Claes is there, and we start talking, and I say, 'Claes, get a sheep. We'll give it something to tighten up its pulmonary circulation' – something called U46619, U46619, a prostaglandin endoperoxide – we gave it intravenously. Tightened up the pulmonary circulation, and we all wore gas masks, we opened the windows of the lab, and the sheep had a tracheostomy. We let it breathe just parts per million of nitric oxide, right? So five, ten, twenty, thirty, forty, eighty.

[84] WMZ noted on 12/16: Kenneth Shine started as an MGH Cardiologist, later became the head of the Institute of Medicine in D.C.

And guess what? Bingo! [Pulmonary] pressure went down, but the [systemic] blood pressure didn't change.

And I thought, 'Oh, this is much better than what I did to that little girl.' And in a nutshell, we did the first sheep, and then we did a whole bunch of sheep.[85] We convinced ourselves. Carl Rossow, a pharmacologist in the department helped us a lot: how to do it, how to space it, how to measure it, [he is a] good statistician, and we published it. We tried to go to *Science* and *Science* rejected it. So we went to *Circulation*, and *Circulation* took it, and *Circulation*'s a very good journal, and about 10,000 people copied us [thereafter]. To make sure it was true. And it was true. It was a selective pulmonary vasodilator at low doses. So even at 25, the EPA limit, I could get a nice response. Then we learned it was in cigarette smoke at 1000 parts per million [ppm]. I don't think that makes cigarette smoke good, but it's probably not bad.

Jay Roberts [Jesse D. Roberts], a young man who was a neonatologist as well as an anesthesiologist and our chief resident, was with us. So this is '90 to '92, [He] said 'Let's try babies.' And we wrote a permit to do babies.

Babies go on ECMO, you give them intravenous heparin and then you put them on a cardiopulmonary bypass machine to make them pinker when they're blue babies, and we said, 'Well, gee, maybe just this gas would work.'

And they said, 'Ok, you can try it, but only for 30 minutes, and be careful, and no, don't push the dose.' And so we got a cylinder of the stuff, and I remember it has a skull and crossbones on the side of it, and we papered over it, so that the mother and father wouldn't think that we're killing their child with a skull and crossbones on the nitric oxide. And we mixed nitric oxide for the baby, I think we gave 40 ppm to the kids to start.

The surgeons were prepping the groin with alcohol, shaving, and, I don't know if kids need shaves, but getting ready to cannulate, and we said, 'Oop, we have a permit first, to do this.'

They said, 'Ugh, you're wasting our time, this isn't going to work. Let us just go ahead and put 'em on ECMO.'

We said, 'No, no, no, let us try.' So a little baby got to breathe a little poison gas in a tiny dose, a natural substance, made by your own body, from arginine, nitric oxide, and the baby turned pink.

I remember the nurse saying, 'What did you do?' And I said, 'Just gave it a teeny dose of nitric oxide.' And the baby stayed pink. And so went out for half an hour, said 'Mm mm mm,' turned it off, and the baby stayed pink. And the surgeon said, 'Damn it,' you know; anyway, that was the story of how we did the first baby.

I think that was actually the third baby or the fourth baby cause we'd done a few in the cath lab. With PA [Pulmonary Artery] catheters, and it was just, they were going to die, it was too late. But this baby was right, this was the first one where we said, 'Let's see if it turns pink.

[85] WMZ noted on 12/19/16: These were really 25-35 kg lambs.

Let's not measure anything except how pink it is, just with a little, you know, pink meter, pulse oximeter.' And, yeah, baby turned pink.

So we then, it took us a long time, it took us about a year, we don't have a lot of babies at MGH, but it took us a bit over a year, and then we published that paper.[86] And it was published back to back with another paper from Denver where they heard, they read my sheep paper, and you don't need to think too hard. So they all, they also did babies, like we did; we each had a dozen babies or so, and the *Lancet*, I'm pretty sure it's '92 we published it. And then the rest is history.

[19]99, approved by the FDA for term hypoxic newborns. Term blue babies, or whatever reason: pneumonia, anything. Doesn't work well on diaphragmatic hernias, babies who don't have vessels. Why do I think it works? Why did babies need it? Well, the clock that makes you turn on nitric oxide production is inside you, and all babies have it. We haven't been able to grind up human babies, but if we grind up mouse babies, we see that the enzyme to make this nitric oxide, synthase, doesn't appear until two, three days before the mouse is born. So there's a clock in the baby that says, 'Oh, you're going to be born in two or three days, you better make this nitric oxide, cause you're going to need to dilate your pulmonary circulation.' You don't need it in utero, it's all full of fluid, you're not breathing. But on day one you go, [takes deep breath] and you better breathe, and they're better be blood flow in that lung.

That's why the [natural lung's] nitric oxide machine has to bang off. And what we think we do is we just supplement it with nitric oxide from a can, from a cylinder, and after four or five days – the average baby gets it five days – we turn it down a little bit, little bit, little bit at a time, don't cold turkey it, you know, and the natural enzyme, by then, has turned on. And the baby's fine. Lives the rest of its life pink. So it's supplementing the substance that wasn't there in the newborn by inhalation, so it only affects the lung and not the body. Cause the baby doesn't have much blood pressure; they're around thirty, forty when they're born. People tried other vasodilators, it killed them. Ooh. Priscoline. Didn't work.

LZapol: So that must have been – how is that different from your other discoveries, in terms of either your discoveries about seals in Antarctica, your work with ECMO, how did this feel – did this feel different to you? [0:44:56]

WZapol: It feels the same and different. So ECMO is a, I did in sheep and then did in people. ECMO is now very popular, right, there must be thirty, fifty, sixty [ECMO perfusion runs] a year at MGH. Right? I used to do one a month, maybe. But we didn't have the right membranes, we didn't have the right devices, we didn't have the right anti-coagulation, we didn't know when to use it, we didn't ventilate the standard lungs so it could recover well. So we were never very good at it. And it was too early. Some technologies, you gotta wait thirty years for. Hey, sorry, it's too early!

But because I had worked with sheep and baby sheep, I could do the baby sheep experiments. We did both baby sheep and newborn sheep with Claes Frostell and Jay Roberts before we convinced the Human Studies Committee. The Human Studies Committee kind of knows me at MGH; they know I'm a serial inventor, that I'll do something in the lab, and then if

[86] WMZ noted on 12/19/16: There were 10 babies studied for the paper.

it's really good I'm going to try it in people. And so they'd see me coming, like electric NO, they saw me coming, this past year, and they said, 'Ok, he doesn't kill people, he's very careful, they're clean, they don't hurt people. And it seems to be of use. Because 36,000 Americans a year breathe nitric oxide.'

So I think – it's human research, so you have to be brave. You have to understand the human disease, you have to believe it will make a dent in the human disease, you have to balance risk and benefit. Can I hurt people? You bet. Unfortunately. But the people I usually get are going out the tubes, going down the toilet anyway. So I usually take them first, I usually start with very sick people, like ECMO. Some of them, their hearts had stopped before I started, that sort of thing. And I work my way back up. But now –well, now you would be sued if you didn't give NO to a blue baby.

LZapol: That's how safe!

WZapol: Yeah, in December of '99, the FDA said, 'Ok, Warren.' And I remember it took nine years. That's a long time.

And it's very hard to tell [a] mom, 'We're going to try this drug, we're not sure if it works, going to try this, it might be the placebo, you might get nitrogen.'

After a while, people say, 'Hey, this stuff works! What do you mean, I don't want a placebo. Screw the placebo!'

So, at some point, equipoise is lost, and then you have to use a drug. And that's what we really worked our way up over all those years. We tried it in a lot of other diseases; it didn't seem to work, and many of them, partly because I don't think we were good enough at treating those diseases yet when we added the nitric oxide. And so if you bang the hell out of the lungs, nitric oxide is not holy water, it's not going to reverse serious processes.

So, that gets you through 1990, '92, the first human publication of nitric oxide. Whereupon, I knew we would get royalties eventually, if this was sold. We patented it and everything, right – your mom was running Technology Transfer [at Massachusetts General Hospital]. She of course didn't touch any of our stuff, but other people did, happily, and the hospital patented the use of inhaled nitric oxide, an old gas, for a new indication, to treat blue babies. And I met Janice Frazier, a very good lawyer, and she helped us write it [the patent], and then we had to go down and fight in Washington to get it, but it was a good patent.

We didn't know what it would be worth, but I knew if it was worth something, it would then fund the hospital, the lab, myself, and Claes, as inventors, and the department. So there were four segments, and it ends up bringing in about 150 million dollars, by 2015 or something like that. So, the hospital quarters it, quarter quarter quarter quarter, but I split with Claes, cause he was there for the first experiment; everything I got, he got.[87] [00:49:48]

[87] WMZ noted on 12/19/16: The hospital splits the share of the income: 25% for inventors, 25% for the lab, 25% for the department of Anesthesia, and 25% for the hospital. The inventor's royalty is split with Claes Frostell.

But at that point, we were either going to go to Johns Hopkins–where are we, '93, '94, right? So Mark Rogers is retiring as Chief of Anesthesia, and Mark comes up. I think we had lunch in Boston and he says, 'Come down, I want you to take my job, you'd be the perfect guy, you should come down here' --

LZapol: Is this because of nitric oxide, now that you seem like you knew --

WZapol: Well, I think he knew about it. He knew about it, certainly. He knew what was going on, he said it'd be a miracle if it happened. We needed this. Because he was a pediatric cardiologist, as well as an anesthesiologist. Mark was a pretty extraordinary doctor, and he's trying to move us to Hopkins. You're thinking about it, too, as I remember, living in Maryland. Mom would get a job in their tech transfer office. But, to be honest, I don't think it was very strong in my mind, but it was there: I would lose all – I would get personal royalties, but I would lose my lab share, which is a quarter of the royalties, which was a lot of money. And this is what runs my lab now, and me. So this wouldn't exist, if I had gone to Hopkins. So we thought about it, we certainly went up and back, and we thought very, very seriously about it. The tug back was Ed Lowenstein, who was on the committee from the choice at Harvard [for the next Chief of Anesthesia at MGH] --

LZapol: So that was happening – that started to happen at the same time?

WZapol: Well, it didn't. So I said, 'Ed, I think I'm going to go to Hopkins.'

And Ed said, 'Mm, this committee is a year away from making a decision; when do they have to know by?'

And we said, 'Well, we really' - I think I held him off until Labor Day, I think it was, September, that we finally, Labor Day, [19]93, and so --

LZapol: Can you explain, just because you haven't, for the record, what Ed was searching for, what was the

WZapol: Ed was – well, my chief decided to, at MGH --

LZapol: Dick Kitz.

WZapol: Dick Kitz decided to retire, and asked that a search committee be embodied, and it usually takes about a year. They first of all have to get advice on who's there in the world, and decide what kind of, what does the department need, what's broken, what doesn't it have, and then go towards something. A person. And Jerry Austin was head of the committee, somebody from the Brigham [Simon Gelman], somebody from the BI [Beth Israel], Ed. Ed was the BI chief at that point, so Ed was on the committee. And Ed knew that this was going on, and didn't want me to leave.

So, the tug of war. [*Clicks his tongue*]. I remember walking around Holdenwood Road with mom, again and again and again, and we'd make a list of the ten reasons to go to Hopkins and the ten reasons to stay in Boston, and there's you and your friends and all of the people that you know, and CA, and then there's a new world, wonderful people who seem to want us, a department that is better than ours, and etcetera etcetera etcetera.

So, it was a turbulent summer, as I remember, but one in which we decided. So, we basically said, we gave Hopkins our list of demands, four or five million dollars, I think – three, anyway, plus these things. You always ask people what they need, and you make that your shopping list. And they said, 'You can have it all.'

So I took that shopping list and I gave it to MGH and said, 'You gotta give me the same shopping list if I'm going to stay here, or I'm going.' And they did.

And then Jerry said, 'Why'd you stay?'

And I said, 'Well, nah nah nah nah nah,'

And he said, 'You stayed because you love the bricks, don't you.' [*laughter*] 'You love the bricks.'

No, I think a lot of it is that, and a lot of it is that I loved the people I was with: Jay Roberts, Bill Hurford, all the people who were around me at the time, who worked on nitric oxide with me, Ken Bloch [Kenneth D. Bloch], others I felt very close to. Not so much – Ken grew over the years, but Ken, at that time, too. [00:55:14]

LZapol: So this is '93?

WZapol: This is '94, really. I became Chief in '93, but I had to go to the ice. So we went to the ice, and I don't know where I was doing then, but I was doing something. It was [Peter] Hochachka, I think. I think it was his last time on the ice, too. I went to the ice, and David [Zapol] and, it was wild, a wild year on the ice, where he meets Diana. I mean, so much goes on in Antarctica! Woo! So much of our life.

LZapol: Well, tell me about, you know, before we end, then let's just, tell me that story: what are your memories of being on the ice with my brother, and --

WZapol: Well, I think your brother had very mixed feelings. He wanted to go, so he takes his third year off --

LZapol: He was at MIT.

WZapol: -- at MIT. And he decides he's going to go, and I put him in the grant, I write him right into the grant, David Zapol. So they know it's my son, it's not like, 'Oh, who'd you put there?' NSF says fine. So he goes in on winter fly-in in August, and it's dark, and there's a little bit of light, and he lands, and it's quite crazy. I think Tommy Wonders is there with him. I'm not sure anymore. And then Bob Schneider goes in even earlier than I do, in, on first October fly-in, and I'm on later. I remember it was a time when, it's '93 and the Internet just appears, and he's [David is] sending me Internet mail and I'm not reading it. Cause I don't know it exists very much yet.

And he's setting up, he basically goes, has to work in a team, which he does, to set up our seal lab, about thirty miles away, on the shore of the Antarctic continent. So as we come into McMurdo he's way over in the Stranded Moraines, near the mountains, on the right side as you come down, as you come into town [flying]. He's over at the Strands. So he sets it up over there, and eventually we show up.

We have a good season, as I remember. Mont [Liggins] is putting monitors on fetal seals, and setting pregnant seals off with computers glued to their backs, and wires on their babies to measure heart rate, depth, velocity, all kinds of stuff. And David is there. We start every morning at about six, seven in the morning, and we work until we're exhausted in the evening, and then David starts not being there. And not being a person who's very observant of familial things, non-scientific familial things, I said, 'Bob, where's David?'

And he said, 'I don't know, he's around somewhere,'

And then eventually I said, 'he's not here, and we have to start this anesthetic, and where is he?'

And Bob finally says, 'He's out on a date.'

And I said, 'A date? With a penguin?'

And, 'no.' But he had met Diana, who was working with Art DeVries, who was our teacher originally, twenty years earlier. She was working on fish antifreeze with Art, and we were, they had met out there, and they had gone on dates and whatnot, and I think they became an item there, and I don't know how old he was, that was '72? [He was born in 1972.] Twenty-one, I don't know. And he's about the same [age as Diana], so, two twenty-one year olds meet in Antarctica, bond, that's it! [00:59:46]

And then she's – the two of them – I remember David very much wanted me to meet her. So he went back, I think a week before I did, and Diana and I – I said, 'Oh, Diana, I forgot to give you his teeth,' because we were going to drop his teeth down – he'd had all his wisdom teeth pulled [at MGH], and we just decided to drop his wisdom teeth down an ice hole --

LZapol: It's a requirement to be on the ice, right? [That wisdom teeth must be removed before working at McMurdo.]

WZapol: In Antarctica, right. For him, but not me. And so I, all I remember was Diana and I dropped his teeth down a hole in Antarctica. And then I got to know her a little bit. And then we, David and I, when we got out, did the famous trek on the South Island, there's like a fifty-mile hike --

LZapol: Milford Trek.

WZapol: The Milford Trek. David and I did the Milford Trek together coming out; he told me a lot, said that he was truly captured by Diana, at the age of twenty-one, and that they were going to go across and do another hike across the mountains, Greylock, Greystone, I don't know, some northern place in the Southern Alps. And I went home, and he continued on with her, halfway around the world, and to Thailand, or Bali, wherever they went; I think they had a great time. The rest is history, right?

LZapol: Right, right.

WZapol: How does your son find his wife in Antarctica? Easy enough. [*laughter*]

LZapol: Looks like you laid the tracks for that to happen.

WZapol: Well, I guess so!

LZapol: Unwittingly.

WZapol: You find strange people down there.

LZapol: Well, I think we're at, just at an hour now, so --

WZapol: I'll get you to chairman life.

LZapol: We get to, up to chairman, and --

[END OF FIRST AUDIO FILE [WZapolOralHistorySession4_1.mp3]; BEGINNING OF SECOND [WZapolOralHistorySession4_2.mp3]]

WZapol: -- which is a whole mind-boggling thing all by itself.

LZapol: Exactly. And we didn't talk about France, which maybe we'll talk about and catch up on next time.

WZapol: Yeah, when did that happen, that was '85, yeah.

LZapol: Yeah, because you talked about '88 being when your funds had, your funds had kind of --

WZapol: Lost all of 'em.

LZapol: -- dried up, so I'm interested in how France maybe fit into that.

WZapol: Yeah. Well France was kind of – Antarctic France was Roger, and we had done so well putting, gluing computers on seals, we realized there were a lot of seals that wouldn't come back to your hole with the data, and that what you'd have to do would be to put an uplink to a satellite on them. So we had microcomputers with satellite uplinks that would, you would record the Bible, and you would read it one sentence at a time to a satellite as it went over. Didn't work, but it was the plan.

LZapol: Because the satellites were so --

WZapol: But they funded us. Yeah, satellites are these low-orbiting, NOA, seven eight nine at the time, so they're a hundred miles up, line of sight. So if you can, you can actually see them at night, you see these little stars go flashing past, on a north-south or south-north, you know they're going north-south or south-north, so you know they're polar-orbiting satellites; that's what they use for intelligence gathering in various – cause it's only a hundred miles up. But you only need five watts. It doesn't take a lot to ping them. And so we had uplink transmitters on our seals that read up where they are, how deep is it, what was your heart rate before you went for the dive, what was your heart rate during the dive, after the dive, and none of them worked.

LZapol: So that was while you were in –

WZapol: You know, takes ten, twenty years for some of this technology to happen; you just have to have the dream first!

LZapol: It does now, yeah.

What, so that was while you were in France when you went to Antarctica.

WZapol: That was when I went there.

LZapol: But what brought you to France –

WZapol: To France, well, I had been working in respiratory distress syndrome; François Lemaire had, and people in Creteil were terribly interested in it, and in ECMO, and in ARDS [Acute Respiratory Distress Syndrome] and there were a lot of human studies going on. So we went there. I published a lot, worked a lot there, but I lost all of my [NIH] grants. Because I wasn't home keeping my crew on the straight and narrow, going to meetings, going where everybody else was going. But, but it was a great experience, and they're lovely people.

LZapol: Maurice?

WZapol: Maurice Rapin, Marie Claude; they treated us as American royalty.

LZapol: Maurice was chief --

WZapol: He was chief at Creteil.

LZapol: Chief of anesthesia, or?

WZapol: No, no, critical care medicine, but pulmonary medicine; nah, critical care. Critical care medicine. And *Soins Intensif*, and François became the next chief, and then Christian [Brun-Buisson] became the next chief, and now they have a new Algerian as chief, I don't know who it is, he's just dropped out.

LZapol: Christian Brun-Buisson was chief afterwards, and those were all people who were contemporaries with you when you were in France. So --

WZapol: Lovely people.

LZapol: Yeah. And what were you working on or publishing when you were there?

WZapol: Mainly on mechanical ventilation and its effects on breathing and circulation. Yeah. So, rather classical stuff. Bread and butter stuff. But it was fun, because they could – first of all, they could do a lot of invasive measurements that we could never do in America. They could put, oh yeah, we're going to put this catheter in your heart while you breathe. Ok! You know, huh?

LZapol: Human studies are less --

WZapol: Were less observed than, less carefully observed; now they're more carefully observed, but, so questions that you could ask – how does it work? They could find out about, where we couldn't. And that was good. The food was splendid, the wine was great, right? Monsieur, the apartment we had was owned by an Air France pilot --

LZapol: Monsieur Franc.

WZapol: Monsieur Franc, Bernard Franc, and he was very kind, very nice. Apartment was splendid, we had a maid who came and cleaned it, can't remember her name, and it was down the, one block away from your school, and --

LZapol: One block from Notre Dame! [00:05:08]

WZapol: A block or two from Notre Dame, yes, mon paroisse, my parish. Yeah, no, it was great, it was great, it was a spectacular place to spend the year. Both the Oxford year and the Paris years were superb. Life-changing times. Also, you remember the terrible plague of boils we had when we were there! We couldn't finally figure out what it was until somebody finally put us on antibiotics [nafcillin] and cleaned us up; holy moly, staph infections, awful. Butt boils!

LZapol: [*laughing*] I forgot about that! We would take a lot of baths.

WZapol: Everybody did. It was awful. And the food was great, and the pain au chocolat. Liza had to have a pain chocolat every day, and croissants and baguettes --

LZapol: Davey and I both were in schools in France.

WZapol: The lady down the street with a toy store, was it, or the cards. Yeah, I mean it was a great neighborhood. The comic books, the PD [?] comic books. Tintin! All the Tintin comic books. No, it was a mind-boggling place.

LZapol: But it's interesting, you say, in terms of human studies, the things that you were able to do in France, also the kinds of collaborations, more mechanical, that you were able to do in England, it sounds like in each place, I'm curious what you think you took with you from those, from those experiences in --

WZapol: Mainly food. [laughter]

LZapol: Good or bad habits, wine and port.

WZapol: Yeah, I must admit, I don't know, I don't think I made – I learned something in both places, and England was very useful in the next set of grants I wrote for NIH, which were about ECMO machines, advanced ECMO machines, and France probably wasn't – I made a lot of friends: Tony Torres, I met a lot of Europeans. I ended up writing a European textbook of critical care medicine with an Englishman, a lovely man from England [Dr. Jack Tinker of Middlesex Hospital, London]. So, I became more European. I was perhaps the most European of Americans, with one or two exceptions --

LZapol: In this –

WZapol: In the field of critical care medicine, we crossed the – and so I was appointed an editor by Maurice of *Critical Care Medicine*, which was intensive care in Europe. So I would go to Germany once a year in Heidelberg for the editorial board meeting, and then François and Konrad followed on that, so I had more, I had some impact on European medicine, which kind of surprised me, I didn't think that was going to happen. So that was critical – that was the Maurice Rapin, François effect: getting invited to Europe a lot. To talk about what we were doing, you know, cause they knew us. And yeah, and eventually getting Fellows, so Konrad, and the others, the Italians – how many Italians have I had, I mean, acres –

LZapol: Right. Your lab is very European, also. Not only European, but –

WZapol: Yeah yeah.

LZapol: – that sounds like that's a legacy of that connection.

WZapol: Yeah, yeah. I had a Japanese connection, so we had some Japanese; Chinese connection now.[88] Heavy Italian, heavy, the best.[89] And the Germans. The Germans and the Italians, I mean – just their basic education is so good. And they're close enough to English to be able to speak to them, and they will understand you within three to six months. Whereas if you, primary Japanese or Chinese, it takes longer, it's harder, and you may not write it for a long time.

LZapol: Well it sounds like we have –

WZapol: We have hours to go!

LZapol: – plenty of material for the next [*laughs*] –

WZapol: Wait a minute here!

LZapol: – conversation, but we progressed.

WZapol: Yeah, talk about being the chief, and that's a big chunk. And then the post-chief years. So, you know. And you only have, see, now you're up to '94 now, hey, wait a minute, you only have twenty-two years to go. [00:10:00]

LZapol: [*laughing*] We've cut in half! All right, thanks, dad, thanks for today, and --

WZapol: Well, it wasn't a waste carting all this stuff down to Florida.

END OF SESSION 4

[88] WMZ noted on 12/19/16 that his Japanese connection is Koichi Kobayashi, and many of his Chinese fellows are from Xian.
[89] WMZ noted on 12/19/16 that his current Italian fellows are Luciano Gattinoni and Antonio Pesenti, both from near Milan.

SESSION 5

Liza Zapol: So this is, it's August 4, 2016, we're in Cape Cod, in Falmouth, at 20 Whittemore Ave, and this is the Dr. Zapol Oral History Project. I think this is our, maybe fourth or fifth session now. So, yeah, so you know, when we last spoke, we reached up to when you were selected as chief, but I think you said, 'Hang on, I still have to go do a trip that I'd already planned' –

Warren Zapol: Right, right.

Liza Zapol: And then you –

Warren Zapol: I went to Antarctica and I came back, the year pretty much went by with colleague George Battit as acting chairman, he'd been vice-chairman before, very nice man. And I then took over on April 1, April Fool's Day, in 1994. And I must admit, I was shocked by the change of my life. My job, which had been to run a research lab, and run around the world giving lectures, and do field work in Antarctica, Korea, Japan, wherever, suddenly had changed. I had to stay put, because as soon as I didn't show up in the office, there was a fire in the garbage pail, and you had to run to put it out. So, you couldn't go very far; as I came back from Antarctica, we agreed we'd have a summer house in Falmouth, so we could decompress a little bit as we came across the [Bourne] bridge and not worry so much.

But all week long, I had to take care of a department with a hundred and twenty-five doctors; probably a hundred and twenty-five residents, another form of doctor, junior doctor, two fifty, and maybe another hundred and twenty-five people. Who were administratively involved in the department. So you're talking three to four hundred people at various times, who go away, move, for very good reasons, their wife gets a job elsewhere, blah blah blah. So you're replacing people, you're changing people and it takes a little while just to imagine the size of the organization and imagine the change in my job.

And although, I did have an administrative group, which was quite good. Margaret Flynn, Missy, who had been with me since mom started at the hospital, which I guess is 1990, so she'd been with me four years, she went from the lab to being an administrative assistant and chief in the department. And we had very good people; I had Bob Schneider as my vice-chairman, so I had reliable people, good friends who I didn't work with. On the other hand, I really didn't – it took me a while to understand that I no longer worked for myself and was boss of my little group. I now worked for the hospital and my boss was the president of the hospital, and I did what he wanted, not what my department wanted. And so, the change in my boss was very important. I really was like a deer in the headlights; took me a while just to understand that. That administrative meetings sometimes began at six in the morning, so I realized I couldn't live in Concord really anymore, because it took an hour to drive in, an hour to drive back. And we boarded a while in a department owned by – in an apartment owned by the department, until we eventually moved, found a house in Boston [Cambridge], in 2001. But it took us a while to make the conversion from Concord to living in Boston, so you could only commute for twenty minutes and not for an hour, and hour and a half.

So life changed, and one of the key therapeutic things for me was to take something called the Harvard Course for Chiefs of Clinical Departments. And, which, for, I believe three or

four weeks, you live in the Ritz-Carlton or some fancy place downtown, and every day you take a course, on how to do what you're doing. And you realize it's nothing like what you were doing, and everything is different. It teaches you that the reasons people stay in departments, and stay in their jobs, is they have respect from the person above them, and the person, they respect the person, their boss, and their boss respects them. Those two, those two responses to working for someone are the most important things in staying in your job.

And as it turned out, there was no president in the hospital when I started; the last one had been fired. They hired a new president of the hospital, Sam Thier, who was a hero, a research and administrative hero. But he was hard as nails. [*laughs*] Really tough. He liked me, and I liked him, but he ran his own ship and did his own –

In a short time, really, as chief, looking at the whole fifteen years, fourteen and a half years I spent as chief, I went through Sam Their, who was President of the Institute of Medicine, and President of Brandeis, and then became chief of the hospital; Jim Mongan, who was hired to replace him, from the University of Kansas, I believe, in Missouri, Kansas City, Missouri; and then Peter Slavin, our, who's still president of the hospital and who was, was wonderful. But they're all somewhat different, and they all had to get used to me, and I had to get used to them.

So that was a very important part of being the chief, getting used to your boss; when your boss changes, how does the job change, does he still respect – she – what you're doing, and the way you're running the department. So, the Harvard course was very, very important; I ended up being one of the directors of the Harvard [School of Public Health, Chief's] course, which didn't mean much, it just meant that then in future years they put my name on the label.

And it taught everything from accounting, which I'd never had, in my whole life, just when you're running a department that makes fifty-five million dollars a year, and you're spending thirty million [*laughs*], you know, thirty-five million on salaries, you shouldn't lose money. You immediately learn, the reason most chiefs get fired is they lose money. So, thou shalt not lose money. I realized I was incompetent at managing money, in my life as well as in my department. [*laughs*] And immediately hired a very smart young lady, Elizabeth Einaudi, the great-granddaughter of the President of Italy during the Second World War, Einaudi, and then later Susan Moss to replace her after she went to Stanford. So I had two great fiscal advisors in my fifteen years, who kept me from going bankrupt, kept me from paying too much, paying too little, collecting too much, collecting too little.

I still had a few frights – the day the [Massachusetts State Guardians of Medicare and Medicaid] came with the guns and the shields to tell me that I had been billing too much, that suddenly my bills for chest surgery for the department had trebled. [*Laughs*] I had to explain that one away as a computer error, but it took a long time. It was a little scary; Missy said, 'There are some people out there with guns and badges for you, Warren.'

So there were some pretty exciting moments as being a chief, that you couldn't – I think the most important thing about being a chief is that you can't predict what will happen tomorrow. You have no idea what's going to happen in your office tomorrow, and it could be a good thing, and it might not be a good thing. So, some of the good things were, I went to see the chief of the hospital and said, 'You know, I think we're not billing for a lot of the anesthetics we do,'

And he said, ‘Oh, why?’

And I said, ‘Well, our bill is a little piece of paper at the end of your anesthetic record, and at the end of the case you put your anesthetic record in the patient’s chart, and you tear off this little piece of paper and you stick it in your shirt pocket. And then if you remember, you turn it in and we bill for it. But if you don’t remember, it goes to the laundry with your shirt, with your green shirt. I think I’m washing most of the, many of the bills of my department. What I need is for them to type it into a computer, instead of onto a piece of paper.’

And Jim Mongan, who knew less about computers, far less than any fifteen year old, said, ‘What kind of computer, how much does it cost, where would you put it?’

I said, ‘Well, you put it in every operating room, and on every anesthesia machine. There are few departments that have them.’

And he said, ‘What would it cost?’

And I said ‘It would be two million dollars, or three million dollars, but I think I could recover the cost in the laundered bills, which wouldn’t be laundered anymore cause we’d have it on the computer.’

And in a nutshell, Jim said ok. We put in a computer, at the cost of two or three million dollars, and sure enough, we found we weren’t billing for something like twenty or thirty percent of our cases. We just did the work, and then forgot to send a bill in. So, that was our first experience with computers.

We also knew, having been at NSF and having known that Antarctica had a computer system, for e-mail, we started, I hired a technology officer, Ed Mortell [Edward Mortell], Kevin Stanek and Ed Mortell. And these young men set up our, we set up our own network. And then, [at] the hospital, only neurology had an internet network. We were the second department in the hospital; medicine didn’t have one, surgery, they didn’t know about it. We actually set up something called etherdome.org, and we had, we ran for about the next ten, it took the hospital about ten, twelve years, ten years to catch up to us. And have partners.org as a network. But that was many million, the hospital spent many many many hundreds of millions of dollars and years getting there. And we’d been running since ’94 with etherdome.org. So those were some of the things, good things of being chief.

I think the worst thing of being chief, if I had to say, was to be presented with a drug-addicted resident. And in the department, in anesthesia in the United States, something like .4 percent of the first-year residents become drug addicted. And were very high, and we believe it is a combination of stress, learning to anesthetize paralyzed ventilated patients, and the combination of stress and availability. You, since the narcotic drugs, fentanyl, morphine, you name it, are right in front of you in syringes, it’s really easy to share the patient’s syringe, or take it all – put water in the patient, and give yourself the drug. And we had thirty residents, so one per year would be about three percent, and I was about half, a half a resident per year, or one resident every two years. And so I had maybe seven residents become addicted in the time that, my first ten years of being chief.

And I had a very kind of shocking experience when one of the surgical residents killed himself with an overdose. And all the chiefs went to a memorial session for the department of surgery together, and we all sat there grieving at the loss of a young doctor who had killed himself with an overdose of a drug. I don't remember which one it was.

And so, we, I came home, and I said, you know, what we do is we educate. Each year I would have a young man [come and talk to the residents] who had been a drug addict who then had saved himself and turned around, had gone on the wagon, not taken drugs, and either become a physician or this was a chap who became a physician and also wrote mystery novels, and if you go into any airport, you'll see all of his books, they sell like hotcakes. And he had been addicted, as a resident, and then switched into emergency medicine, and because drugs weren't available, nurses gave him drugs. So, I realized, even though I did that every year dutifully, and spoke to the residents and told them if they had stress, we'd help them, and there were people available they could call day and night, [it] didn't seem to work.

I kept having, you know, I remember well hiking with mom in the, in the Appalachian mountains and getting a call on my cell phone to say that one of my vice-chairs, Ken Haspel [Kenneth Haspel], had found not only one but two residents, a fellow and his girlfriend, both drugged out. So I mean, it was just too much. It was too many times. So I looked around, and what I saw was the only people around I think have done very effective programs to prevent drugs in their workers were the Department of Transportation, which requires all airline pilots, all truck drivers, to have random testing of their urine for drugs. Means you walk in, they say 'Pee in a cup,' you pee in the cup, and if there are drugs in it, you've got a problem.

So we decided that we would ask the hospital if we could drug test, random drug test. Not drug test everybody who comes to work on the first day and then 'that's the end of it if you're clean', but actually several times a year call people up and say, 'Hey! Come pee in a cup.' Because another thing occurred to me, as I thought this out, is that my best staff man, a cousin of mine by the name of Paul Alfille was working with a resident who was also found asleep, drugged out, in a bathroom. And I said, 'Paul, did you know the kid was using drugs? Did you know?'

And he said, 'No, he might have taken long bathroom breaks, but I didn't see anything, I didn't smell anything, I didn't note anything.'

So if really good doctors can't tell if the person working next to them, who they're teaching, is a drug addict, you better just randomly test people. And if you find one, you'll be able to take care of them, and you'll know they're drug addicted before they kill themselves. I didn't really want to go to any funerals of my residents. So, I went to the hospital, and a lot of fancy people at the MGH when I presented this said, 'Our doctors become drug addicted? Couldn't possibly be! This is man's greatest hospital; we don't have doctors who get drug addicted.'

And I said, 'Uh, [*laughs*] I've got a little history; I've had seven.' And I've proven it, because each one, when we note them drugged out, or we find them, or their wives find them, we then can require a drug test. If you're caught with a syringe hanging out of your arm, we have pretty good evidence that you're doing something wrong. And then I found evidence of drugs. It's not that I, that I'm against finding out, I really want to find out before they kill themselves.

And so, the post office does it, the Department of Transportation does it for airline pilots, and guess what? The number of drugs, people using drugs in the post office, is way down now. And the US Army does it, because they found too many helicopters crashed, so all Army members are random tested, and guess what? There are no more helicopter crashes from drugs, or plane crashes, and their doctors do it, too, and their doctors don't have addiction problems.

I said, I'm not, I don't know if it's perfect, but it's a lot better than doing nothing, and waiting til somebody finds them drug overdosed and/or dead. So, they were, they decided, they thought in their minds that it was a bad idea, but if I wanted to do it, I could. As chief of anesthesia. So I was allowed to do it, and they promised they would pay for the nurse who, when you have to, when you're called in, you come in. And then you have to have a special bathroom where you can turn off all the water so they can't mix water with – they have these synthetic urine plastic sacs, it's called 'how to beat drug testing', you can find it on the web. [*laughs*] So you have a little urine, dried urine, healthy urine, and you add it to water, and then you say, 'It's my urine.' Of course, it isn't.

So you have a special bathroom, turn the water off. And a nurse, who isn't in there, but makes sure everything's ok, you don't have anything in your pockets, you won't – So basically we've done this and we're now ten years later, and knock wood, we haven't had a single positive urine sample that we couldn't explain. So there's some explainables: so if you eat a lot of poppy seed bagels, in the poppy seeds there's a little morphine, and that'll trigger your urine positive, or if you have a doctor who gives you a painkiller for a pinched nerve or something. As long as you have a doctor's prescription, we're not going to torture you. I don't care about marijuana. I don't care about alcohol. I only care about the drugs we use, really, fentanyl and the kind of anesthetic-type drugs. But ten years later we haven't had any, so we're really happy.

Liza Zapol: So that's continued since --

Warren Zapol: That has continued since I have – so I was only chief for fifteen years, and we did this about ten, it's continued for another eight years now, so now we're trying to get it published, but you can't, it's hard to convince people based on your previous ten years that your next ten years is better, so what we're working on now is the Brigham and the BI's data. And of course when I told this to my colleagues, chiefs at the Brigham and the BI, they tried to do it too, and their chiefs of hospital said, 'No, no, no, don't do that' --

Liza Zapol: Because they thought it was a violation of rights?

Warren Zapol: Too invasive, and, but of course they've had drug incidents since then, so I'm just trying to show statistically that we're better. And of course what they claim is, 'Well, that's cause the ones that want to use drugs don't go to you anymore cause they know you're going to find them.' Ok. That's all right. [*laughs*] Then let them go somewhere else! It's been an amazing experience to do this, and I think it's been a very good thing, and a few other places are now picking it up, and are looking at it closely: Cleveland Clinic, Hopkins, are trying to do the right thing.

Liza Zapol: How, I know this is a question I've asked you before, and it might bother you, but, you know, have you ever experimented with drugs, with, having them available to you in that way, or done a Sherlock Holmes, like, testing, even in your laboratory on yourself.

Warren Zapol: No, no. No. No, I never thought of drugs as a solution, although I grew up, mom and I grew up at a time where marijuana was being smoked, and drugs were being shot and used, in the '60s certainly there was a big counterculture. I personally never used drugs. I mean, I've used sleeping pills and things like that, but I hate drugs. And some people – and maybe me – have a very dysphoric, unpleasant sensation with narcotics. You actually give it to them and they don't get the high and the happy feeling, they get the nausea-vomiting feeling often, so I think it's, I don't know, I personally have no experience with it, but I feel bad.

One of the other things I did, as long as we're on the drug story, and it's an important part of my life, is I felt so bad for the kids who got caught. I felt so bad, that I volunteered to be on a committee [the Mass Medical Benevolent Society]. The committee chairman chose me, it was a psychiatrist from MGH [Charles A. Welch] who had been the president of the Mass Medical Society, all doctors in Massachusetts, and he had a committee that's very old, like since George Washington's time. It's called the MMBS, the Mass Medical Benevolent Society, and it's like ten people, mainly old doctors, who have some money, and an endowment since George Washington's time, a few million dollars, and can give that money away to help doctors. So, doctors who fall on bad times, for various reasons, sometimes need help. Even doctors need help. And we could give out some money.

And I think everybody understood I was an anesthesiologist there for a good reason; most of these were psychiatrists, general practitioners, I was the only anesthesiologist chosen, and the youngest, I think, on the board at the time. This was twenty years ago, in 1998 or 2000, and they knew that I'd been struggling with the drug problem. So I got them to agree that, sight unseen, if you were a young physician, and you're caught with drugs, in Massachusetts – it's a very good state, they say, if you enter a program of urine testing and promise to never take them again, you can keep your license – We won't take your license. But you have to be urine tested for six months to a year, show that you're negative each time, achieve some psychiatric help, these people go to like an Alcoholics Anonymous, they go to a drug users anonymous kind of program –

Liza Zapol: Narcotics Anonymous.

Warren Zapol: Narcotics Anonymous, and they do that. I never fired people who got onto drugs. They don't get much money, but I would keep their minimal salary on for as long as I could, for those six months to a year. But many people fire them; many people are fired when they're caught with drugs. And if you're fired, then you have no money. So, you have no room, you have no food, and you can't afford to pay to have the urine tested.

So, we agreed that any physician who signed the contract – you have to sign a contact, to keep from losing your license, that you will have urine tests, you will be clean for a year. You know, as long as you're clean, period. And so we basically gave fifty thousand dollars to each person who became drug addicted, just [*snaps*] you got a check for fifty thousand dollars. Assuming you'd be fired, assuming you need that money; you might have to retrain at another specialty, you had to pick your life up. Cause your life is just crashed around you.

So I think that's one of the best things I did as chief, was go every month to the Mass Medical Society. [The Mass Medical Society] meets in a palace outside of Boston, outside of Route 128, in the Mass Medical Society building, which is absolutely gorgeous, and it was rich,

because the *New England Journal of Medicine*, they published, and it cost a lot, and they had a lot of people, subscribers, and so it lived on the subscriptions to the *New England Journal of Medicine*. And, obviously had some money from the Mass Medical Society. It was a very good thing. We also helped a lot of doctors who had terrible health problems, and other problems. But this was kind a good thing, a good thing to do, and I don't, I think, it doesn't make a difference who you are. You don't have to know a lot; you know somebody's going through this, they're going to need some money to keep their life from collapsing.

Liza Zapol: And do you have stories of people's recovery then, afterwards?

Warren Zapol: Some recovered. Some recovered; I can think of one young man who did pain medicine after, and in pain medicine, although people have pain and need drugs, it's usually done through nursing and through prescriptions, and to the best of my knowledge, he's chief at another hospital and doing quite well. So, some do. On the whole, many don't, and so my department was very positive about re-hiring people who went straight. And they were very kind and nice. But I think in retrospect you could make a very good case for not hiring people who have drug addiction problems. Anesthesiology is just too tough a place to be, with availability. I think you're better off in a place like pain medicine, or another specialty where - rehabilitation, a lot of them go into, where the drugs are just not in your hands. You see patients, you sort out their problems, you write prescriptions for them, but you don't take the drugs, you don't hold, physically hold the drugs in your hands.

Liza Zapol: So, you know, you switched from some of the positive things to some of the more difficult things, and I guess I have a couple questions. I mean, you talked about having people like Bob Schneider and other people supporting you, but in terms of some of the more positive things, I'm wondering about, you know, some of the junior people who you grew through your department, and maybe some of the mentorships or ways in which you felt like you may have had a bigger impact on up and coming people's careers.

Warren Zapol: Great. Yeah, no, I think the only reason to be a chief is to grow young people. And to grow them and their careers, and to grow a young person, you need to do two things: you have to help them find the right future career, be it research or clinical work or teaching, and then you have to guide them and protect them.

Why protect them? This is a pay as you go system, and anesthesiologists are very well paid, but have to work hard to be well paid. And the machine, the anesthesia machine has a lot of patients lined up every day for anesthesia. And they need doctors. And we're always short of doctors. And that's another little problem we could talk about, but that, if you're short of doctors, then you're always going to be trying to grab the person who's trying to do research, cause you'll say, eh, he's in the laboratory, he could come over here and anesthetize somebody! So the big hand goes out and grabs the person.

On the other hand, if you want to stay in the laboratory, you better sit there, work hard, write grants, and get some money. So the federals can pay, federal grants can pay your way. And if you're not there, you're not going to get the grant.

So there's this tug: who fights for you to stay in the laboratory and do your science, versus the vacuum cleaner that's going to suck you into the operating room to anesthetize people.

And in all honesty, one of my jobs was to say, the law is that a junior investigator who gets NIH funding is supposed to spend eighty percent of their time in the laboratory. And I was finding young ones who weren't spending eighty percent of their time in the laboratory, and the surest way to not go ahead is to not spend eighty percent.

So protecting them. Telling the clinicians, 'No, one day a week is all he has to be in the operating room.' It's a very important job for the chief. And my chief did it, and I did it, and the subsequent chief is now doing it, so I realize, it's important. It's important, and if the NIH finds that you're not spending eighty percent of your time, they'll take the whole grant to the institution away. So, the NIH cares, and I care, but the clinicians at work, the vice-chairman, the people who have to work to make sure surgical patients get anesthetized, get their operations which they need, doesn't care so much. So that's the chief's job, and a difficult one.

But perhaps the greatest happiness I had was, when I started I think only two or three of us, Jeeva Martin, myself, and Keith Miller had grants, and when I got done there were eighteen young people with grants. And many of them were Chinese, and I'll tell you a bit more of that story. Many of them were Chinese-Americans, and so mom and I would have a Chinese New Year party each year, and we were lucky enough to hire a number of Chinese people.

Now, why did we hire Chinese people? That takes a step backwards. In 1996, we were operating the department with thirty residents in the operating room, to covering thirty of our fifty rooms. And staff, some staff. And that was great. That was great. And then for various reasons, partly due to Hillary Clinton's revision of Medicare, as it was to happen at that time, remember '94, that was the year they took over. It was decided that the MGH would shrink, from a thousand-bed hospital to a five hundred or a four hundred-bed hospital. People wouldn't need to go in the hospital anymore, primary care was going to take care of them in their doctors' offices; they wouldn't need specialists anymore.

We should not hire any more specialists. We should not hire any more anesthesiologists, there would be no jobs for them. No jobs. It was absolutely a wrong call, by the feds. Absolutely, a hundred percent, but the President of our hospital [Samuel Their] really smelled his champagne and thought it was right. And he said, you have to come and beg me to hire any single person. At that point, the *Wall Street Journal* article broke, it was on the first page of the *Wall Street Journal*; A reporter got into a cab, and it was a very smart young man with a haircut driving a cab, and he said, 'Gee, you look like a smart young man driving a cab! Why are you driving a cab?' And he said, 'Oh, what do you do?'

And he said, 'Oh, I'm an anesthesiologist.'

'Oh, you're an anesthesiologist! Why are you driving a cab?'

He says, 'Because there are no jobs for anesthesiologists in San Francisco. There's no need for them, and I finished my residency and I can't get a job, so I drive a cab.' Well, that was in the – we don't need specialists, we sure don't need anesthesiologists. First page of the *Wall Street Journal*. Every dean in every medical school in the United States saw that. Hung it up on the bulletin board, and when their medical students had to decide whether to be interns and anesthesia residents, said, 'Uh-uh, no jobs.'

Well, we would get thirty residents each year. That year, eight residents matched, came through the national match. So twenty-two operating rooms would be uncovered. Right? So suddenly, we had to find people to cover operating rooms, or Bob Schneider did. It was cause for midnight diarrhea. There just weren't those doctors available, staff to take over the residents' slots.

It was a nightmare, a nightmare! We had to pay incentives to do extra hours; we give you double your pay if you do extra hours in the operating room. So you make two hundred thousand, you make four hundred thousand a year, but working twice as hard. People tend to work for money, so it worked, but it was scary at the time, and it was dead wrong. But at that point, I started to look very hard at the people who did apply for anesthesia residencies, and many of them were Chinese physicians who had a PhD in science and wanted to do science, and that's where Wei Chao, Tong Yen Chen, Zhong Cong Xie, Yan Dong Zhiang, and on and on and on and on and on and on. At least twenty excellent physicians, who had left, 1990 China had a terrible slaughter in --

Liza Zapol: Tiananmen Square.

Warren Zapol: -- Tiananmen Square, and so by '95, 6, 7, there were lots of Chinese doctors trying to work in the United States, and I took as many as I could from PhDs and MDs and many of them became clinician scientists, with grants. Many of those, yeah, you know, many of those I mentioned. So, so certainly, you wouldn't have expected that the day before. I remember someone [Greg Koski] calling me at the Harvard Chiefs' Course, another Harvard Chiefs' Course, the psychology chiefs' course, how to deal with people saying, 'Warren, you won't believe it, we only matched eight residents instead of thirty, oh my god. Oh my god. Now what are we going to do?'

So, you don't really know, you have to ride through it. You have to ride through it. And then with a big department, you're going to lose eight [staff doctors] a year anyway. I found I had to pre-hire eight people, because with a hundred and thirty doctors, six, eight on average would leave each year. Their wives would get jobs at UPenn or Seattle or, and they'd move around. They'd move around, it's, you know, you don't have patients like a practitioner of cardiology would have; your patients come to the operating room and you're ready to go. So, a lot of operating rooms have a lot of patients, you can move around. Pick your city. And they pay more in the south, so you could double your salary by going to Texas.

Liza Zapol: So, you mentioned also, the, you know, Hillary Clinton HMO shifts --

Warren Zapol: Right, that was a theory, that should have happened, but didn't.

Liza Zapol: It didn't. How has, I mean, sort of larger trends in healthcare, and --

Warren Zapol: How did that change our business?

Liza Zapol: -- just try to - yeah, change your business, and how did you, I mean, have you seen the --

Warren Zapol: I think, luckily, the hospital is the greatest influence, so several, several nightmares occurred while I was chief; one was capitation, the thought that, you know, you

would get so much per patient and that was it. But capitation was very hard to do, because the average patient doesn't cost very much, so if I gave you ten dollars per patient, you probably could survive in a year, if they were healthy and young. But every once in a while, a premature baby comes in that needs to live in the intensive care unit for three months while it gains weight from two pounds to six pounds, and has to be ventilated and cared for day and night, and so runs up a bill of two hundred and fifty thousand dollars, three hundred and fifty thousand dollars, so how do you figure out what capitation prices should be? And they can vary a lot, from, if you have a lot of prematures next year, it's going to be a lot more expensive for your HMO than if you don't. [*laughs*] So, it's very hard to capitate on a per-dollar case. And so, I would get up in the morning at six o'clock in the morning and listen to these stories of what the physicians' organization was willing to sign up for, what were we willing to do? And which HMOs, whether capitated or otherwise, so I mean it was quite difficult, and I think what it comes down to is anesthesiologists charge different people different things.

So, Medicaid and Medicare. So Medicaid might pay fourteen dollars for fifteen minutes of anesthesia. These are old numbers, but they're probably not far off. And Medicare would pay sixteen dollars for fifteen minutes. But if an anesthesiologist did anesthesia from eight in the morning til six or seven at night, straight, without a break, at sixty bucks an hour, right, fifteen dollars every fifteen minutes, you're talking about seven hundred and twenty dollars a day, and thirty-five hundred dollars a week, or a hundred and fifty thousand dollars a year. But anesthesiologists make two hundred and fifty thousand dollars a year. So how you're going to cover their salary working for Medicare and Medicaid? You can't; you can't get from A to B.

So what you have to do is either the hospital has to make a donation to your department of a hundred thousand dollars per anesthesiologist, which they're not keen to do, but have to do at city hospitals, county hospitals, where you only have the poor, or you're the Mass General and you say, all right, that accounts for thirty percent of the bill. We have thirty percent of the bill that's Blue Cross, and other HMO's; let's charge them more. So we charge forty-five dollars to the Blues for fifteen minutes of anesthesia. So we have a mixed bag, where it's like buying, imagine buying gasoline, some at two bucks a gallon, some at three bucks a gallon, and some at four bucks a gallon, this is kind of what we do. We sell our services like gasoline, and so the feds, which are hard as nails, they get fifteen dollars for fifteen minutes, or the state even gets less, thirteen dollars, cause they don't have as much money as the feds. But the Blues have to pay forty-five, or else we say nope, we're not doing it.

And then we fight. We have these fights. And of course every specialty does the same thing; they fight it out. This is the private enterprise system in medicine. As opposed to England, where a doctor with three years of experience gets this much money, and he makes a little more at four, a little more at five, a little more at six, and I don't care if he's a surgeon, an anesthesiologist, or a toenail specialist, they all get the same thing. Modest differences; modest differences. Honestly, you could tell which is a pinko liberal, which I believe is right, I mean, I'm thinking real good, the way we do it. With a strange, free enterprise system, it's just strange. And the drug companies making out like banshees, and medical device men – everybody's making out like banshees, including the doc, some doctors! Why do anesthesiologists get four hundred and fifty thousand dollars a year, and internists who work only make two hundred thousand a year? Why? What did we do that's so hard? [*laughs*] What do we do that's so hard anymore? That they can't do? They use their noodles and figure out what disease you have; we

go: drug A, drug B, drug C, don't kill 'em, don't do this, and we're done. We have all these monitors. And nurses could do what we do pretty well. No one has been able to prove, by Medicare records, that survival rates are different for doctor anesthesia versus nurse anesthesia. I'll give you my bias; I think that if you're really sick and have a lot of problems, you're better off with a doctor. But if you're an average joe getting a hernia, a nurse will do a perfectly good job.

Liza Zapol: So, it's --

Warren Zapol: It costs a little less.

Liza Zapol: Right.

Warren Zapol: Not a lot, a little bit.

Liza Zapol: Well and you also talked about the physicians' organization, so you're also dealing with different parties and what people will accept.

Warren Zapol: Right, right, right.

Liza Zapol: So is that a union of physicians --

Warren Zapol: It's a union of doctors, in a way, each union's a little bit different. And the guys who are hurt the most are psychiatry, gets almost nothing; surgery gets almost everything, and various committees of the feds decide what they'll pay for a dollar of time, for work. Yeah, so no, I mean, I think, tough --

Liza Zapol: So, what you just said makes me think about the pecking order in the hospital, and I've heard you tell stories before about, you know, certain surgeons, and --

Warren Zapol: Right, well the pecking order in hospitals generally has been that those who fill the beds are most important. So surgeons, people come to have their surgery by Surgeon X, and he's most important. And if an anesthesiologist leaves, an anesthesiologist is replaced. So clearly surgery and some of the medical specialties, cardiology, people come for their [care], are very special. But even over this period of time, it became relatively clear, and it's changed now, it keeps changing, that you can make more money shooting x-rays in the outpatient department than you can by doing surgery in the hospital. In fact, surgery in the hospital's kind of a money loser. Cause it costs so much, it fills the beds, but it's, it costs about as much, they cost about as much as they bring in.

But x-rays, you know, with the growth of MRIs and CT scans and the needs for them, you don't need beds, you don't need nothing, you just put the people through, you take the pictures, you get the pictures read, next, next, next. So I think outpatient, outpatient department has boomed as a place where a lot of money can be made. So it's different, things are different. When we shot x-rays, you couldn't make a lot of money there, and radiologists, some of the interventions did ok, but most were kind of, they'd charge fifty bucks an x-ray, how much can you make?

Liza Zapol: So those, that has changed more recently.

Warren Zapol: That has changed over the period, really, just 2000, since 2000, with MRI and CT growing; that's a guess. I think it's really grown a lot. Yeah, no, it's changed a lot, so there's a, you know, there's a specialty I probably wouldn't have gone into, looked kind of boring, there were just chest x-rays, but now, they hardly even do autopsies anymore, you can see everything inside the patient. With tremendous resolution; if there's a tumor there, you're going to know. Whereas the old days, we had to cut them up and look inside; oh, gee there was a tumor there! We thought there might have been. So the pathologists knew everything. Now the radiologist knows everything.

Liza Zapol: Yeah, I mean, so has your experience of radiation, or radiology, rather, changed now?

Warren Zapol: Yeah, no, if I had only known! [*laughs*] If someone had only told me, 'In about ten or fifteen years, they will discover a whole bunch of new instruments that will make it much better,' oh, that'll be interesting. Yeah, yeah, no, I think orthopedics was the same way, when I was a little boy in medical school it looked totally boring, football players did it. You hammered nails in the bone; but look, prosthetic joints came along, we changed hips and knees now, it's a well-paying specialty that works. A lot of people go back and waltz again.

Liza Zapol: But it seems, that also happened in anesthesia. That's what we've been talking about.

Warren Zapol: Well, anesthesia, right, got better, right? In the '80s, as we, as our monitoring got better, and our drugs got better, so you didn't york after anesthesia, and you felt better, with propofol, and you had monitors so you didn't do the wrong thing. Yeah, no, I think anesthesia got better while I was chief, but I think it's there now. I don't think there are going to be quantum leaps in anesthesia. Maybe there are some inventions to come; monitoring the brain more closely, and knowing where anesthetics work and how they work. Emery Brown's kind of work. I think there will be some changes, but I don't think there will be massive changes. When I started, anesthesiologists got paid maybe a hundred and fifty thousand a year, and malpractice insurance [was expensive], now we pay eleven thousand, something like that. Basically about what a primary care doctor does.

Liza Zapol: Because there are less, because there is not as much --

Warren Zapol: You don't --

Liza Zapol: -- error. [*laughs*]

Warren Zapol: -- kill as many people. There aren't as many medical – we don't kill as many, we don't maim and injure as many. In the old years, you turned somebody into a vegetable, you could be very liable through an error. And now, we monitor your [blood oxygen] saturation, we do, duh duh duh, you know, we have therapeutic ways to treat the disaster as it happens, and before it happens.

Liza Zapol: But your mention of Emory Brown, there's still a lot of mystery about how things work.

Warren Zapol: How it works, I could spend hours and be dancing around and not be really sure. It's like nitric oxide; it has properties in the lung, to dilate the lung, and its peripheral properties, its anti-inflammatory, anti-injury; it's there, but I don't know how it happens. It's action in the distance, it's, you know, Ampere. Ampere showed how electrons flowing in wires had actions at a distance, and it was magnetic fields and various things. So I don't think we know.

Liza Zapol: So there's room for discovery, in that way.

Warren Zapol: There's definitely room for discovery. And there's some components of anesthesia where I've spent my life – intensive care, still big mortality, still, how do you treat sepsis? You chase the bacteria, but once the patient goes south, oohh. I still think sepsis is a big question mark to work on, and there are more.

Liza Zapol: That makes me think about another story, in terms of sepsis. Which I'm not sure we've discussed, but we'll have to come back to again.

Warren Zapol: My travels to treat sepsis?

Liza Zapol: But --

Warren Zapol: I think we did, I think we covered the trip to Brazil, but I'm not sure.

Liza Zapol: So, and then the other, the other part of that question, around CT scans, is really your experience now, right now, and of being a patient, and --

Warren Zapol: Mm, ah! Who knew.

Liza Zapol: -- and I mean, it's not a very sophisticated question but it's just how that shifts your understanding of that part of the system of radiology, but there are bigger questions there, too, and talk to me about that.

Warren Zapol: Yeah, no, becoming a patient changes everything, and the good news about being at MGH for so long is that I kind of know where the great doctors are. And so I can usually find that, and get treated and get an answer that I trust. And which is probably right. On the other hand, it's humbling. And it makes you realize, both how good we are and how bad we are.

So how good we are, using modern medicine, drugs, and to conquer old killers, or at least set them back, and how bad we are, cause we're not exactly sure and everybody is N equals one, everybody is, well, we've never seen that, exactly, before, so let's see what we do now.

So I, the individuality of oneself, and the, I mean, it all kind of turns on uncertainty; you don't really know yet. I guess if I could go into a time machine and come back in ten years, I'd be a lot better off. Cause certain areas, just are going forward at a good speed, like the area of my own disease treatment. But it's not there yet. They're learning, and they will learn; they'll be very good at it in a decade. They'll say, 'Gee I wish I had done that,' as we all do.

Liza Zapol: But we're, so, I mean, we're talking about lung cancer, about what it's like as a patient. And there, I have a lot of questions around this, and we've been talking for fifty-three

minutes now, we just have a few minutes, so I don't want to open so much, but we can, we can start the conversation a little bit. I mean, what comes to mind, it's so interesting how, two, what was it, about two and a half years ago, when mom got in an accident, in a bus accident, where she was hit by a bus, I was so, I was struck by how rapidly and you really went into crisis mode, but you also were very clearly, you know, treated the experience as a doctor. First and foremost, and sort of, and tried to not respond to the emotional weight at that moment. And kind of, still, while it's personal, then the shift to being a patient is a big difference.

Warren Zapol: It's very different, because to me I think to me the big difference was that I was so symptomatic, I mean, it's one way to say, I'm a patient. And then you walk out of the hospital and you're not a patient. But if you are – but if you can't breathe, and you can't walk, and your mind is working, well, as a doctor, then, gee, that's probably because I have pulmonary hypertension when I walk, then I have tumor cells that are growing up my pulmonary arteries, and various things.

You know too much about your own disease, I think, so that you can say, oh, you get a little hyper, and then you begin to say, ah, there might be a little blood in my urine, I'm going to die of renal metastasis or something. But in fact, you're not. So I think you know too much, you're hypersensitized for the possibilities.

I've grown up in an earlier age when everybody died from this disease, and I took care of them, or anesthetized them, and watched them struggle for breath, and it was awful. But there was nothing I could do; there were no drugs, no Crizotinib and no Tarceva at the time. So, so, we used crude drugs, and most of them didn't work.

But I think part of me being a patient is that I was very sympathetic, and this one didn't start off easy and slowly get worse and worse and worse. It just started awful. You look at your saturation, and say, you're blue. You don't need a meter. And I was afraid to go! I mean, I think to die very quickly while you're symptomatic must be about one of the worst ways to go.

Either go real quick and die, or else, don't do this thirty, sixty day wonder disappearance, act, where every day is worse. So I think there's that, plus there's the, your doctor doesn't say 'I want you to do A, B and C,' he says, 'Well, you could either do A, or B or C or D.'

And then you go see another doctor, and he says, ' Do C.'

And then your doctor says, 'You could do C.'

And so, but what about A and B and D? So, I mean, I guess uncertainty of diagnosis – diagnosis was pretty clear. Treatment was uncertain.

And symptoms were very, were there. Were there; couldn't talk for a long time, I'd get breathless and pooped out. And I would, didn't have a lot of strength, I'd be laying in bed for half a day, get up for breakfast, and come out for dinner for a while, and I just didn't have stamina. And all that changed with the rapid response to drugs, you know, and then really you're left with certain residual symptoms like holes in your chest and ribs that hurt and things like that.

And overcoming those was, to a great extent, exercise, and work to – just physical exercise, and rebuilding your body from, you lay in bed for a month, your body falls apart. And

after two months, it's even worse, so I had to rebuild muscle, muscle mass, strength, and then the hernia appears, which has nothing to do with the cancer, you keep saying, 'Is it hard and a rock, or is it not?' No, it's not, it's just bowel, it's called a hernia. You know. Have one, could have two soon, just so you know, you never know. And getting it fixed and the getting complications and getting it fixed.

But then the physiotherapist saying, 'You can do the bike, you can do it. Your heart rate's ok, your pressure's ok, go do it.' So she was terrific, and then, and then joining the MGH gym, going to Florida during the winter with mom, and biking, and biking more and biking more and biking more.

And then you, saying, 'Dad, let's do it.' [The Pan Mass Challenge]

I can't do it, I can't possibly do it.

And then you and your brother saying, 'Dad, let's do it,'

And I say, 'Mm, all right, well, I'll give it a try.' And then not asking for any money for a long time because I was afraid that I might not live long enough to do it. But, since it's Wednesday?

Liza Zapol: It's Thursday.

Warren Zapol: Thursday, Thursday. And in seventy-two hours, we'll have done it! [*laughs*] And I probably will make it. I'll sure try.

Liza Zapol: Mmhmm!

Warren Zapol: No, I think the challenge has been very important. You have played a really key role, just, that was a brilliant thing to do. Never would have done it otherwise. And to keep challenging yourself, to realize that -- hey, if you can bike ninety miles, you probably can travel. Probably can make it to California, so I made it to California to see the kids, and probably can make it to New York.

Probably can, you know, so just, just re-integrating yourself in the world, after being a patient, and knowing that it's uncertain, that you don't have long you'll be a patient, but nothing hurts. You seem to be working ok; get on with it! And I think it's easier for other people to deal with you when you're not a chronic invalid, you know? You can do things. No, I think, yeah, it's frightening as all hell at the beginning, just scared shit – these are my last days!

And now we're almost a year, end of the month it'll be a year from finding the tumor, and its problems, so its, you know, in many ways the drugs have converted it from an acute disease to a more chronic disease. It's like having arthritis, or having something else, you know. Probably do you in eventually; those billions of cells are nasty little brains trying to figure out how to do you in. But it's been great to have a year, great to work with David, and it's been hell [*laughs*] to work with David, as a son, when you disagree. It's been fun to do these with you. It's been fabulous to see Juno accelerate through her first year of growth. And my support has come from my dear wife.

Liza Zapol: So, what time is it?

Nikki Zapol: It's 2:40.

Liza Zapol: Ok. We'll pause now. But, I think we're at a good place to pause now.

Warren Zapol: Yeah, yeah, yeah. You got a lot!

END OF SESSION 5

SESSION 6

Liza Zapol: Ok. So today is January 1, 2017. And this is the Dr. Warren Zapol Oral History Project; I think this is our sixth session, but I've started to lose count at this point. And today we're doing a group session in Miami Beach. This is Liza Zapol, and we're going to go around the room and say our names.

Warren Zapol: I'm Warren Zapol, as described earlier. [laughter]

Nikki Zapol: I'm Nikki Zapol.

Diana Laird: I'm Diana Laird.

David Zapol: David Zapol.

Liza Zapol: Great. So today we are going to talk about your trip to Brazil. How you found out about it, how you decided to go, and what happened while you were there. We just heard a recording that Dave and Diana recorded, and if you want to give a little background on that, just so we know what existed, what we just heard, that would be great.

Diana Laird: Well, we had the chance to visit Brazil in November of last year, in 2016, and I think because – I was invited to speak at a conference, and then because the timing worked out we took the kids out of school, and David found an excuse to do some work there. And then Warren and I were visiting in October, when I was in Boston, and he told me an incredible story of the time that he was in Brazil twenty or so years before, and offered to get in touch with an old friend of his, José Eduardo Da Cunha. And so we then arranged to have a Sunday afternoon meal with José and his wife Beatrice in São Paulo, and that visit was lovely; and got perhaps a little more extended than we thought, because the kids got detained at immigration for seven hours because the consulate had put the visas in the wrong passport. So, we had a lovely and extended visit with José and Beatrice, and because there was a rainstorm, they convinced us to stay overnight with them, and so we had the pleasure of hearing José's side of the story firsthand, and David took a recording.

Anything to add?

David Zapol: No, that was how it happened. And we, he was more than happy to go back and reminisce about those days, it was clear he hadn't done it in a while. And I think you had taken pictures?

Diana Laird: When I was in Boston just before going to Brazil, Warren and Nikki pulled out some newspapers from 1985. And so I believe I just snapped photos on my iPhone of these newspapers, because I thought they would be interesting conversation starters.

Warren Zapol: They were! Yeah, yeah.

David Zapol: So in the recording, when I ask him who's this and who's that, we're looking at those --

Warren Zapol: Photos.

David Zapol: -- photos of the newspapers.

Diana Laird: And of note, as we were sitting in immigration, detained by the guards, I thought about pulling these newspaper clippings out. Perhaps it would help our case. [Laughter] Say, 'Look, this is Warren Zapol, and here are our his grandchildren you're holding in captivity!'

Nikki Zapol: We had imagined that that's what you actually did – you didn't? No.

Liza Zapol: Well we can, maybe at the end we can talk about that story, about your more recent experiences in Brazil, but, and we have that recording of that conversation, so we can add that to the record here.

So now, it would be helpful, Dad, just to tell us your version of the story, so how did you --

Warren Zapol: Well the story as I remember it, which is not precise anymore, is that I had a call from Brazil asking would I come and care for their quite ill president. They knew he was quite ill, but I think there was a bit of a battle going on between the surgeons in Brasília and the surgeons in São Paulo, and they had both cared for him, and there was a certain amount of blame --

Liza Zapol: So, if I can ask you --

Warren Zapol: -- going back and forth.

Liza Zapol: -- to start actually from the beginning of even what the, what was happening in Brazil at this time, and how did you hear, did you know anything about the President -- [00:04:57]

Warren Zapol: I think I knew the President of Brazil was sick cause it was in our newspapers, but I don't think I paid much attention to it. And I think a phone call came through and --

Diana Laird: You told me, when we discussed it in October, he was not yet the president, number one --

Warren Zapol: Right.

Diana Laird: -- and number two, it was the very first democratic election in Brazil.

Warren Zapol: Right, right, right.

Diana Laird: Which was incredible.

Warren Zapol: This is true. This is true.

I mean, so to go back into Tancredo, Tancredo I guess had been prime minister in the '60's and then had gone off and done his own things. And then there'd been fifteen years of military dictatorship, and then finally they decided they would allow a democratic government to operate in Brazil once more. And Tancredo was elected by – wildly. He was seventy-five, very popular, very loved by his country.

And Tancredo, as I heard this story, did indeed have abdominal pain, after he was elected, before he was going to be inaugurated, in a week or whatever. Developed abdominal pain, had a cousin who was a physician, and he knew he could swear him into secrecy. So he got the cousin to give him narcotics, and he was taking narcotics from the cousin. And not noticing that his abdomen, his belly was swelling, and he had this benign tumor as it turned out, which I heard was a tumor on a stalk that had rotated. So it had died. If you kill the blood supply from the stalks, so he had this tumor that was expanding. And dead. Cause it had no more blood supply. And this was the abdominal pain that he had. But he took his drugs. And as it turned out, and you heard, he had his surgery, eighty people went to watch – they didn't wear masks, or gloves, or anything, and it was filthy; there's a belief in São Paulo that he got infected from all these people breathing and walking around the operating room and watching the president have his surgery.

Nikki Zapol: That was in Brasília, right?

Warren Zapol: This was in Brasília. He has his surgery, and then as I understand it, on the night after the surgery, he pulls his nasogastric tube out, to give a speech to the nation saying he's fine. And so he bloats, because you need your nasogastric tube after major abdominal surgery. And then, as I heard it, they didn't tie the stalk of the tumor when they removed the tumor, they didn't tie the stalk carefully, and the stalk started to bleed. And that's the bleeding he's talking about five days later, four days later. And then they didn't have a functioning blood bank. So he's bled down, and they can't get him blood transfusions quickly, right type, quick enough. Don't ask me why, you got a Brazilian army, you gotta be able to have a hundred fresh units in five minutes.

But nevertheless, then we heard on the tape [*referring to conversation with da Cunha*] that Piñote, who's the great surgeon from São Paulo, is called in as a consultant; and as I understood it, the hypotension, the low blood pressure from the no blood transfusion caused him to lose his kidneys. Cause the kidneys don't like to have no blood flow. So, he shot his kidneys, and starts to develop respiratory failure, whereupon they take him to São Paulo. At Instituto de Caracao, they made a whole floor his floor, of intensive care. His sister was a nun, so they had a floor of the nunnery praying for him, and that's when they called me. And they called me on the telephone, I don't remember if it's the anesthetist, or who exactly calls me, and I said, they said, 'If you come to Brazil, we'll take care of you, you'll see the president, you'll see if anything can be done for him. We know you study acute respiratory failure, you could bring an ECMO machine, just come to Brasília Airlines in New York and we'll take care of everything.'

Liza Zapol: So 1985, what's going on in your life? Do you remember getting this call? [00:10:05]

Warren Zapol: I remember getting this call, and saying to David, cause mom was out of town, she might have been in Virginia at the time. I said, 'David, you're going to have to stay with Mimsy Stromeyer, you and your sister, and I'm outta here. But you're alone.' [laughing] So David stayed with Mimsy, and you did, Liza, you were not very old in 1985. You were seven?

Liza Zapol: Seven.

Warren Zapol: So I go to New York, and the Brazilian consulate in New York comes to stamp my passport, and while I'm there, they're sending me first class on Brasília with my ECMO machines and my drugs – I had some experimental drugs that I was testing, NBAD A-R-D-A-S, called L340 hydroprolyne. [unclear- hydroxyprolyne?] Which I remember well. [NAME UNCLEAR_debbie oblerafan?] and I were doing it. And so we had our experimental drugs, we had this, that, and the other thing, we didn't have to, the FDA of Brazil had no problem with letting us do whatever we wanted to do, and --

Diana Laird: Is it – how did you – when you told me before, you said it was already evening, and you left at night, and so then you just had to drive into Mass General and pack a bunch of things and go to the airport.

Warren Zapol: Yup.

Diana Laird: But how do you go, you just went and checked out a whole bunch of medicine from the hospital? How do you pack for going to save the president of Brazil [laughing] that's what I don't understand.

Warren Zapol: Yeah, you have a lot of cartons and help. [laughs]

Nikki Zapol: You don't have to justify it as you're taking it out.

Warren Zapol: Uh huh.

Nikki Zapol: At least not then.

Warren Zapol: Not then. They let me do what I wanted to do. They knew me, they knew me in the intensive care unit; everybody knew me. And everybody knew I was an okay doctor, I'd been a visit there from '85, fifteen years, so, you know, they knew me. They let me pack my bags. ECMO machines, ECMO catheters, Heparin, took everything.

Diana Laird: What do you put all this stuff in? Suitcases?

Warren Zapol: In cardboard boxes.

Diana Laird: And then the airlines didn't give you trouble?

Warren Zapol: No --

Diana Laird: Checking all that?

Warren Zapol: -- no, no, no, no. Brazil Airlines was --

Diana Laird: But that was not until New York; you were in Boston. And you had to talk your way onto a flight?

Warren Zapol: Yeah, I don't remember how I got to New York. [laughs] Yeah, I probably had to talk my way on an airplane. But in those years it was much simpler. Life was a lot easier.

Nikki Zapol: Yeah, say 'I'm a doctor on a medical mission.'

Warren Zapol: Yeah.

So I remember getting to New York, and the *Financial Times* calls me, and says, 'Dr. Zapol, we hear you're going to Brazil.'

I said, 'Yes, it's true.'

'We hear that they have, the military has shot Tancredo Neves, and we think you're going to try and take care of him; have they told you that? Do you know that?'

And I said, 'I don't think so; that's not what I'm hearing from people who are telling me about why he's sick and how he's sick.'

Said, 'Ok.' So, they said, 'Will you tell us when you get there, what you see?'

And I said, 'Sure, I can tell you when we get there. I don't, I have no evidence that he's been shot in the abdomen, and this is not, they're not trying to kill him.'

So I fly to Rio. I get to Rio, and my bags I know are going to be transferred, and everybody's looking for me in Rio. As soon as the plane lands, they're all looking for Dr. Zapol, Dr. Zapol, but if you remember, I look, I was forty-three at the time

Liza Zapol: You looked about twenty. [laughs]

Warren Zapol: I looked about twenty, so nobody thought I was Dr. Zapol by any means, and I didn't identify myself. So I just went from the Rio plane to the São Paulo plane and got on. And sat in the Zapol seat, and I assume I told them and reminded them not to lose the ECMO machine, and not to lose everything else that I had taken and packed. Cause I went to Russia, I took a ventilator, I mean, I took everything.

But, but anyway, I then got to São Paulo, and in São Paulo when the plane landed the police were all over. [laughs] So the F, the federal FBI of Brazil picked me up, put me in a car, got all the bags, and we drove through the streets of São Paulo. Now, São Paulo was in mourning, although he hadn't died, there was a crèche on every street corner, and there were people praying around the crèche. [00:15:11] So you know there must have been, I don't know, a quarter of a million people out praying when I land, and go to the hospital that night.

And then I remember staying at the hospital for a couple of days, meeting Piñote, the boss, Professor Piñote, and hearing some of these stories that to and for between Brasília and São Paulo, who had done what to him and why. And we tried all L34 hydroprolyne [NAME UNCLEAR], we tried altering his mechanical ventilatory work. He was still getting hemodialysis, they were cleaning out his blood.

And at that point, a friend of mine, by the name of Bill Knaus had come up with something called the APACHE score [Acute Physiology, Age, and Chronic Health Evaluation]. The acute physiological disease scoring system. So what's the p-value that you would survive an acute illness? And all I can remember is filling in all the data and it was like ninety-nine point nine nine percent he was dead.

So, we went on a little while. Every day we'd have our little talk saying there's nothing to be done, we're doing everything. The American embassy called me and said, 'Can we take him back to the States, would that be good, do you want him back at Mass General, we can fly him out.'

And I said, 'No, I don't think this is a flying job.'

'Or we could take it up the canal zone, if you want.'

And I said, 'I don't think their hospital is so bad;' I thought their hospital was pretty good. I mean, built in prayer, you know, I thought they were doing a good job.

So, several days went by; his wife came, his girlfriend came, they were different. [laughter] His --

Nikki Zapol: What do you remember about that? How do you remember knowing that?

Warren Zapol: Well, I was told! [laughs] I met the lady.

Nikki Zapol: I guess it was widely known.

Warren Zapol: He went to dinner, I think, with both of them. [laughs]

Nikki Zapol: Really?

Warren Zapol: Yes!

Diana Laird: At the same time?

Warren Zapol: No, no, they were careful.

Met his sister. They were lovely people.

And I spent most of my time in the hospital, and then the one, the story that I remember was, I said, 'How about' – he's still ninety-nine point nine nine percent and not getting any better; all the numbers are going in the wrong direction – 'how about we let him die?'

And they said, 'He can't die today.'

And I said, 'Why?'

And they said, 'It's Tiradentes Day.' The famous --

Liza Zapol: Martyr.

Warren Zapol: -- martyr of Brazil died that day, and we don't, the military doesn't want it to seem that he's a martyr dying on that day, cause that's going to be too difficult for them to deal with. Okay.

'Okay,' I said, 'he can die tomorrow. [laughs] I'll stay with him today, and he'll die tomorrow.' And I had, I remember when I came there, they gave me a naval attaché; he was all dressed in a Navy uniform and had a sword and he was to take care of me and make sure no harm became of

me. And I went in with him, with the president, and the nurses would go back and forth and I would sit there with him and we kept, we said, 'He's just not going to be declared today, you know, if his heart quits, his heart quits; if his potassium's too high and we can't clean it out, we'll try.'

Long story, I get a message, probably about five o'clock, saying 'It's all right if he dies today. The military has given the civilian government approval.' So he died, as I remember, on Tiradentes Day. [April 21, 1985] And it was a little scary, because a mob immediately collected outside the hospital. Half a million people, I don't know. Tan-cre-do! Tan-cre-do! And something else in – they were all screaming and yelling. And they asked me would I stay for an autopsy, because it was very important that the world know what, what did he have, did he die. And some of it was my question about was he infected, wanted to make sure he wasn't infected, but I didn't think he was. Cause he had drains, and, you know, I think – we knew, I think, he was ok. [00:20:08]

But, I did stay and I then had to write up, they asked me to write up an independent autopsy. To, and I said, 'No, no bullets.' You know, 'no gunshot, no shattered bones, no evidence that people'd been shooting him.'

And then in the middle of this mob [laughs] area, I said, 'I want to go home.' [laughs] I'm down in the basement of this hospital, there are fires and people around it, right, there's a half a million people around there. And somehow the FBI got me out, they got their – they drove their van up to the front, got me out of there. And that was it. It was scary as all hell, I thought they might kill me, [laughs] but they didn't.

And they were very nice to me, in fact; they gave me – my military attaché invited me to Rio, to the naval base there, and I think I spent a day in Rio, or two. It was very pretty, beautiful country, you know, nothing the matter with it. And we also went, once he had died, we also went scuba diving on the coast of Brazil, and I have wonderful scuba diving pictures. And a number of the surgeons played instruments, so they introduced me to Brazilian music, which was just wonderful. Wonderful music! So, it turned out to be a good, a good tour.

I think, when you go to take care of very old, sick people, I think you have to plan in your mind how you will deal with a bad ending. And what you will tell the press, and I always told the press, I thought their doctors did a great job, and did the best possible job. And although I knew in my own mind, you're not supposed to let people be hypotensive and bled out and stuff like that, I didn't say it. You know, I didn't want to criticize them. Why criticize them, it's all over.

Liza Zapol: When you say that – you said a couple times that it felt very scary. And one thing is just that there as a mob of people around you –

Warren Zapol: Mobs!

Liza Zapol: – but you also described, you know, the person who was assigned you with a sword, and military. So can you describe in more detail, perhaps, what made you feel frightened? Or maybe that your own --

Warren Zapol: I think it was the mob and the screaming and the crowd after he died. That was the scariest. Coming in wasn't so bad, cause it was just crèches and praying, but it was every

block, I mean, you had to work your way around, but the FBI took care of me. I have no complaints.

Liza Zapol: Did you ever have a sense, you know, you talk about how there are the different factions of São Paulo and Brasília, and also the military, and that this is a new democracy, that, as we know in South America, could be quite volatile. Did you have that sense around what you were involved in?

Warren Zapol: Yeah, I mean, I just didn't know what was going to happen, that was for sure, and I heard, there was a lot of talk about José Sarney, and Sarney shows up and he's a poet, apparently, that's what I was told, that he's a poet, he's written poetry. But he was also a crook, it sounds like, as vice president. Didn't last a long time. And as the first freely-elected vice president, as you heard, no one was too cheerful about him.

Nikki Zapol: What do you remember about how they actually got you out of there? Out of the hospital?

Warren Zapol: Not a lot, not a lot. They sat me [laughing] on the, in the back seat of a car, a squad car, with a cop on either side, and out, took me out, and --

Nikki Zapol: And they took you out the front of the hospital, or they took you secretly out the back?

Warren Zapol: No, I think you went out, we went out the back way, where autopsies go, I think, they took us out. [laughs] Autopsies don't go in the front door, then they don't want to scare the patients. [laughter]

David Zapol: It's a very big medical complex there now. I assume it was somewhat smaller, but it's still pretty big --

Warren Zapol: Yeah, no, it wasn't big. It was like three floors or something, and not so big. [00:24:59] Looked more like, I don't know, the Gray building or something like that, you know, it was a small MGH, three or four stories. [laughs] Not much bigger than the Bullfinch.

Nikki Zapol: There's a picture of you in the paper standing outside with, is it with Piñote? What was that, where are you standing? Were you in the hospital on a balcony? And were there a lot of people outside watching you at that point? That was before he died, or after?

Warren Zapol: Every day.

Liza Zapol: You went to do a news conference? --

Warren Zapol: -- Report to the nation every day. Every afternoon, you'd go out, talk to the nation.

Nikki Zapol: Meaning there were reporters there? On the balcony?

Warren Zapol: No, I don't remember that. I don't remember that. I know we, I don't remember how it was done. I didn't speak any Brazilian, so I was useless. [laughs]

Diana Laird: But that was, that must have been a difficult set of decisions to make, knowing that the stability of this new democracy was in limbo and what you said or did not say was a factor. And did you have a conversation with somebody about what you should and shouldn't say? How did you know what was the right thing to say --

Warren Zapol: That's a good question --

Diana Laird: -- at these news conferences, because that seems like an incredible leap.

Warren Zapol: It's a good question. I don't, you know, I really don't know, but I do know I was surrounded by advisers.

Liza Zapol: Americans?

Warren Zapol: No, no, by Brazilians. Good Brazilians, lot of people from the government. Lot of people from the military, were with me, and watched and listened. Did I ask questions? I don't know. Because I didn't speak Portuguese, I think I was pretty well insulated from Piñote and his statements. He made the health statement of the day, and I would be there. Were there any European, North American reporters? I don't remember any.

Diana Laird: In retrospect, it seems pretty smart of the surgeons to invite you to be there, as a witness.

Warren Zapol: Right, right.

Liza Zapol: Mm-hm.

Warren Zapol: I was a witness, and I think also they knew that I would balance the two sides, and not call – not call errors, cause they're not going to – I mean, they need a better blood bank, but – I don't – You know, there is a reason to criticize, but I think not then. People knew, they knew they hadn't been able to get blood fast enough for him.

Nikki Zapol: Did you meet Sarney?

Warren Zapol: I believe I did, I believe he did come to see him.

Nikki Zapol: Remember anything about him?

Warren Zapol: Nothing. Once again, if you don't speak Portuguese, it's real hard.

Nikki Zapol: Mm-hm.

Liza Zapol: What do you remember from some of those, you said the meals with family members, and --

Warren Zapol: Yeah, no, they're very good meals. [laughter] They're all, they were all classical Brazilian, you know, meat, meat, grilled meat events in the local grill meatery, and –

Liza Zapol: Someplace near the hospital.

Warren Zapol: – Mm, I don't know about that, but at a good restaurant. *Ribeira*, or whatever they call 'em. And, yeah, no, they had a lot of good meat. Wine --

Liza Zapol: And the people at the company --

Warren Zapol: -- meat.

Liza Zapol: And the people your the company, were they trying to impress you? Did it feel like --

Warren Zapol: No, I think they're just trying to be nice. I don't think anybody was impressing anyone.

Liza Zapol: There's also this element that seems to recur in a lot of your stories, which is kind of, how is this Jewish kid from Brooklyn, what the hell is he doing here? [laughter] I mean, did you, do you recall feeling, or even now in retrospect, feeling --

Warren Zapol: Well this is, yeah --

Liza Zapol: -- disbelief?

Warren Zapol: -- this is six years after Russia, so I kind of had a little practice, with a younger patient. And so, no, I think I'm beginning to, at this point, I've now been in practice for fifteen years, intensive care, I'm one of the world's better-known respiratory failure doctors, so I think at that point it's not – it doesn't shock me that people call me and ask me to do things. [00:30:19] A lot of the time, yeah, no, a lot of the time you do it on the telephone, 'Well, raise this, lower that, can you make this, can you do that,' yeah, I mean.

There are other people, too, that get called, I mean, I don't – this one didn't come through NIH; the Russian one came through NIH. Different people know you, know me, from giving lectures on ECMO machines, respiratory failure; I was heavy into respiratory failure. This is '85, right, so '78, we're seven years into the SCORE, the Specialized Center for Research and Acute Respiratory Distress Syndrome. We're publishing a lot, and visiting, and going out a lot, talking a lot, as a group.

Liza Zapol: But then, so then, flipping that question, could you have ever imagined, as a kid, that you --

Warren Zapol: This was going to happen to me? No. [laughs] Not at all. Not at all. I think it all started at NIH, that, you know, just, once you start dealing with strange inventions, people are going to call you when they get into trouble. For babies, for adults, devices.

So I had actually, I think some of the story here, which is – I haven't told, but when I was at NIH I went to the Brigham. And Frannie Moore had a respiratory failure patient there, and Judah Folkman had me come up. He was a very famous, really a cancer oncologist, I think is what he became, but he was a pediatric surgeon; and Judah had been my visit at the City Hospital, and he knew I was with Kolobow working on artificial lungs, so he had me come to the Brigham, and I think I took care of two patients at the Brigham. And Frannie Moore didn't like me, because I was messy. Because when I canulated people and anticoagulated them, they bled a lot. Franny was a very neat surgeon. And, so I think that's his boss, that's his boss, so Judah

Folkman and the Brigham knew me, and I had done ECMO at the Brigham before I did it at the MGH. I was called up by Judah, and we had both a woman who had a hemolytic anemia and was in an, she was in a hypobaric oxygen chamber, which is a terrible thing to do to somebody with respiratory failure, burn their lungs with high oxygen pressures. And so I had known, I had known José Eduardo's boss, whether any of this came through him, or the independent anesthesiologist, I don't know.

Diana Laird: He apparently forgave you for being messy. [laughter]

Nikki Zapol: That wasn't, that Frannie Moore didn't – it would have come through Judah, who didn't say that. Frannie Moore was a titan --

Warren Zapol: A titan of surgery.

Nikki Zapol: Yeah.

Warren Zapol: And Judah was chief at the Children's, had become chief at the Children's, when I went to Boston, and was a lovely man, and had me sleep in his house, so I stayed in his house at night, met his wife, Paula. They were lovely to me. He was great.

Liza Zapol: So that's a possible connection to José Eduardo.

Warren Zapol: It could be, I don't know.

Nikki Zapol: Through Judah, yes.

Did anyone there in, in Brazil, speak English with you, other than, like the family, was there anybody in the family, any of the women that you met --

Warren Zapol: They all – some young surgeons. Some young surgeons spoke English and cared about English and wanted to be great surgeons, and knew they had to learn English. So those were the ones that taught me music, and we went, went out with to dinners, some, you know, they would usually take me to dinners, cause they needed someone to translate for me. And the military.

Nikki Zapol: Hm.

Warren Zapol: No, I really didn't, I didn't worry so much about who would be next there. Why, I don't know. I thought the Tiradentes Day was a suggestion that, that's ok, we can let a democrat run this place, and we can deal with it. So I kinda felt good about that. [00:34:58]

Liza Zapol: How did you, when you came back, then, to the US and, how did you tell that story, what is it to tell the story? What, how did you frame that story for yourself?

Warren Zapol: Well, the Brazilian journals came after me. And so there's, they wanted to see me in America and see what I did. And so they followed me. So there's a Dr. Zapol in the ICU story that was in that, that was in [NAME UNCLEAR], or, can't remember, it's the one with the face of the wild man of West Brazil painted. Anyway, it, we have a copy of it, and you'll have it, and it's – Basically they came, and I was taking care of patients with Hermes Grillo here, who was a famous tracheal surgeon. And taking care of respiratory patients of various sorts with

troubles, and they photographed me and did an article on me as an American doctor who had come and taken care of Tancredo Neves. Which they all knew who we hadn't saved, but we could talk about intensive care and the things people did.

So the Brazilians did come after me, and, and cover the story, to the best – and I didn't, I mean, I was very careful not to make trouble for Brazilian physicians; that's the last thing you want to do. And then they invited me back to give some lectures in Brazil! All right, a year or two later, so I was in São Paulo at that big meeting, and, you know, yeah.

Liza Zapol: And you said before, of course, you prepare yourself for the worst. But I wonder, you know, what it feels like to come back and to say, this person died. You came back already with a --

Warren Zapol: Hey, you feel awful. Obviously. You hate to lose. On the other hand, there are certain wars you won't win. And this was one you won't win.

Nikki Zapol: Mm.

Liza Zapol: I remember, when we were talking about this before, there was one detail about the blue lights on the top of the ambulance, and --

Warren Zapol: Right!

Liza Zapol: -- which we, where was that? Was that when you were leaving?

Warren Zapol: São Paulo, that was coming in and leaving. Oh yeah, no, they'd always run the [laughs] the candy --

Nikki Zapol: Was that your police escort? Or what was that? Cause you were never --

Warren Zapol: I can't remember whether I had a police escort as well as a police car.

Nikki Zapol: No, but that's, you were describing the car you were in, not an ambulance, right?

Warren Zapol: No, not an ambulance. I was, they always had squad cars.

Nikki Zapol: What was the military presence like? I mean, I think I remember when you were there, I had more of a sense of kind of a – an ominous sense of the power of the military at that point, because, yeah – Because even though you say that you felt good that they let him die on Tiradentes Day, the very idea that the military would first have said, 'He can't die today' must have been pretty freaky.

Warren Zapol: It was strange, yeah, I didn't know – I mean, I didn't know anything about this bit of history, so it was strange.

Nikki Zapol: But do you remember your reaction?

Warren Zapol: No, I don't think I – no, I think I said, 'We'll just wait it out, he'll die tomorrow. Not a problem, we can deal with this.' And no, I just remember not having a problem with that. I mean, what day you die on is not a big deal.

Nikki Zapol: I know, but the idea of a military --

Warren Zapol: I didn't really think about that, I guess they were, there was nobody there acting Stalinist, I mean, there was nobody --

Nikki Zapol: So that's a good question: when they first said to you, 'He can't die today,' what does, what do you remember about that moment?

Warren Zapol: It came through the doctors or something, I mean, it wasn't --

Nikki Zapol: It came through a doctor, it wasn't a general standing there saying that to you.

Warren Zapol: No, no, no. There were no generals there. They, you know, no – other than the guy who, my naval attaché, who then calmed down and put his sword away. Yeah, no, I wasn't, it wasn't a problem. It wasn't a problem. [00:39:59]

Nikki Zapol: Mm-hm.

Warren Zapol: They just needed to get off the hook, right? I mean, they're all being fried as their president dies, and it's easier to have someone from outside, than blaming the doctors who took care of him for being klutzes. Ooh!

Liza Zapol: Does that give you – has that experience given you insights or thoughts into other times when politicians have been ill?

Warren Zapol: Yeah, yeah, I mean, that's why I went to Saudi Arabia, to take care of the queen, because they were worried they were going to kill the queen. That's why I went to Denmark, to take care of the queen's lifeguard, because they were afraid they were going to kill off all the soldiers with respiratory failure, and there may be more, too, but I, yeah, I think, sometimes it's that. Sometimes it's just, they want a better doctor. And they, like, the other Brazilian guy, that I took care of his wife in New York. I wrote it in the, there.

Nikki Zapol: The governor of --

Warren Zapol: The governor of Rio.

Liza Zapol: Oh right, yeah.

Diana Laird: That was in a different email, but yeah.

Warren Zapol: It's about two years later; that's another fallout from this. When the governor of Rio calls me from New York, and says, 'Would you come and take care of my wife? She's at Cornell, and I need a doctor.' [laughs] So that began a series of weekend trips to take care for the wife of the governor of Rio, who had severe chronic respiratory failure, and acute on top of that. And was bankrupting [laughs] the state of Brazil, and the guy who was the chief. So, he's at Cornell, and they don't like the doctors at Cornell, so they ask me to come down. So every Friday night, I come down and spend 'til Sunday taking care of her. And changing her antiobiotics, and changing her volumes and pissing the surgeons off, cause she was in the surgical ICU. And --

Nikki Zapol: What year was this?

Warren Zapol: I don't know. And then, I think it's early '90's, so I think it's a few years later.

And finally, Leonel Brizola, who's the man's name who everybody knows he was a Communist, and he was head of town in, he was head of Rio. Rio, he was for poor people, he was a good man. But he was in New York negotiating a loan from the World Bank, for Brazil, when his wife became ill. And so they put her in the Cornell ICU, but it was so expensive, he knew he could never pay for this. How is he going to pay for it? So after a week or two, maybe three, we're talking to Butch [Thomas] to, trying to keep their surgeons off me, cause the Cornell surgeons hate me, [laughing] right, they don't want any external doctors.

So Brizola says, 'Can you take her home to Brazil for me?'

And I said, 'Sure. She's not that sick, we could take her home.' And so, Brasília Airlines rigs a couple of seats, you know, five rows or four rows, and I go to Bob Kasmarack [NAME UNCLEAR] and I say, 'Bob, can I have a respiratory therapist or two?' And we'll take her from New York, we'll go to Cornell, pick her up, and we'll take her on Brasília to Rio. I'm not going to go, though [laughing] cause I'm working.

And they didn't like it when I would disappear to do these things, they would, they, this was Teplick [Dr. Richard Teplick], he hated it when I would do these junkets. So, and so they put me on forever [laughs] if I, when I did this.

Liza Zapol: What do you mean put me on forever?

Warren Zapol: Well, I'd get every night on duty, you know, they --

Nikki Zapol: They'd make you pay the time back.

Warren Zapol: They make you pay the time back in spades. So in a nutshell, I worked out with Kasmarack that they would go down there, pick her up at Cornell, stick her in an ambulance, and get her to Brazil, and get her back to Brasília. [00:45:10] And she did, and she survived, and she did very well. And I think she went another year or two before she finally, finally died of her respir – bad, bad lung disease. I think she was a smoker, with terrible emphysema and acute lung disease.

Yeah, no, Brizola was cool, and we – I'd have him down to the Harvard Club, and we'd drink in that lounge, on the second floor, and talk about his problems in Brazil and the loan and, you know, how he couldn't possibly pay the hundreds of thousands of dollars that she was billing, that they were billing up for her at Cornell.

Nikki Zapol: You came free. [laughter]

Warren Zapol: Yeah, I basically came free. I don't think they ever paid me. I don't know, I didn't – don't think I ever asked.

Liza Zapol: When you said he was for the people, what, what did you

Warren Zapol: No, I know he was very well loved. When you talk about Lionel Brizola, there's, the wealthy didn't like him, cause he was a Communist, but most of the other people are

pretty, pretty thrilled by Lionel. They think he was a really great, great leader. He goes on for quite a while after that.

Liza Zapol: I'm going to pause for a second --

Warren Zapol: Yeah.

Liza Zapol: -- and then we can discuss how to continue.

[END OF AUDIO FILE 'T06;' BEGINNING OF AUDIO FILE 'T08']

Warren Zapol: Five, four, three, two, one.

Liza Zapol: Ok, so we're recording again, we decided to talk about your trip to Saudi Arabia.

Warren Zapol: Right.

Liza Zapol: So roughly around when do you think this was, and again --

Warren Zapol: About 1990. About, about. And Jesper is working in Saudi Arabia --

Liza Zapol: So this is Jesper Qvist --

Warren Zapol: Qvist, a Danish --

Liza Zapol: -- who you know --

Warren Zapol: -- colleague who was a fellow at MGH and then went back and forth to Copenhagen, and Jesper calls and says, 'I'd like you to come and help me take care of a very special patient, who's the Queen Fatima, who is King Saud's favorite wife.'

And I said, 'Jesper, you know I'm Jewish? [laughs] You should ask them and see if they mind having a Jewish doctor around.'

Jesper calls back, says he spoke to the prince, 'Prince says there's absolutely no problem with having a Jewish doctor. It's ok if you come. And they'll pay you, and they'll send you by Saudia Airlines, and all you have to do is come to New York and wait at Saudia, and the embassy will come and give you, stamp your passport and give you a passport.'

And I said, 'Oh, how bad is she, what should I bring, ECMO?'

'Yes, bring the stuff.' So I bring my ECMO, bring all my stuff, and I go to the airport.

And the Saudis turn up, stamp my passport, and said, 'Please, Dr. Zapol, first class.' Which is so interesting, because in first class there's a big compass on the roof that always points to Mecca, so you know which way to pray when you sit down in your, on your rug.

Anyway, [to] make a long story short, I got on the plane, I go out there, I arrive, and all the bags are piled up at the – I have to switch, I'm on the Gulf Coast and I have to fly up to Riyadh, where the King Faisal Hospital is, ICU, where Jesper works.

I get there, and I see just bags and nobody's at the desk or anything, and I said, 'What's up?'

And they said, ‘It’s prayer time.’

I said, ‘Oh, prayer time.’ And then prayer time is over, and everybody comes back, and they get their bags, and all, of course, their handbags and bags are all sitting there. And I said, ‘Nobody watches?’

And they said, ‘Not in Saudi Arabia. If you steal here, *thwack,* your hand gets cut off.’

‘Hm. Okay!’ [laughs]

So we fly, next stop, I get off, airports are beautiful, they have lots of fountains, but it’s a rather dry country. And in Riyadh, I go to Jesper’s, and I help him, basically, take care of the queen. So the first shocking event is to go in and see the queen, and so she has a hotel, not a hotel, an ICU room, and there are four ladies in waiting covered with black from head to toe. And the four ladies are in there, and they’re in the corner, and they’re playing the Quran, they have a tape of the Quran, and it just goes endless Quran. And then they have water from the Zamzam Well, which is a well on the famous hajj. So they have Zamzam water, which they anoint her with every few hours.

So, I go in there, and I remember one of the ladies in black says, ‘Come here.’ So I go over [laughing] there, and this lady in black says, ‘George Bush, number one!’

And I said, ‘Oh, ok.’ [laughs] So this is the time right after the first invasion of Kuwait. Long period of time. So I basically stay with Jesper, and we take care of her, and she does ok. [00:04:49] She’s stuck on the ventilator still, but she’s going to be there forever. I mean, it’s going to be, I’m not going to create any magical miracles; Jesper’s not either, and maybe she’ll get a little better. Maybe she’ll get a little better.

And, so, it was interesting to be there. It’s a tough country, because women are so unequal. So unequal. And the nurses are so unequal. And there’s no drinking. Jesper’s closets are full of wine, so he makes, he gets fruit juice [laughing] and makes his own wine. But I enjoyed living with Jesper, and seeing the country, taking care of it. And one day the prince says, ‘Will you come to my house.’

I says, “Okay.”

So it’s Ramadan, so he says, ‘Well, come in the evening, come at seven o’clock.’ So they come, guy with a kerchief, looking like an Arab kerchief, comes and picks me up in his whatever it is, Mercedes, and they take me across the desert to the prince’s house. So the prince and his sister are arms merchants, and they sell arms to Qatar and all these other little Gulf ports. And I go in to the prince’s house, which is a block, right, there are no windows, it’s just a big cement, enormous block.

I go in, and as I come in, through the entrance, there were all the guys in the shawls, or whatever they’re called, turbans, and there’s this funny statue that looks terrible in the entrance hall; I said, ‘What is it?’ to the prince.

He says, ‘Scud missile.’

I said, ‘Oh! Why would you have that?’

He said, ‘Well, I was an interpreter for the Marines when we invaded, when the Americans invaded Kuwait and so I got a Scud missile, which I keep here to remind me of how terrible Sadam Hussein was,’ or whatever.

Then he looks at me and says, ‘Scotch?’ [laughter] ‘On the rocks or straight?’

I said, ‘Well, on the rocks would be all right.’ [laughter] It’s Ramadan, I’m in the prince’s house - he’s the most remarkable guy. I mean, they all, they’re all very, I mean, these are all special people. You know, he had a house in Cairo, he had a house here, he had a house there; it wasn’t the fifteen thousand dollars he was going to pay me that was going to make him bankrupt.

Nikki Zapol: Did he bring scotch with you?

Warren Zapol: I don’t --

Nikki Zapol: Did you drink scotch?

Warren Zapol: Yeah, I did, and I can’t remember what he did. I kind of think he did.

Anyway, it wasn’t a very nice place, and the nurses I thought had the worst, they were terrible to women there! There were religious police when you’d go into the market, and they themselves wore skirts, these men, and they had whips, and if your sleeves weren’t long enough, or whatever, they would whip you. And chase you out of the market, away from people. So, the muttawa, muttawa, this was the religious police. Anyway, it wasn’t a nice, it was really not a nice place to be.

I was very pleased, Jesper and I did take a day off, and Jesper’s a bird watcher; we followed the river, we went through Riyadh and saw Riyadh, which is a terrible-looking town, I mean it’s all shambles of mud, or dried sand or whatever it is, people that live in there; then we went south and followed the river and there were cranes and beautiful birds, so the birds of Europe liked to come into Saudi Arabia and winter there. So we saw a lot of wintering cranes. We had a good time.

Liza Zapol: Jesper had a family, he had three children back in --

Warren Zapol: Copenhagen.

Liza Zapol: -- Copenhagen. What brought, why was he there at that time?

Warren Zapol: Money. Money. He wanted to pay off a big chunk of his mortgage, and he knew he would get four times what he got as a doctor in Copenhagen, so he went for money. It wasn’t a nice place to be, not, no. You know, no; you suffered when you did that sort of thing. [00:10:16]

Liza Zapol: And Jesper, of course, we’ve heard about him from stories from Antarctica.

Warren Zapol: Yeah. Yeah. All I could remember is that at the airport they have, they had three planes ready to go. Gassed, fueled, ready to go. And one went to Stanford, if someone needed to be medevaced, and they had all their, the Saudis had all their medevacs worked out in

advance. Who would take you for what. So if it was cardiac, it was going to go to Stanford, and if it was a this it was going to go to Texas --

Nikki Zapol: Mayo.

Warren Zapol: Yeah, or Mayo. I mean, they had, they had three planes ready to go. And the royal family got to do whatever they wanted to do, right? Cause you're royal. And this lady was Saud's favorite wife, and Saud had his own elementary school. He had so many children [laughing] with so many wives that he had his own elementary school. I mean, you heard these weird stories that, you know, can you believe this?

Liza Zapol: I'm sure Jesper told you quite a few of his own stories as well.

Warren Zapol: He did.

Liza Zapol: We'll have to go to him for some of those.

Warren Zapol: Jesper is amazing.

Liza Zapol: All right, well that was eleven minutes, so --

Nikki Zapol: Excellent. [laughter]

David Zapol: What happened to the queen?

Warren Zapol: She did ok. She did ok. She went a long time, like a year or two. Yeah.

David Zapol: On the ventilator, or did she get off?

Warren Zapol: On the ventilator, I think.

David Zapol: The whole time.

Warren Zapol: Jesper will know more.

Nikki Zapol: How old was she?

Warren Zapol: She must have been in her seventies.

Nikki Zapol: Oh.

Warren Zapol: We never took care of Marina again.

Nikki Zapol: How old was the king? Faisal? At that time?

Warren Zapol: I think – I don't know. I think he was the one that had made a deal with Eisenhower to form Aramco, so he was kind of an important man. I was told. A little company. [laughs]. Okay.

Liza Zapol: All right.

Warren Zapol: Thank you so much.

Nikki Zapol: Yay!

Liza Zapol: Thank you!

Warren Zapol: All of you, for listening [applause] to these ancient tales. [laughter]

Nikki Zapol: Do you like telling 'em?

Warren Zapol: Yeah, I guess I do. [laughter]

So what's left, Marina and the, Jesper's – basically the queen's lifeguard.

Nikki Zapol: Danish lifeguard.

Warren Zapol: Danish lifeguard. Another, that's a quicky too, but we don't need to do it tonight.

[END OF AUDIO FILE 'T08;' BEGINNING OF AUDIO FILE 'T09']

David Zapol: I remember we were driving out to Nine Acre Corner to pick up the newspapers, because the US newspaper had a picture. [Of the Brazil story.]

Liza Zapol: Mm-hm.

Nikki Zapol: Right, the *Times* did, I think.

Liza Zapol: They covered, I think, your story was in there.

David Zapol: I think we just, like, bought all of the remaining papers.

END OF SESSION 6

SESSION 7

Liza Zapol: Today is January 2, 2017. Just getting used to saying that.

Warren Zapol: Wow, wow.

Liza Zapol: And we're in Miami Beach, Florida; this is our follow-up session to yesterday, and this is the Dr. Warren Zapol Oral History Project. This is Liza Zapol, and --

Warren Zapol: I'm Warren Zapol. And we shall do it together.

Liza Zapol: Good. So one of the topics that we realized, as we were going through your career, we haven't yet discussed, is a story which I often heard at dinner parties and when various characters from these stories showed up we would roll out the story again [laughs] and hear it again, and it would change, and I've met many of the characters in the story, which is very exciting.

So, I am, anyway, we thought we would focus on your stories of your travels to the USSR. In the late '70's, early '80's.

Warren Zapol: Right, right.

Liza Zapol: So if you can tell me, give me a context a little bit about what was happening, how you got the phone call, and then maybe some of the backstory of the case that you were asked to come to Russia to help with.

Warren Zapol: Right. So, it started from a phone call. I was called by a man called Hank, or Henry, Bahnson, B-A-H-N-S-O-N, who was chief of surgery at the University of Pittsburgh. And Hank was kind of the dean of American cardiac surgeons, a student of Alfred Blaylock at Hopkins, and had started cardiac surgeries in many countries. And, including Australia and Austria and, just, a real hero. And he was in charge of an American-Russian exchange of cardiac surgeons, and every two years they'd have a meeting on Pedie cardiac surgery, and each year one or two Russian surgeons would come to the United States for a few months and watch people do cardiac surgery and learn how to do it better.

So Hank called me and said, 'Oh, Warren, a very good friend of mine, the Russian leader of the USSR-USA exchange, whose name is Vladimir Ivanovich Bourakovsky [NAME UNCLEAR] has a problem, and would like an American doctor to advise him.' And first it was just advise. And his daughter, as it turned out, twenty-eight year-old Marina Bourakovskaya, had been ill, had had a cardiac arrest, and had very bad adult respiratory distress syndrome, as we called it at that time. 'And since you worked on ECMO machines, and you're knowledgable in intensive care, I'd like you to think about this,' he said, 'hold off on the ECMO until last resort, because there hasn't been very good results with ECMO, but see if you can help them.'

So thus began a series of phone calls between Moscow and Mass General Hospital, Warren Zapol, who had been tagged by the National Heart, Blood and Lung Institute to talk to Warren Zapol, cause he studied Adult Respiratory Distress Syndrome. And George Falkowski, a young cardiac surgeon who had just really become involved a little bit in this case, was watching

from a distance, and wrote a very nice review of it. George was on the phone, and first I gave them advice, and then they said, on the telephone, and then they said, 'Come. Come quick!' And then they call back and say, 'No, no, don't come.' So there was this crazy come, don't come story. And finally, I hung up, and the State Department called me and they said, 'We've been following your messages with the Heart, Blood and Lung Institute and we want you to know that if you don't have a passport that's active with a visa, you'll be put in jail if you go to Moscow. [00:05:07] So don't go to Moscow unless you have a visa and a valid reason to go.' Okay. I didn't realize the State Department was paying attention to my phone calls, but they apparently were.

So, long story short, I call mom --

Liza Zapol: I'm not, I'm not sure I follow; why were they telling you that? Why were they saying that, were they afraid that there was some other reason why you might go? Or that they were afraid --

Warren Zapol: They were afraid that I would go without a visa.

Liza Zapol: And then --

Warren Zapol: Be jailed in Moscow.

Liza Zapol: And then you would be, then something would happen to you in Moscow. Not because the Americans would be punishing you, but because the Russians --

Warren Zapol: The Russians would put me in jail. And I would say, 'It didn't sound like that, it sounds like they needed help, and why would they ask me to come if they were going to put me in jail?' So it didn't make any sense. The State Department call made zero sense. So, there was more come, don't come, come, don't come, and finally, come. And I asked mom to pack the bag; mom drove in with a bag of clothes. I had packed up my ECMO machine, and as I was going out, I spoke, the most important phone call I made, and then visit, was with a man whose name I'll take a peek at, who was chief—Mort Swartz, who was chief of infectious disease at Mass General Hospital. And I said, 'Mort, I think she probably has ARDS, and the most common cause of ARDS is sepsis. So, since she probably has sepsis, she probably has a bug, and the Russians don't know what the bug is and don't know its' sensitivities; what would you do?' And he looked at me, and he said, 'Warren, take an experimental drug called BBK-8,' which later became Amikacin. He says, 'They probably have only gentamicin in the Soviet Union, which they get from Yugoslavia, and everything is resistant by now to gentamicin.'

Liza Zapol: This is because they, because you thought there was sepsis, so there was a bacterial infection --

Warren Zapol: I think there's a bacterial infection here. So in a nutshell, I take my BBK-8 box, he gives me some boxes of this experimental medicine, luckily. And off I go to New York, and in New York the Soviet embassy comes down, stamps my passport, makes me ok, and puts me on a plane, and I go into tourist section, and, no no no, they pull me back into first class, and it's scary, it's about a nine, ten hour flight, through the dark – you leave in the evening, and you fly, and then you show up in Moscow.

Liza Zapol: So, you know, we talked previously about your travels in, across Europe, and into India, but had you ever been before to Russia?

Warren Zapol: I had been to Russia, with Tommy Wonders, we had gone, very briefly, for a two or three day trip, giving lectures in Leningrad, and, then '72, so that was seven years earlier. I really disliked it, it was cold, unpleasant, and people were very unpleasant, and we had no special reason, really, for being there, except the special lectures. So, Tommy and I went back through Denmark and met Jesper's first wife and went back out. It was quick, it was no more than three days in the Soviet Union. Which was plenty, which was plenty.

Liza Zapol: And now, in 1979, what was happening, or what was the feeling about the USSR here in America?

Warren Zapol: It was terrible, it was terrible. And it was going to get much worse in the next year as they invaded Afghanistan, and we didn't go the Moscow Olympics. So, things were going to get worse, but at this point things were just at a low level. Ugly.

So we went, I went to Moscow, and, as soon as the plane set down, they came and picked me up at the door and took me to where the general, everybody had what we call scrambled eggs on their hats, they had very fancy Polish generals and satellite generals and Russian generals. (00:10:05) So I was in a very different part of the airport – they stamped my --

Liza Zapol: Scrambled eggs because they had all of their --

Warren Zapol: Gold braid on their hats.

So I, in a nutshell, I was tired, I'd been up all night, worried. I got my boxes, my antibiotics and drugs and various things, and went off to see Marina Bourakovskaya, who was in terrible shape when I saw her. She was in the, one of the Moscow city hospitals, an ugly place, and I learned a great deal more about her and her history. And her history was that she'd had a fallopian tube pregnancy, which had gotten infected. And she had some sort of criminal abortion, didn't want to tell her father, who didn't like the fact that she'd divorced her first husband. She had a daughter, and didn't think another pregnancy was a great idea. So, he, her father had her go to another hospital to have the fallopian tube pregnancy removed, and when she had that happen she had a cardiac arrest. Her heart stopped. And why, I don't know, did the anesthesiologist not put the endotracheal tube in the right place? And was there an aspiration pneumonia? They denied these things, but I don't know, I don't know what happened, I wasn't there.

But, she had a hard time, cause when they resuscitated her, her, she was in coma, and she didn't answer questions or open her eyes. They did a tracheostomy to make her breathe easier, and she developed respiratory failure over the next several weeks.

So I arrive, and there's this blue lady with renal failure beginning, and respiratory failure, and dying. And it's scary. And we're in a rather gray little room in a city hospital somewhere, and they had sent over a better ventilator, a so-called MA-1, a Bennett MA-1. But it wasn't a very good ventilator, it was kind of a crappy ventilator. The first thing I said is, 'Do you have positive and expiratory pressure, because she's blue.' And they said, 'Not in Russia.' And I said, 'Well, maybe we can make it.' So we took the expiratory tube of the ventilator, and we got a ten-

liter bucket, and we filled it with water, and we put the tube ten centimeters of water under, underwater. So it bubbled when she exhaled. And she turned pinker.

Liza Zapol: So what was happening in that reaction? That must have been unusual for them to help you build up --

Warren Zapol: We were expanding her lungs. Her lungs, which had collapsed down, were now being expanded a little bit. Not super quantities, but a little bit.

Liza Zapol: So were they – all of a sudden you're starting to tamper with their --

Warren Zapol: Yeah, it's --

Liza Zapol: -- equipment.

Warren Zapol: -- American intensive care in the end of the world. And she was on a lot of drugs, and I didn't know any of these drugs, and they're all combination drugs, A and B, C and D, E and F. So I said, 'No more drugs; stop them all. The only drugs I allow are paralysis with curare and morphine, cause I understand morphine and curare, and the other drugs I don't know. We then, I then set about doing a number of things, and I don't think we need to go through them all individually, but one is to make, I brought some MGH ICU sheets, Intensive Care Unit sheets, and put them up on a wall, so we would write down all our numbers, so I could tell, when I came on duty, how much blood oxygen did she have, how much was her blood urea, how bad were her kidneys, I could immediate – how much urine had she made, I knew everything. So, we started to write everything about the patient.

Liza Zapol: And who's helping you translate this, and get this information?

Warren Zapol: Well, Lado Meshkivili a wonderful Georgian pediatric cardiac surgeon, Lado spent most of the time at the bed with me. [00:15:02]

So anyway, for the first twenty-four hours, I was there, on duty, on this hospital unit. We set up her respiratory care unit, we put her on expository pressure, and I started to scream about the need to culture her blood. I needed to know what bacteria I was fighting. And they said, 'Have they cultured her blood?' and they said, 'Yes, they had five days ago, and nothing came back.' I said, 'Nothing?' 'Nothing.' So I said, 'Stop all the gentamicin, stop all the antibiotics, stop everything!' And we waited about twenty-four hours, and I said, 'I want to culture her blood.' And they said, 'We can't culture her blood .' And I said, 'You can. I know you have chemical and biological warfare in Russia. Let's find the institute in Moscow, because they will be growing bacteria.' And Bourakovsky, her father, found these people and they came, and they looked like cooks; they had big white hats on and they had pots of broth, and we collected her, I put in fresh IV's, I pulled out all her dirty IV's, I cleaned her up, and I took some sputum samples for them and I smeared them and looked myself, I couldn't see any, when I Gram stained it, I couldn't see any bacteria, I could only see polys, so I knew she had pneumonia, but I didn't know what bug. And then I drew, we drew blood, and we cultured her blood.

Liza Zapol: You knew she had pneumonia because of the polys? Or because of --

Warren Zapol: Yeah, and because of the collapsed – the clinical story was so good. Whether this was an aspiration from her original injury, or whether this was subsequent infection, I don't know. But the story was, I said, 'Ok, you got the blood cultures now, with twenty-four hours of no antibiotics. If it's going to grow, it should grow.' And so they went off to grow it, and I gave them a little bit of BBK-8, and I said, 'Do sensitivities. If you grow a bug, see if it's sensitive to BBK-8. Just put a little bit in jello, and see if it still grows.'

Long story, make it shorter, it, she did grow a pseudomonas, it was resistant to gentamicin, and it was sensitive to amikacin.

Liza Zapol: Amikacin was just B --

Warren Zapol: BBK-8.

So that was the good peep, and we then started to go back and forth to Mass General with requests. And I said, 'She hasn't eaten in two weeks or three weeks. We have to feed her.' And so we had something called TPN, or total parenteral nutrition. Total IV nutrition. And they didn't have it yet in Russia. It had to be made fresh at the Mass General, Monday, Wednesday and Friday they made it. So Monday, Wednesday and Friday, Shirley Barry, my secretary, would take her BBK-8, and her TPN, and fly from Boston to Kennedy, and at Kennedy the pilot of Aeroflot would take that drug, those drugs, and put them in the cockpit and fly them to Sheremetyevo. Three times a week. And they would send a limousine down, a Volga, to pick it up. And then they would get it and bring it back to us. So we fed her, continuously. She didn't have to eat. We gave her a thousand, fifteen hundred calories a day, and IV, BBK-8, and we waited. And she got pinker, and her lungs got better. That was the good news, her lungs slowly got better. But she was, I thought quite comatose, and worried about that. And the story of the comatose is, I would do a neurologic exam every day, check her reflexes and see if she had any strength, or could respond to me, and then I would yell in her ear, 'Open your eyes.' And the most famous story I can remember is when one day I came to, came out after examining her, and said, 'Michael, Michael!' And I was talking to Michael Israelovitch Perlman [NAME UNCLEAR], who was the world's greatest tracheal surgeon, next to Hermes Grillo, at our hospital. Michael Israelovitch Perlman, in Russia, was doing tracheal surgery and tracheal repair and tumor removal; he was just a brilliant surgeon, and I was told that he was the best surgeon in Moscow, and I should use him, the American surgeons told me. [00:19:59] So Michael looked at me and said, 'Warren, you're yelling so loud in her ear,' he said, 'if you go downtown, and look, there's a statue of Pushkin. If you yell in the ear of the statue in Pushkin Square, Pushkin will blink.' [laughs]

So, anyway, I think, I think we, everything was ok, except she was still fevering, very high fevers, thirty-eight, thirty-nine, should be thirty-seven. And I pushed for a laparotomy to open her up and look and make sure there was no pus left inside. And it was very hard on the family, on Vladimir Ivanovich, but nevertheless he agreed, and one of his, the best surgeons in Moscow came and did it and she was clean. They just closed her up.

So we knew she didn't have a pus pocket, we knew she was clean, we knew she had a bacteria in her blood, which was sensitive to amikacin, and slowly, so it took us maybe a week or ten days, and she became slightly responsive. She would move her head. We always wondered

whether she would, her head would ever come back. We had no idea. But it did. And things went extremely well.

I remember some dinners at Aragvi [NAME UNCLEAR], which was a Georgian restaurant, with Primakov, who was the, perhaps a member of the central committee, later premier of Russia. An important man, who was obviously very important in allowing his good friend Vladimir Ivanovich to have an American take care. As Marina gets better, her sister comes, Lena, who's wonderful, just wonderful, beautiful. And is married and is married to a diplomat in Jordan, and comes, I believe with her daughter as well. And spent a lot of time holding her hand and making her – so, we're trying, then, to wean her from the ventilator, which is not something the Russians do. The Russians say, 'Oh, you're all better,' pull out the tubes, see if you make it, or you die. And I don't do that. [laughs] I say, 'No, no, we'll go little bit by little bit and see what she can do every day.' So we're slowly weaning her, at which point her mother appears, Lily, and Lily says, 'I want you go to pray with me.' And Lily and I – not Vladimir Ivanovich, I think George – go to a monastery about thirty miles from Moscow, so we drive a long, long, long way, and actually they, this monastery was under very close Soviet supervision, and they allowed us to see a priest, a Greek Orthodox priest --

Liza Zapol: We're going to pause here for one second.

Ok, so, just to resume, you were talking about a trip with Lena --

Warren Zapol: Lily.

Liza Zapol: Lily.

Warren Zapol: So Lily was Vladimir Ivanovich's wife, and obviously wanted her daughter to survive a great deal. And was probably very important, and was egging Vladimir Ivanovich on to have an American. But she wanted to pray. And praying was not allowed for the Soviet higher-ups. So a black, a limousine with dark windows appears, and Lily's in it, and she takes me and George Falokowski and we drive out to, about thirty miles outside of Moscow. To an onion-skinned domed monastery, which had been closed, clearly, and was, they were allowed to have a few holidays. There are a few priests, under tight control of the state, and I remember it well because it had Ivan Rublev paintings inside of it, and he's a very great painter of Russian churches. And it's all covered with plastic, cause the women, I guess, rub their clothes on it, and, to bless themselves, and so it's all covered with plastic to keep from being worn away. I was very impressed that Lily did pray. And we did meet, we did have a little prayer session with the monks. [00:24:58] And I was impressed, cause I didn't expect that to happen.

Liza Zapol: What did a prayer session look like? What did it sound like?

Warren Zapol: I didn't understand a word of it, of course, [laughs] it was in Orthodox, but it was quite nice, it was beautiful. They had scent, I mean, there was a smell and a man was in a black robe, and it was quite impressive. Quite impressive. I'd never been to an Orthodox ceremony before. So that might have lasted an hour, and then we headed back, and it 'shush, shush, don't tell anybody Lily prayed.'

So, we had the church with us at that point. We were quite thrilled. And so slowly, Marina slowly gets better. And at, a ventilator comes from Mass General Hospital that can allow

us to wean her. In other words, it doesn't have to – it can do, it can help an occasional breath, but not each breath, so she could breathe many breaths on her own. And I would help one in four breaths, or six breaths, or something like that. So I used a more modern mechanical ventilation program than they had in Russia, to allow self weaning. And it really went rather well; the Russians were very happy with it, I know her father was thrilled that she turned around and was getting better and that she was opening her eyes now, paying attention, and doing all the things.

And so they decided to have a birthday party for me, and this was in March. When my birthday is. I don't know if it was on my birthday, or around it, but we then went to their apartment, which was glorious, it's in a building across from the Kremlin, and right up on the other side of the river, where Stalin had put so many people in jail and killed them and what not. But it's a very famous house they lived in, the house across the river. And there are books written about it, because Stalin was so terrible to the people in his government. In a nutshell, they, at that dinner, they toasted Warren Zapol and his family, his little daughter Liza, his wife, Nikki, who was kind enough to let him go to Moscow, and so we had many toasts with vodka, and after three or four I don't think I remember anything exactly anymore, but at the party were two very important people: one was Yevgeny Primakov, who then becomes premier of the Soviet Union later on, in Perestroika, another ten years. And Arbatov. Arbatov, who's head of the United States and Canada Observers. And we're drinking away, and looking out the window, and so happy that Marina's getting better, we're all thrilled, and the family's happy, and everybody's happy. And I'm almost certain Primakov said it, he said, 'Zapol, Zapol, I sit with the generals, and the generals want to push the button.' He says, 'When the generals want to push the button, I will remind them that you came to the Soviet Union to save the life of a young Russian girl.' My hair stood up. My hair stood up. First of all, who believed that there were generals that actually wanted to push the button? And second of all, could I possibly have done something that made them realize that we cared about humans and they cared about humans and maybe we shouldn't vaporize each other. So it was a very interesting moment at a birthday party. Rather frightening, and then they went on to say, 'Oh, give my regards to Teddy Kennedy when you come home,' and I said, 'Of course, of course!' [laughs]

Liza Zapol: We're buddies! [laughs]

Warren Zapol: And then Abe Ribicoff, the senator from Connecticut. Oh yes, oh yes, I definitely will give them your regards. It's a small world, with very important people in it, who were happy to see his daughter survive. [00:30:05]

So, we then, Marina came back to his hospital, we then brought her back, on Mother's Day, I remember, it was a day in March or April. We moved her across town from the hospital she was in, where I did intensive care, which was the 21st, around, some number Moscow General Hospital, just the pits. We brought her back to the Bakulev Institute for Cardiac Surgery, where her father had a room for her, where there was a compressor, so we could vary the amount of oxygen we gave her, where we could wean her carefully, and over a week or two, we could wean her. At that point pretty much everybody in Moscow knew things had gone well. I had agreed to give a press conference at the end of it, which we did. Because on the way in, I said, to *The New York Times*, 'Don't run this story. If she dies, it's just sad news for the family and everybody. Don't run it. But if it's it a positive outcome, we'll talk about it after, how it was and how it went.' So I knew I'd promised the newspapers that, you know, there was a call, *Financial*

Times, whatever. I stayed at the National Hotel, I remember, with a fabulous view of Kremlin Square there. Beautiful place!

And I would go to George's and George would help me, introduced me to Chuck Mangione and his music, American of course, and we would have strawberry jam made by George's wife, Elka. And gribis [WORD UNCLEAR], we would have mushrooms sometimes, pickled mushrooms. So they, they were very, George was very nice to me personally. Took me out to various sites to see Moscow then. I went to the opera, saw *Ygeni Onegin* [laughs] *Eugene Onegin*.

People were very nice, and I'd get on, I'd be allowed to call home pretty much every day. And the operator would say, 'Oh, Dr. Zapol! How is Marina today?' [laughs] I'd say, 'She's doing much better, thank you.' And so there are only ten phone lines out of Moscow, at that time, and you had to go to Ezvesty [WORD UNCLEAR] or one of these places, where you were allowed to use a line that would dial Boston. So, really, things went quite well, eventually.

They gave me many gifts, I remember, both for my birthday, many more than I deserved, but they never gave me any money. But they gave me furs, and they gave me an old golden watch, and I said, 'Bourakovsky, when was the watch made?' He says, 'Everything good was made before the revolution.' [laughs] Gave me a gold watch, and a stole or something for, you know, a hat, a fox hat, whatever it is, silver fox hat, or what they are. But, I mean, they were very nice to me. Eventually I go home. Eventually I go home. I'm delighted to go home, and I leave everything; I leave them the ventilator, I, they now know about TPN and feeding and all these sorts of things, and a lot, many of them didn't speak English, so they really didn't know what I was doing, but Lado and George I think wrote up the story on intensive care for respiratory failure. And so it was written in Russian, so they could understand what we were doing, and the Russians could begin to learn how to do intensive care as we did it. It was pretty, pretty extraordinary, I mean, it was a win, and it was a lucky win, but it was a win.

Liza Zapol: So, you told a little bit about George Falkowski and having, you know, having Elka's jam, but can you describe a little more who he is and your friendship, which has now lasted til now, but just your introduction to him, maybe --

Warren Zapol: Thirty-five years. [laughs]

Liza Zapol: -- your first time meeting him, and maybe how he spoke, kind of, more of a description of who he is.

Warren Zapol: George Falkowski is an American, living, who lived in Moscow at the time. The story in a nutshell was that George was the son of his mom, who worked at, who, and father, who worked at the *Moscow Daily News*. [00:35:08] His father was an American communist, who had worked in the mines of Pennsylvania and then moved to the mines of Germany and then the mines of Russia, and then eventually in Moscow was a journalist, so started the *Moscow News* with George's mom. And George, born in the early '30's, I guess, and grew up in a tough time, Stalin, purges, worries, paranoid, and one day they say, 'George father's on the hit list. Get him out of here if he's going to survive.' And George's father skis over to Leningrad, and escapes. Becomes an American again, forgets his family in Russia, re-marries an American woman, and then becomes an American GI and fights his way up through Italy, and George then is a Russian

with an American father and a Russian mother living in Moscow. George, bright young boy, they burn his father's letters to make sure they're not put in jail or Stalin doesn't kill them, too, and eventually he, he becomes a medical student and a cardiac surgeon and a good cardiac surgeon and reads English, and speaks English quite well with his mother. So his English is really quite good. So George Falkowski then is in the middle, is a young, bright, cardiac surgeon working for Bourakovsky when Bourakovsky gets into all this trouble and then needs an American translator, an English translator. So George English translates for me. And is a lovely human being, kind and friendly, and understands what I'm trying to say, and understands the Russians. So he kind of mediates back and forth between me and the Russians while we're there.

And after this is over and successful, George comes to America sometimes on the cardiac exchanges, and eventually his family emigrates, first to Israel, in about 2000, and then to New York. His daughter also visits America, and decides that she wants to be an American pathologist and, boom, is an American pathologist in New York. And has a grandchild there now, and so their little family lives on Long Island. The Falkowski, very small little family.

Liza Zapol: So when you met him, what was your first memory of meeting George?

Warren Zapol: Well, I didn't know if he was KGB or not, so my first memory was a little – my first memory was always to be aware of people who spoke English, cause I worried that they would be KGB. So I was fascinated by George, because he was very helpful to me, but I always wondered if he was KGB. And since I'd heard his mother started the *Moscow News*, and his father was a communist, that didn't surprise me that there might have been KGB approaches here. But it didn't, it turned out not to be that way.

Actually, when I got to Russia, Bourakovsky brought me in the first morning, or the second morning, introduced me to his pathologist, who he showed me the numbers on his arm, so his pathologist was Jewish, and he said, 'Don't worry, Warren, that you're Jewish. I hire Jews.' And at some point, George, I think, said, 'Moscow would stop running if not for the Jews and the Georgians.' [laughs] So, there were a lot of Jews and Georgians. But this was peak Jewish emigration time. And it also is the tale of me on the subway, being told that someone by the name of Raykhtsaum and his wife would be emigrating to America, and could I help them, and would I give them my phone number. And I gave them my phone number, and, as you know, Aza played in the Houston Symphony when she came across, and they did call me from Kennedy, and I said, 'Of course, I'll help you, if you come to Boston, if you don't come to Boston, just stay on, help, I'll be your help.' And I think we helped maybe twenty Russians come from that period to the United States. [00:39:58] We got them jobs, we would say, 'George, is he a good anesthesiologist,' he would say, 'Yes.' So, we got, oh, I don't know, a lot, a lot of Russians jobs.

Liza Zapol: And of course, the story you were just saying, about Aza Raykhtsaum, Aza just spent New Year's Eve with us two nights ago, so that friendship has continued, and become lifelong friends.

Warren Zapol: Absolutely.

Liza Zapol: Aza, who divorced her husband --

Warren Zapol: Grisha.

Liza Zapol: -- Grisha, but who you've stayed in contact with --

Warren Zapol: As well!

Liza Zapol: But yeah, so you were saying that was a point of peak emigration because people wanted to leave because there was some persecution of Jews --

Warren Zapol: Absolutely.

Liza Zapol: -- and also there was more opportunity for people as --

Warren Zapol: I think fifty thousand a year were allowed to leave. And go to capitalist countries. Kapistanya [WORD UNCLEAR]. Amazing. Amazing.

Liza Zapol: So, and you've also stayed friends with George, as you said, and --

Warren Zapol: Steinbach, Valerie Steinbach. I'm thinking there's another one, Faina, and an MGH respiratory therapist, who's retired now. But yeah, yeah, so I'm, there are at least three, right, they're bing bing bing in Boston that I was able to help. And others. Steinbach, I helped do his board exams for him, I would board examine him for the anesthesia boards, practice boards. Yeah.

Liza Zapol: So --

Warren Zapol: These were good people. They just needed help! They changed countries; they're like our parents who changed countries, and they didn't have people to help them.

Liza Zapol: So, and then also, I have memories of being invited back to Russia. A few years later. So how did that come to be, and what was that trip like?

Warren Zapol: That was extraordinary, I wish I could remember it all. And your mom and you will remember probably much more than I did. But it was about two years later, and we went back as guests of the Soviet Union. And they allowed us to stay in very nice places, both in Moscow and in Kiev. In the Ukraine. And then we went down to Georgia, and had a great time, because the professor had come from Georgia, been raised there. And there was great wine, Tsinandali, [laughing] Stalin's favorite white wine, and whatever they were, and it was great, it was great to visit. We visited a children's school or two there, with you; you had a great time with the other kids. And then we stayed in this castle on the side of town, of Tbilisi.

Liza Zapol: Of the river.

Warren Zapol: Tbilisi, at the river.

Liza Zapol: Volga?

Warren Zapol: No, I think, it's Tbilisi, in Georgia. Yeah, no, it was great, great. Could be ocean, too, ocean inland – but I don't know.

Liza Zapol: And was this, was there work involved in that, or was that just by way of payment to you?

Warren Zapol: I don't think so. Maybe I gave a talk. Sometimes they would get me to give a talk. But that's the only payments that were involved; I never took money from them, I never gave them money. I took some gifts after she survived, that's all.

Liza Zapol: So, this was around Glasnost, there was some, some more friendliness, but already you had the relationship that was --

Warren Zapol: Yeah, no, it was a personal relationship. That I saw people have.

Liza Zapol: That we were allowed to get visas to travel?

Warren Zapol: Yeah. And then he would come to the airport, Vladimir Ivanovich, and make sure we got in ok, and get us through the red tape. Yeah, no, I remember him looking over and seeing David crawling in the admission box, and he said, 'Tom Sawyer!' [laughs] Yeah, no, it was great.

Liza Zapol: What, I mean, it was, you were about three generations removed from Russia yourself, but this was of course a very different --

Warren Zapol: Yeah, 1920 or whenever they came, yeah.

Liza Zapol: Or earlier, but this was a different Russia.

Warren Zapol: This was a different, this was a very different Russia. [00:45:00] Yeah, I think it had just begun, perhaps, at that time. As a socialist state, yeah.

Liza Zapol: And do you remember what your mother's reaction or parents' reaction was to this trip at all?

Warren Zapol: I really don't. I really don't. I think at the end, we did have this press conference. So *The New York Times*, *Time Magazine*, various American journals wrote about it, and it was a very, I mean, Vladimir Ivanovich was very worried about this, this press conference, they're not used to press conferences, but it actually went very well, because it was a good story. And I remember the Russian, two Russian ladies did the stories, for *Izvestia* and *Pravda*. And they put it down near the weather section, which people believed, cause you could believe the temperature and the wind speed, and the rest was a little dicey, but it was called 'For Life,' in Russian, and we have it in Russian, still, it's in a PDF file. It was called 'For Life.' The Russians were in no rush to get it out; they let us review it, and we gave it, and they published it really as an editorial page, next to 'For Life.' Where the Americans went running off, you know, within an hour to be the first newspaper to have the story, right.

And it basically, what I said was, 'Look, it's an American-Soviet joint effort, I didn't do it myself, I could not do this myself, I had lots of wonderful Russians helping me, and we did it together. And we used American technology, we brought a ventilator from Boston, we brought antibiotics from the west, we brought food from the west. So three very important components, and I helped them as an intensivist in setting up a similar strategy of writing everything down, and getting all the numbers together so you know exactly what's going up and down and in and out, and then carefully using respiratory care to help her lungs get better, and then she had to take over and breathe on her own,' and then, now, they took the tracheostomy out the day I left. And

she was just talking to them. 'Lalala.' And it was great. It was great. It was a wonderful, good outcome to a tough, tough problem.

So, it's been written about. My friend was at the American embassy at the time, I didn't know him, Bill Knaus and he wrote a book called *Inside Russian Medicine*, and I'm a chapter in that, called "Special Medicine for Special People." But in fact, only three people that I know have ever, to that point, had American doctors. Michael DeBakey had operated on the vessels of academician Keldich [NAME UNCLEAR]; an American eye surgeon had done some eye surgery on one of the famous Russian leaders; but I was the only one, I think, I was number three in the Americans who had practiced medicine in the Soviet Union. At that point, in 1979.

Liza Zapol: So I'm in the process of pulling up the *Times* article. So maybe we can pause to find that.

But, you know, you talked earlier about the, how many of the other cases were with older people who were ailing, that this was one of the rare cases – not your cases overall, but there ones when you're called in to do a rescue, when it gets to the point where you need to call in an American doctor and you're in a foreign country.

Warren Zapol: Right.

Liza Zapol: So that this one --

Warren Zapol: This was really a twenty-eight-year-old, not eighty-eight-year-old, member of the politburo in trouble. Yeah. But I, they didn't talk much about those. I didn't have any, I don't know any more than those things.

Liza Zapol: Yeah. Ok, well, I'll pause this for now, but let's see if I can find this other article, and we'll stop for the moment.

Warren Zapol: Ah! The name of the Russian article is Radizhizni. R-A-D-I, that sounds something like Z-H-I-Z-N-I, and it means 'for life.' And we have that, and we have its translation in my PDF file. [00:50:09] So, that's what the Russians wrote, and I tend to, I trusted them, they learned. They were pleased. It's really a Russian learning experience, isn't it.

Liza Zapol: Yeah, it sounds like it was about improving their intensive care --

Warren Zapol: Teaching and improving, and explaining, and --

Liza Zapol: Work which you had been involved in --

Warren Zapol: Right. For a decade.

Liza Zapol: In your training, and improving --

Warren Zapol: And with – yup.

And I would call, I remember calling back infectious disease, probably Pontoppidan in respiration, I mean, I had my consultants, too.

Liza Zapol: To get help --

Warren Zapol: Right, in was I doing the right thing, was I doing everything right, did I leave anything out.

Liza Zapol: Were there – which of the doctors in Russia were particularly helpful to you?

Warren Zapol: Well, George, Lado Meshkivili, [NAME UNCLEAR], Lado was incredibly good, dedicated, smart, intelligent. Pretty good English. Not as good as George by any means, but pretty good. Lado put in the hours. He was younger than George.

Liza Zapol: So here's, March 25, 1979, the *New York Times* headline is 'Boston Specialist Saves Russian Woman's Life.' An AP article. Should I read it to you?

Warren Zapol: Yeah, sure.

Liza Zapol: So, 'Dr. Warren Zapol of Boston, without a visa or a plane ticket, scrambled aboard a Moscow-bound Aeroflot airliner early this month on his way to help save the life of a twenty-eight year old Russian woman who was dying of a lung ailment. This week, the woman was sitting up, watching television, reading and preparing to go home in two or three weeks. 'She's very lucky,' said Dr. Zapol, of Massachusetts General Hospital, after nearly three weeks of intensive work at the side of the Soviet doctors, 'most people die of this disease.' Dr. Vladimir J. Bourakovsky, director of Moscow's Bakulev Institute of Cardiovascular Surgery, praised the emergency mission as another in a series of accomplishments under a 1972 United States Soviet accord on medicine and public health. Dr. Bourakovsky and Dr. Zapol refused to identify the Soviet patient, but Western sources in Moscow say she was Dr. Bourakovsky's daughter, Marina, herself a physician. She had been operated on in February with an infected ovarian cyst, lapsed into a coma, and developed septicemia, acute infection of the circulatory system. As a result, Dr. Zapol said, her lungs became clogged with excess fluid, seeping in from infected blood capillaries, the life-threatening condition that he treated.'

Warren Zapol: Hm. That's true.

Liza Zapol: Let's see if I can find – or if that's it. Doesn't seem like that would be it, but that's where it ends. So. There you go. That's of the many articles, I think.

Warren Zapol: Yeah, there are more. Yank Dr. flies to Soviet and saves life, [laughing] you know, it's the usual stuff. Even *The Boston Globe*.

Liza Zapol: So, what is it that gives you so much nachas about this story?

Warren Zapol: That the family's still alive, that they came to visit us! That we saw Marina, and Sasha, and her daughter and her granddaughter. And Lily was still alive at that time; she's recently died, but the fact that you could go to a place and see four generations of children that were alive because mama made it [laughs] not because, I mean, they had their mama. So it was great, that's great. I mean, that's nachas. [00:55:07] Saving people, whether you know them or not. If you give them a life, it's a wonderful thing.

Liza Zapol: And something about the ongoing relationship, and friendship across odds and --

Warren Zapol: Right.

Liza Zapol: -- and across, you know --

Warren Zapol: Across the ocean.

Liza Zapol: Across the ocean, across great difference, across political divides.

Warren Zapol: Political divides, that night with the guys who want to press the button. Whoa! [laughs] Whoa! What are we doing to each other? Absolutely.

Liza Zapol: And then, right, cause here you are, saving lives, and there's, you know, it's a Cold War that's happening [laughs].

Warren Zapol: Yes, yes, yes, and we see it here, reflected now. I mean, you can either hate each other and think the worst of each other, and the most evil things of each other, or you can say, 'We could work together.' [laughs] 'How about we work together; we save your babies, and we help your people survive.'

I mean, I was lucky enough to go back to Russia, where my picture hangs in the Bakulev Institute, which is now a new building on the Ring Road, and the guy I worked with is now Putin's physician. Leo Bakaria. [NAME UNCLEAR] And so Leo had me give a lecture there, I went back with George, and they got a photograph of me, and it's, there's this, you know, three foot by four foot photograph of me hanging in Moscow now [laughs] and they gave me an academician's medal of the Soviet Union. So I have a medal. I mean, I think they were very nice. I mean, I think they were very kind.

Liza Zapol: Grateful.

Warren Zapol: Grateful, yeah, are the words. Vladimir Ivanovich, now dead, he died of prostate cancer maybe a decade ago. He was a wonderful man, he was a wonderful man, and he loved his daughter, and his wife loved his daughter, and they wanted her to survive, so it's all the right things happened at the right time, at a time when the world wasn't ready to be nice. But, the NIH helped, and the hotline between the, you know, they send the telegram for me over the NIH-Soviet Ministry of Health hotline. So the hotline wasn't only for bad things, it was for good things.

Liza Zapol: Yeah, it sounds like also, she was obviously uniquely connected to the medical establishment, her father was uniquely connected to the government. But in a way, through helping her, over all, and what I'm hearing you're saying, but just to reiterate it, that you were able to help teach the doctors about ways in which to improve their overall intensive care procedures, and --

Warren Zapol: Which they needed on a daily basis. They were fixing kids' hearts, and kids get respiratory failure, and everybody gets respiratory failure, so they needed it. These were, and we gave them a ventilator. And when I got back, the amikacin company funded, they gave us, they gave me a check for, which I could pay the MGH back for the ventilator, the Emersonski, that was what it was called, Emerson ventilator, Emersonski with Bolshoi peep! With big peep, they called it, Bolshoi, super peep, positive and expiratory pressure. So the Russians called it the Emersonski with Bolshoi peep, when I was there. I left it, and then amikacin paid for it. And amikacin used it in their ads to sell amikacin, or BBK-8.

Liza Zapol: They used your story.

Warren Zapol: Yes, yes, I gave them the story.

Liza Zapol: A good one at that. [laughs]

Warren Zapol: Yeah, yeah! It was a good news story.

Liza Zapol: Yeah.

Warren Zapol: And even the AMA, the AMA wrote, it was a two-page article, very nice. Yank doctor does this – even a rather conservative organization like the AMA, it was very positive about this. And I now she liked Harry Belafonte, so I brought a lot of Harry Belafonte records back with me on each trip, for Marina.

Liza Zapol: For Marina, too. [laughs] [01:00:07]

All right, well, this has been a fun session this morning, I know that we have more stories to tell, but that's good, we'll have to make another time to continue recording. But thanks for taking the time today.

Warren Zapol: Thank you for doing this. It's an honor.

SESSION 8

Liza Zapol: Um --

Warren Zapol: One, two, three, four, five.

Liza Zapol: Great. So this is the Dr. Warren Zapol Oral History Project; today is February 2, 2017. And I don't know, I think this is our seventh or eighth session, but I'm not sure anymore. So we are here in Brooklyn, New York, in Park Slope, and you guys just arrived, and in the room is – and if you guys can say your names, please.

Nikki Zapol: Nikki Zapol.

Warren Zapol: And Warren Zapol.

Liza Zapol: Ok, great. And this is Liza Zapol. So, what we said that, I know you're raring to go, was that we were gonna talk a little bit more, or talk about the story of your adoption, or how you found out about your adoption, and then as we continue with the conversation, I know you got renewed interest in finding out more about your family history, of your family of origin. So why don't we get started, and I think you were about to, with how you found out that you were adopted.

Warren Zapol: So we'd come back from England, just, and what year was that? '77, '78?

Liza Zapol: '78 or '79.

Nikki Zapol: It was '78, the year Liza was born.

Warren Zapol: Right. It was, so it was after that. And we came back to Boston, and I got a call, and I think Shirley Barry, my secretary, said to me, 'Warren, there's someone who says he's your bother on the phone.' And I said, 'Bullshit, I don't have any brothers.' So, I said, 'Hang up.' So he hung up. And he called back. And said, 'This is not bullshit, I'm his brother, tell him to talk to me.' And so I spoke with him, and he says, I said, 'This is baloney, no one ever told me this story, that I was adopted, that I wasn't a Zapol.' And he said, 'Ask your mother. She'll know.' Florence was still alive then, of course. And so I said, 'Ok.'

Nikki Zapol: But what did he say to you?

Warren Zapol: What did he say. He said he had found me. I said, 'Who am I, and how did you find me?' And he said, 'Well, you're my younger brother, you're eleven or twelve or thirteen years younger' – maybe more - and he said, 'My father Nat Warshaw, and my name is Stanley Warshaw, and you're supposed to be Michael Warshaw, but your mother died when you were born.' My mother, Millie Warshaw, who was a Russian immigrant. Who was quite young, right, thirty, something like that. Maybe forty, or something in that range, I can, we can look those facts up. But Millie had died of eclampsia, high blood pressure, and a stroke, two days after I, you were born. And my father, Nathan, didn't want to, didn't want to have another, a baby to raise, and he was sending me to Los Angeles to get rid of me, cause it was a time of great angst in his life, and you were, you were given away, to the family across the street, because I was a friend of, because Nat was a friend of my uncle. My uncle Jack. Steven's father.

Liza Zapol: So he was – so your birth father was friends with Zapols, the --

Warren Zapol: The Rothlines.

Liza Zapol: The Rothlines --

Warren Zapol: Jack Rothlines, who was my mother's brother.

Liza Zapol: Your adopted mother's brother. Florence's brother.

Warren Zapol: Right. Florence Rothlines' brother, and they, we have pictures of them at the beach together on Coney Island, both looking like he-men. So they had known each other, and Jack knew his sister had been childless for ten years, she'd been married and childless for ten years --

Liza Zapol: That Florence and Ben had --

Warren Zapol: Not had --

Liza Zapol: -- fertility problems.

Warren Zapol: Yeah, exactly. And thus, I think, was quite happy to take me in. And took me in, but in the 1942 lingo you didn't tell the baby it was adopted. And so this baby was never told it was adopted. It became Warren Zapol, and not Michael Warshaw.

Liza Zapol: We're gonna have to pause for one second. So, continue – so it's February 3, 2017, we're continuing from the conversation we just began yesterday. And you were just saying, you were sort of in, talking about the phone call that you'd gotten from your brother, a surprise call, and he'd said that you should contact, that you should ask your mother.

Warren Zapol: Right, right.

Liza Zapol: So what happened next?

Warren Zapol: Well, I did, I did, and I can't remember whether Nikki was on the phone or not, but I do remember calling, and I do remember my mother crying, and being ultimately shocked, as I was, really, but I was at work and couldn't show it, so it was when I went home that evening. I called her in Florida, in South Beach, in our usual place, and she said – my father had died, of course, at this time, in '74, something like that, so this is four years later. And she cried, and worried that it would change our relationship, and I assured her it wouldn't, that I owed her a great deal for having raised me, and brought me up, whatnot, and what I think she was most interested in was that Liza, you, and David would maintain a grandmother view of her. That although she wasn't a genetic grandmother, she would still be your grandmother. And indeed she did; she remained that way. But there was a certain request for secrecy or something, I don't remember exactly, your mom was more involved in that. I think we decided we wouldn't keep anything secret from you guys, and as is appropriate, the woman who wiped your butt and fed you and cleaned you up and did all those things deserves all the allegiance that can be given to her, whether or not she genetically donated half your chromosomes. But it was shocking to me, and it took a whi – took days, really, to realize that I was not a Zapol. And Ben was not my father, and Sonya and {laughs} – various relatives. Jeff! Wasn't a blood relative. Jeff already

knew, and the whole family knew, but somehow my parents were very careful whenever a friend of theirs had an adopted child, they would be very gentle and kind to that child, they would be very special, but they never intimated that I might not be me, Warren Zapol. And it amazed me how well they had kept up that pretense. And that later, when I was twelve or thirteen, my mother had wanted to, not adopt another child, but she wanted to take in a foster child. I remember that, and we had interviews, in which I was interviewed by the foster child. But there weren't enough foster children at the time or something in our part of Brooklyn, so we never had one, but I know my mother, my mother had a penchant for children, and she liked to bring them up, and she liked to have them sing and dance and do the things that she did, so I think there was that. I was shocked, and it took a while to separate myself genetically, and Stanley said, could he come and visit me.

A little bit of background here is that Stanley had found me through the senator of Vermont, who had searched the public health service for Warren Zapol, and found me. At the Mass General. So that's how I was actually tracked down, physically, by Stanley. So Stanley was thirteen years older than I was. He was, he ran a wallpaper school, a school for wallpaper hangers in Vermont, and his wife, Leah, very sweet, and they asked if they could come and see us, and we said, 'Sure you could come,' so they came down to Concord one weekend, Stanley, Leah, and his youngest daughter, Cheryl, who must have been six, something like that, at the time. And Meryl the elder wasn't there, she was into Nat, and a wilder life, with tattoos. So, three of them came, and we, I think we cooked out, and we had Darwina then, our little doggie, and we took walks to the river with them, but I think the one thing that was most clear to me is that Stanley wasn't very nice. He just was not a nice or kind person, to children or his, to anyone. I mean, he was very abrupt. He had done this kind of as a decision that he would take. I think he told his father, my father, that they had found me. But I really, after that weekend, I really, and Nikki for sure, had no interest whatsoever in continuing this as a close relationship. So although we knew he was there, the Vermont paper hanger school, and Leah was sweet but very suppressed by Stanley, I thought, she didn't speak hardly at all, couldn't quite tell about her, Leah Stein, his [Stanley's] wife, and I think her, their child Cheryl was very disappointed that she couldn't follow up with David and Liza, her cousins, but the relationship, really, we did not see them again until the mid-2000s. 2005, whatever the year was. When I got interested in ancestry, and through ancestry wanted to figure out who were my relatives on the Zapol side, on the Warshaw side, and found some wonderful people, who we visited. And they, the nicest people were Nat's elder brother's children, eldest brother, Sam, the painter, and, who had painted Roosevelt, who he wrote about in the article in the railroad historical journal.

Liza Zapol: So, in your --

Warren Zapol: In the circus historical journal.

Liza Zapol: And you later found out more historical details about the Warshaw family, and discovered this --

Warren Zapol: Lots of details. But I think the most interesting one is we actually discovered, and met, a very nice lady, who was living in Connecticut, with her husband, they were artists, too, but social workers in public schools, not far from Newtown. Lovely people. Carol Bloch was her name, cause, nevermind, but the Blochs got into the Warshaw tree. And she gave me her mother's diary, of, over the years, of – and in that there's a family tree. And in that there's

Stanley and Michael Warshaw. And it says, 'Michael Warshaw, given away at birth.' And she said the family was very disappointed that, in the text, that I had been given away at birth. And that there were sisters who wanted me, but I think my father had such a tough time because my mother, who, I don't know, was forty or something when, in 1942, maybe thirty-five, forty, had died of eclampsia, I think he felt very guilty, cause he was told in the first pregnancy with Stanley that if she gets high blood pressure, we can't treat it, you should never get her pregnant again. Then he gets her pregnant again. And I think the family, there was an anger at him for getting Millie pregnant the second time, and so Nat didn't want anything to do with the baby, me, and didn't want anything to do with Stanley, my brother, so he sent Stanley out to Los Angeles to live with one of his sisters. And he remarried three or four times, and I think he remarried within six months of Millie's death. So I mean, it was kind of, all I remember is that they say he married a schoolteacher, and all the relatives said she tortured him, and he deserved it. {laughs} So Nat wasn't very nice. My mother, my adoptive mother did tell me that Stanley came to my first and second birthday parties. I don't remember this, of course, but they lived right across the street, you know, maybe five hundred feet between their house and our house on Atkins Avenue, and I think it was a wonderful gift to the Zapols, and to me, in many ways. I think I wouldn't be me had I grown up as a wallpaper hanger Warshaw. It would not have been a violin-playing student at Stuyvesant, oh, he only got ninety percent on that quiz, what about the other percents, what did you get wrong, you know, I wouldn't be me without the Zapol influence, I think, so it was a very strong influence.

Liza Zapol: When you first found out – so, it sounds like you found out more details about who your father actually was, you know, your feeling, and learning about his later marriages later on. So, when you first found out, and you decided you didn't really want to find out until you got into ancestry, which was like, probably twenty years later, what was your decision, you know, you said --

Warren Zapol: Yeah, almost thirty, right.

Liza Zapol: -- I don't want to have any relationship with them, but what, how did that – did it effect your self-perception in that moment? I mean, you said it took a couple days to kind of realize, but then --

Warren Zapol: Not really. I think I, I loved my mother. I knew she was a difficult lady, you know, she wanted a lot of things in her life, from herself and from me, but I didn't, I didn't, because she hadn't exposed me to Nat and that family and continued writing and dealing with them, I think I didn't want to harm her. And I didn't want to harm anybody by bringing another relationship to you guys. And also, our initial relationship with Stanley was [groans] – do we really want to have these people as friends and see them very often? I don't think so. I think, he yelled at the kids or his wife or something, he did some things that probably he shouldn't have done, so I think we weren't too happy to integrate with that family, so I think partly it was that, and partly it was, you don't know – you know you may get more troubles than you really want, so, I don't think I'll do that. So we didn't do it.

Liza Zapol: So you say it was very painful for both of you, but very painful for your mother, so you were wanting to protect her, too. But in your conversation, did she ever explain to you why she hadn't told you?

Warren Zapol: Yeah, I think she always said – and I think we have a letter, we have a very nice letter from her to me in 1978 where she talks about this, and she basically says, 'In 1942 we were told not to tell the child, when you adopted a child, don't tell the child that they had been adopted.' And that I think is why she never, that she was very frightened I would be taken away by the Warshaw family, I think. She was afraid to lose me. I think that's part of it, too, it's not just the psychologists told you, don't tell the child; I think she had a fear that I would be swept away and taken back to the Warshaw side of the street. So I – but in reality there was, who would take me? My mother was dead, my father was floating around the world --

Liza Zapol: You said that some of the family members were interested.

Warren Zapol: But some of the other ones, Carol's mother, was troubled that she wasn't offered the child, or other people in the family weren't offered the child. Which might have turned out all right; Carol turned out fine. But, yes – this was all in hindsight. I think at that time, it was shocking, yeah. Not how, it was, you're not who you think you are. And your genes aren't theirs, and when you, you know, as a physician I would write down he died of heart disease, he died of cancer, and none of those things were my genes. [laughs] So your genetic family history is different than your fictitious family history that you've thought you've lived. I must admit, I didn't, doesn't make a difference to me whether I'm a Warshaw or a Zapol. It didn't, it really didn't. I didn't, it wasn't, there weren't many Zapols left in the world [laughs], in fact, I was the Zapol, and Florence. There were only two of us. And her, I mean, that's right, no no, right, Stanley and I were the two Warshaws that I knew. I didn't have any great desire to become a Warshaw; I was a Zapol, Florence Zapol was my Zapol side, and she loved you guys and wanted to be your grandmother, and there weren't any volunteers on the other side. The guy actually had run away and was living in Berkeley, California or something. So was I gonna stop off in Berkeley and meet this man and have a, say that was my father? But then my wife would say things like, 'You don't look like that photograph in our living room.' [laughs] And I'd say, ah, my mother said I did, Florence said I did, but you don't look your relatives. No, no, I guess I don't. And it was peculiar, because all your relatives knew, but didn't tell you.

Liza Zapol: So, I have some recollection that after, almost, actually, immediately, when grandmother Florence passed away --

Warren Zapol: 1999.

Liza Zapol: That was in 1999, that she, that the stories from the other family members started to come out, about them knowing that you were adopted, but that you didn't really, that it took sort of, that still the illusion of your being a birth son to your mother, to Florence, was maintained until her death. And then after that, for everybody, there could be more open conversation about your adoption.

Warren Zapol: That's probably true. Yeah, yeah.

Liza Zapol: So tell me if you have recollections from your mom's funeral, or the conversations that happened. I remember, like, Paul Avrich for example --

Warren Zapol: Paul was there, yeah, huh.

Liza Zapol: -- telling you.

Warren Zapol: Yeah, I mean, I think they all knew. And they never spoke about it. But I think everyone who was there at the time knew, too.

Liza Zapol: But you didn't know --

Warren Zapol: Because she was never pregnant for nine months with me. She turned up with a little squalling baby --

Liza Zapol: She had to have --

Warren Zapol: She made a mystery of it, too. She moved to Bloomingburg, and so it was a little uncl – since nobody saw her, I think she could keep up the mystery that I was truly her baby, because nobody saw her not pregnant. Or pregnant. [laughs] Nobody was there. Mrs. Brown sold us eggs, and we lived by a farm on the hill. So I think that contributed to her – I think she had a fantasy in this, and that is that I really was her child. I think she knew I wasn't, but there was a fantasy, and let's keep the fantasy alive, and when I would go get my birth certificate, it said Bernard Zapol. She had my birth certificate changed, and when I got my passport it said my father was Bernard Zapol and Florence Zapol was my mother; yeah, no, no, she changed, they changed my birth certificate. And so it was much, yeah, I mean, it was, I'm not sure I even had a Warshaw birth certificate.

Liza Zapol: It must exist.

Warren Zapol: Yeah, it must – well, it was Brooklyn. [laughs]

Liza Zapol: Yeah, the records might not exist anymore, it's true.

Warren Zapol: For a price, you could get most things changed. Yeah, no, I mean, it's – but the stories of Harry Zapol and the Zapol family had its problems, too, you know?

Liza Zapol: But I, so I asked you this question about kind of finding out how everybody knew. So do you remember any of those conversations --

Warren Zapol: I really don't. I really don't, but I remember, I think, everybody I spoke to said, 'Yeah, we knew.'

Liza Zapol: Like Steve I remember saying that.

Warren Zapol: Steve knew, I think everybody knew. Just about – no one, to none was this a surprise but me. But the fact that they knew – well, I don't see my relatives very often, so they, it was easy to keep the peace.

Liza Zapol: Maybe, but Steven, who you talked about hanging out with a lot when you were a little kid --

Warren Zapol: Yeah, I don't know why he never told me. And Robert.

Liza Zapol: Well, apparently it was a pretty well-kept secret.

Warren Zapol: They were told not to tell him, by Florence, probably.

Liza Zapol: So, do you remember what ignited your interest in looking or reaching out, even, back to your family history? Was it around some of the medical concerns?

Warren Zapol: Gosh, it's a great question, it's a great question. I don't think I know. It was just – first of all, ancestry didn't exist --

Liza Zapol: Ancestry the website.

Warren Zapol: The website existed, unless it had a place to put it. And it also had good search engines, that allowed you to search. So I could search both sides of the family, and I think I have like six hundred members of the family. It's quite difficult now, because almost all the family hints and efforts are in DT's family. And if you ever look at it, it's just thousands of, I mean, they have a hundred relatives going back two hundred years, and they have photographs, and pictures of high school reunions – it's something.

Liza Zapol: You're talking about my husband, the Townsend's family, which of course --

Warren Zapol: Yes.

Liza Zapol: -- also has a longer history in America, which also leads to more --

Warren Zapol: Yes, yes, it's very hard --

Liza Zapol: -- documentation. Ok, but so I wonder, in some part, it was like, [laughing] it sounds a little bit like collecting QSL cards, like you want to be able to learn more and find out more about your own history, by, you know, looking at the family tree, which is interesting. And then at the same time you're reaching out and making relationships with people like the Blochs, who you learn more about actually what happened. And then of course you then went back to Florida to meet some of, to go see your brother again and meet other family members. So I don't know if you, why you did that, and maybe what happened, because of course then you formed a longer, some longer relationships out of that.

Warren Zapol: Well it was definitely partly driven by ancestry, because I had a brother, and a father, and that was about it, and I didn't know much more. And I knew, as you go on ancestry, it helps a little; it must have been I'm the first from both the Zapol family and the Warshaw family to dig in ancestry, so I don't meet much there, I don't meet people there who are active in this. But I did want to see Stanley and to see what had happened to him, over the '78 to 2008, right? [phone rings] Forty years. So I went and asked – that might be David, you think?

Liza Zapol: Yeah, let's pause for a second.

Warren Zapol: Well, going to Florida – first I figured out where he was, cause I called the Vermont paper hanger school, and they had disappeared, but I found an excellent Vermont paper hanger graduate in Georgia, and he said, well, he knew where Stanley was, but he would have to ask him whether he, Stanley wanted to release his email address to me, or his wife. So he did, and eventually they released their email address, I found them in Florida, and when we went to Miami one time we, I think we all went, no? Mom and I went and visited them, on the Florida east coast, I think Fort Meyers or wherever they are, and they, Stanley had a stroke, so he didn't say two words. But Leah was very talkative, cause she never spoke when we knew her. But she

spoke; she showed us a lot of photographs, which we photographed, and I took back. And she told us about Sam, and she told us about the internal stresses between Sam and Nat, and Nat and what he was like, so I mean, I think we got a lot more human description of the people of the Warshaw family.

Liza Zapol: What did you learn about Sam and Nat?

Warren Zapol: Well, Sam was obviously a wonderful, the elder brother, very talented, started the screen painters' union in New York, in 1914 --

Liza Zapol: Like the scenic artists' union?

Warren Zapol: Yeah, right, and had done that around New York, and had realized that he was a good painter, but he knew he couldn't make a living doing that, and worked at the, wherever they teach artists on 44th Street.

Liza Zapol: The Art Students League.

Warren Zapol: And he taught there, and learned there, and he had professors, I can't remember the famous one, who did the *Saturday Evening Post* or something [Norman Rockwell] --

Liza Zapol: Hopper. No, not Hopper – the *Saturday Evening Post*, it'll come to me.

Warren Zapol: He would do the doctor --

Liza Zapol: Sure.

Warren Zapol: -- you know, examining child --

Liza Zapol: Yes, yes.

Warren Zapol: Classical, yeah, he was his student, and then Sam had done the World's Fair scenic art, and then he had done the famous FDR portrait about a month after I was born.

Liza Zapol: The FDR portrait, it was for what?

Warren Zapol: For Madison Square Garden, for the Ringling Brothers, he had made forty-foot high pictures of – and so I worked out, had Roosevelt sat for his portrait? No, but the New York library here, up the river, the Roosevelt collection had provided the letters to the Ringling Brothers, where they gave him a photograph to work from. And they were so grateful to him for letting them use the railroad, after Pearl Harbor, just five months after Pearl --

Liza Zapol: The Ringling Brothers were so --

Warren Zapol: The Ringling Brothers were grateful, so though strong Republicans they had four forty-foot tall pictures of Roosevelt going around Madison Square Garden at the start. So it was, you know, it was well worth learning all of this through ancestry, and from relatives who knew Sam. Although Sam had died in '54; I don't think anybody really, I don't think I knew anybody who had ever met him. But I did go to the Art Students League, and they published a piece looking for Sam, and then the Ringling Brothers, the circus history magazine, published painting the president, uncle Sam paints the president. So it was fun, I mean, it was fun. I had

more time – I didn't have time, going into my forties and fifties, but in 2008, when I stopped being chair, I had more time to pursue QSL card hunting, you know, think of it that way. It's peculiar hobbies [Liza Zapol laughs] that you have, I mean, I think --

Liza Zapol: It's not so peculiar, I mean, people, understanding your own family history is --

Warren Zapol: It's fun.

Liza Zapol: -- is fun, and also makes sense.

Warren Zapol: Yeah, and it's web-based, and it's left for antiquity. People can then say, who was this guy, and how did he come down, and how am I related to him or her? Yeah, and her, and, yeah, right.

Liza Zapol: So, ok, so then you were in Florida and you decided to see them. You talked to Leah some more, and she gave you some, the photographs --

Warren Zapol: Photographed, photographed a lot, and then we went to dinner and at the dinner she brought her two daughters. And we met the daughters, and the daughters realized we didn't have three heads, and we were nice people, and kind --

Liza Zapol: What do you mean, like they had been told that you were not good people?

Warren Zapol: Well, Meryl knew me when she came with her parents in 1978, but they knew, we never paid any attention to them after that, so I think they felt we had cut them off. And we just hadn't pursued it. I don't think we cut them off, there wasn't much going on between us, and there was no e-mail in those days. So we then went back for lunch at Fort Meyers, where Meryl brought her children, some of her children. She has a disabled child, and a son, and a daughter. And the daughter's name was Caitlin. And Caitlin chatted me up and said, I asked her what she wanted to be when she grew up, and at that point she worked, I don't know, in two, she had two day jobs, and she was in Florida West Coast University. And her day jobs were waitressing at, like, McDonald's or something, two of those places. So she was working sixteen hours a day and going to college, and I said, 'What do you want to be?' She said, 'I want to be a doctor, I'd like to be a surgeon.' I said, 'I don't think you're gonna get there in your present track. Why don't you come work in our laboratory?' And she thought about it, and her mother thought about it, and she'd have to leave Florida, and she did. And I think she was eighteen? Perhaps nineteen, eighteen when she started with us, and after a series of events, three years later, she got into Boston University, where she got in with a scholarship, where she is now, in her first term, and she's about to start organic chemistry. I said, orgo is, it's a test. It's hard. So I think, I think it changed her life, and I think her trajectory towards medical school will totally depend on whether she gets a lot of A's in college. She's gonna need a lot of A's to get into an American medical school. Cause her history is so bumpy, at that Florida West Coast University, she's got A's and D's and F's and A's, you know, if she worked the night before or could study.

Liza Zapol: What was it like hiring her as, in your lab, and bringing her into your lab?

Warren Zapol: Well, I've always asked, when people come to my lab, to work, who are my relatives, I always ask other people in the lab to hire them, and take care of them. So she was in the Donald Bloch area, and just when I hired David, David was, he worked for me, though, there

were no Donald Blochs then. But I wrote him into the NSF grant when we went to the ice. I'm always very exposed, I say, 'Yup, they're relatives.'

Liza Zapol: But I mean beyond the facts of any conflicts, or nepotism or something like that, really, you know, what was your relationship like with her? She was this --

Warren Zapol: She's very sweet, very nice, and I was – I think she wanted a way to get ahead, and she need a way to get ahead. And her father was a scoundrel, who subsequently died, two years after, three, or something, and he --

Liza Zapol: Sorry, when, he died a couple years ago?

Warren Zapol: Yeah, just the year before she went to BU, I think, he died, and I don't remember what or why, but it was acute. And I know he was a scoundrel, and he would list her on tax forms and things like that so that she couldn't get student aid. That sort of thing. So I know he was, you know, not helpful.

Liza Zapol: Here, hang on one second. Ok, so just to resume, we're gonna, you were talking about Caitlin, and what she was like and what your relationship was like – at first she came to live in your house, right, when she first arrived in Boston.

Warren Zapol: Right, she spent the first month with us.

Liza Zapol: In Cambridge?

Warren Zapol: Yeah, and I think mom had a frosty view of her, because she wasn't at all gifted socially or, and she had a Warshaw background. But I was more generous, and said, you know, she's young, let her have a crack at it. And I think she did well in the lab. She hit rocks in the beginning, 'I can't do this, this is too intellectual, I can't, I can't, I can't,' but she did. She succeeded. She got very good at growing cells, doing whatever she did. And then I know she got into an affair with someone she shouldn't have, and she told me about it, and I said tsk tsk tsk, that's too bad, and I helped her a bit with her tuition for her night school at Harvard, and she got A's, she got four A's at her night school at Harvard, so I knew intellectually she could do it, if she could stay tuned. If she could stay tuned and focused and not go off. But I think, I mean, her life is hers, and she does what she wants to do. I know she wanted to go to Harvard or Brown or one of the fancier places, but they wouldn't take her, and they wouldn't give her any money, with her dad, so, but BU did. But not enough, and so we had a kind of tense moment when mom went with her to see the BU scholarship folks, and they said, 'Not this year. Try again. Maybe next year we could give you more money.' And so she waited, she worked two years, then she worked a third year --

Liza Zapol: For you.

Warren Zapol: For us.

Liza Zapol: For the lab.

Warren Zapol: Yeah, for the lab, and then, I mean, I don't know, we don't, we might pay thirty a year, we might, to technicians; they don't make very much. And after her third year she got more money from BU, she decided to go to BU, and one of her friends who worked in my lab

had gone to BU and then was in BU medical school, so I think she has, she knows people who've gone up that track. And it's a fine medical school, there's nothing the matter with it. I'd gone there for a year, it's quite all right. Not a year, but you know, eight months or something, six months.

Liza Zapol: So that's been the ongoing relationship with your birth family, really, is through her.

Warren Zapol: Right, and she's gonna come back and see me this week, probably, she's gonna try and come early this week before we head off to Florida. Yeah, we haven't continued with the family on the east coast, but could, I mean, if we write to the, they'll be happy to invite us in. But we got a lot of pictures. That's where I got a picture of Millie. My mother! I had no idea what she looked like. But Sam had painted Millie, and Millie was in Stanley's house, and so we have a great picture of Millie, that Sam had painted --

Liza Zapol: And was that how you discovered that Sam was such a great painter, was seeing the paintings --

Warren Zapol: My mother. And he did Nat. I think he did a better job on my mother. And then Nat also tried to paint, and there were some fights about who signed what, whose paintings, but I think Sam was the great painter, and Nat not.

Liza Zapol: Mmhmm. Hm.

Warren Zapol: The great ego, maybe. [laughter]

Liza Zapol: Yeah, it's interesting. What parts of that family history that you've now discovered – or the parts of that family history that you've discovered that you've chosen to make your own, like, the painter, and --

Warren Zapol: Yeah, well there are eight brothers and sisters or something, of Morris Warshavsky [NAME UNCLEAR]. And they all came from Russia, where, not far from where the Zapols came from, so, yeah, I mean they're, it depends on who was alive, and who – I mean, the fact that we saw Carol Bloch gave us some insight, I think, into the Sam line. And, and her mother's diary, which I think was of, they were social workers, and they were honest people, and good people, so I think they were reliable sources. Yeah. And even this morning, I had an email from the Zapol side asking for details of Harry and Molly Chesner [NAME UNCLEAR] so I think people are interested in these tragic as well as good stories from ancestry. Especially as people grow older, they try to gel the story, because it may be very hard for their children or grandchildren to sort it out.

Liza Zapol: Yeah, I think we, I don't think we spoke too much about that story, about Harry and Molly Chesner. So, if you want to speak briefly about what, then, about what that story is and why it's important to you.

Warren Zapol: Well it's important, I think, to me because --

Liza Zapol: Tell us what the story is, too --

Warren Zapol: All right, so this is my non-genetic side --

Liza Zapol: Right.

Warren Zapol: Bernard Zapol --

Liza Zapol: Your dad.

Warren Zapol: My dad came with his mother to find his father and he came with two sisters, Sonya and Rose, and they came to the States. And he had a brother who had come to the States ten years earlier, who was a rabbi. Rabbi Harry Zapol. And Rabbi Harry Zapol, who was ten years older than my father, had gone to Maine, Portland, as a rabbi. But Harry's problem was that he had tuberculosis. And he coughed up blood. And it wasn't long before people realized, he was coughing and coughing and blood came out. However, he ran a, you know, a children's [Seder? WORD UNCLEAR] in the parish, and he had a, he was a rabbi, and he fell in love with Molly Chesner. A young woman, young girl, must have been seventeen, eighteen, I don't' know. And they got married. Her parents didn't want her to get married, because he had tuberculosis, but they got married. And there's a Maine marriage license. And they were passionately in love with each other, and he became sicker and sicker, and her family had the marriage annulled, or, so that she wasn't married to him anymore, and that crushed him, that she left him, and, but they're an Orthodox family, and did what dad told you to do, so she left him.

He goes back to New York City, and commits – actually, I think he goes maybe to a sanatorium, I haven't been able to figure out when or where. They sent these people to the Alps, to the Catskills, or actually to, you know, Lake Placid and higher with tuberculosis. This being, oh I would guess, about 1930, and it's still ten years to get anti-tuberculosis medicines. So Harry's not doing well, he's coughing, he's losing blood, he's living in Brooklyn, comes back from the sanitarium, and my father gets a call from the police, that, can he come and identify the body, and Harry shot himself. Through the heart. Here in Brooklyn. And there is a police – I found the police record, man shoots self, man with tuberculosis shoots self, ho-hum. No – it probably wasn't a bad way to exit, compared to the awful ways tuberculosis was a white plague, it was called. But now, Chesner's, Chesner died about 2000, I think. She lived to be quite old, and, you know, get to be almost a hundred, or ninety, and her son told her that Harry was the love of her life. And she still loved him. And so he, through ancestry, I'm pretty sure, as I followed the Chesner line, I ended up with Stanley whatever his name is [laughs] and his wife, and they, and we emailed, and they said yes, and they told me the story, that she always considered him the love of her life. And he wanted to know for his children whether he could have this information from ancestry. Or from, I hired a man in New York, cause I got to the point where I couldn't, there were things, for examples, in New York. like police records and things, that were very hard for me to find --

Liza Zapol: Right.

Warren Zapol: -- in Boston, so I hired a man who works downtown here called Jordan Auslander, who is a genealogist, and he found all these things for me. I tried to find my birth record, my mother's medical records, they're all destroyed, but he could, you know, he was the, I needed help. If you really want to get into things, you need a full-time genealogist.

Liza Zapol: So, tell me – it's interesting, that story has love, and it has the medical interest as well, along, tuberculosis is involved – why, what is it about that story, that must have haunted your father.

Warren Zapol: Oh, it did, it did. I think it did, without any doubt.

Liza Zapol: Did he ever talk about --

Warren Zapol: He then goes to medical school a few years later, in Germany, '32, '33, but, no, we, Harry is buried not far from here, and Sonya, I think they're all buried here in Brooklyn. His mother, I'm pretty sure Wolf is there too, his father.

Liza Zapol: Your father's father.

Warren Zapol: Ben's father. His mother, they all died very – he had a terrible time in 1930, cause his mother dies of sarcoma, his father dies, and his brother dies. Holy moly! I think that led a lot to him getting married, and just wanting to get into another world. And he marries my mother, and he goes to Germany, starts medical school, does a year and a half, with Sobotta and then, I don't know how much we have of this already, but my father, Hitler comes in in '33 and says foreigners can't work, and so pop can't work, can't go to medical school anymore. Back to the States.

Liza Zapol: We spoke a little bit about it. Yeah, so there's a lot of filling in, in terms of stories that you'd heard maybe a little bit about, his, your uncle, but not maybe so much.

Warren Zapol: Yeah, nothing like – I didn't, he didn't talk much about them, and I never spoke much to Rose or, who would also have known about it, and Sonya. Sonya died of renal failure when I was pretty young, and Rose was not a reliable source, [laughing] so --

Liza Zapol: What was she like?

Warren Zapol: -- we didn't see her very often. Oh, a great huggy kissy Russian lady. Who was strange. She owned the apartment next to my mother, and sold it without telling my mother, you know, she owned the apartment upstairs, right across the hallway, and just sold it without telling mom. So Rose was strange; this was Paul's mother --

Liza Zapol: Paul Avrich's mother.

Warren Zapol: Yeah, and Paul's sister, Dorothy, is nutty as a fruitcake. And ends up in, hospitalized up in Montreal, I think we think she was schizophrenic, and then she becomes pregnant by a schizophrenic up there, and then has a strange son, who's living, I think, in south Florida, who tries to hold up the family for money, so, you know, not everybody turns up straight on either side of this. [laughs]

Liza Zapol: Well, it's interesting what you, what you get when you get family.

Warren Zapol: Right.

Liza Zapol: And then also as you find out more, I guess as I am right now.

Warren Zapol: Right, right.

Liza Zapol: Well I know we also have family that are rapidly arriving here in Brooklyn, David, Diana and Ruthie and Elliot have just landed at JFK and are coming for the weekend, and, so we don't have too much more time in this session, but --

Warren Zapol: A little on the Danish?

Liza Zapol: [Laughs] So yeah, one of the stories – I mean, I want to continue, I have lists and lists of stories to talk about. And I guess I do, I will want to hear the Danish story, but actually more, you know, I think more as a beginning, I'd like to start more actually about our relationship, and – I know, I know, it's just the beginning. We'll open the door, and then we can come back to this. But really, you know, you talked about my birth, and we talked about, of course, many times in our travels, when we've been around, but you know, I, I think about this now cause I'm raising Juno, our two and a half year old, like, what, what kind of moments, what particular moments you remember from early childhood, and this may not be, you know, you may or may not have particular memories about this, but for example, any songs you remember singing to me or to Davey when we were little --

Warren Zapol: Whoa.

Liza Zapol: -- or – I don't mean to stump you – or just particular, any particular moments from our childhood personalities.

Warren Zapol: I'm trying to remember where we put you. [Liza Zapol laughs] David was downstairs --

Liza Zapol: I think at first I was in the room across from you.

Warren Zapol: Yeah, I think you were in that room. And so you were very close. You would appear, right; as soon as you had mobility, you would appear. And I think you were, you were very much like your daughter, very strong-minded, you wanted to wear gloves and a wool hat, and if the sun was out it didn't make any difference --

Liza Zapol: The picture we have of me in June --

Warren Zapol: Yeah, I think of you as a very strong as a child; I think of you as quite competitive with your brother; who got to sit where, from the age of three, probably, was vital, so there was a hot seat near the window, and if you got to that first you were warmer in the winter.

Liza Zapol: There was a vent --

Warren Zapol: Right.

Liza Zapol: -- from the heating system --

Warren Zapol: It was a hot air seat.

Liza Zapol: That vented right underneath the chair in the kitchen, and yeah, another famous story is that we would fight or push each other for who got to sit in the --

Warren Zapol: Right, and the older you got, the more intense the fights got. So it, I don't remember, at her age, though, I don't remember too much of that. I remember, everybody wanted to visit and play with you. All the family. Tasha, so Nikki's --

Liza Zapol: Cousin.

Warren Zapol: -- cousin would come and play with you, so you were very much a sought after child to play with then. And I'm trying to think if the kids, I remember taking you to Nine Acre Corner, cause there was a school, like your daughter goes to, and there was a woman there who only kept people from two to three. She didn't want three and a half year olds, and she didn't want one year olds. But very sweet lady, whose name --

Liza Zapol: Rose Ruse. [?]

Warren Zapol: Rose Ruse. And I remember taking you to Rose Ruse, in the car, and I know you loved it, and she loved you guys, and what are there, ten of you, twelve of you, I don't know how many there were in the class, but Rose, Rosey Ruse. So I certainly remember you at that age. Getting you into the car and getting you out of the car was always a stuss. I don't think the rule was quite as tight about child seats, but it did – we did have child seats, and you did have to sit in them. And I don't think you were too keen on getting clamped in and unclamped. [laughs] Ever. Ever. Yeah, I'm thinking Rose Ruse --

Liza Zapol: And we don't have to go just to the, to early childhood. I mean, just also, as a parent, but as my parent, what were some of the, what were some of the more difficult moments you remember about, that you had as I was growing up?

Warren Zapol: I don't remember, why don't I remember these things? I remember – you always were competitive with your brother. Which seat, where I sat, who got to do this first, who got to do it second, so mom had the calendar colored with dates, you know, if it were a red day, you could sit there; if it was a blue day, David sat there, you know, that sort of thing. So, your mother, I think, was, dealt – well first of all, she dealt with it more, cause I was usually gone by seven in the morning. I'd start my cases at seven, so I'd be gone by six. And I wouldn't come home many nights; I'd come home late, one day a week, and then if we did ECMO's, my life was, my schedule was terrible, so I think I wasn't around a lot. I think I was one of those fathers who, not the 2016, '17 fathers, I mean. And then I went to Antarctica, and then I went to various places, where I traveled to. So I would say, I spent a month a year traveling. And more than that when I went to Antarctica. And I started to go in Antarctica in '75, before you were born, and I went '77, '78, and then I went '84, '85, so, and your brother, so I left you both, and mom took care of you, and she had this ambivalent – she knew it was good for my career, and I was doing good science, and she liked Peter Hochachka and various people, and she liked to travel, so she went with me on the first one with your brother, her first trip around the world, but after that I was kind of on my own. I remember one very, very important time, it must have been '85, when I came back, you were seven years old, and I had grown a beard, a big, heavy, black beard, and I remember getting off the plane, and you guys ran right past me. [laughs] Dad, dad, where are you! And then you got in the car, and you were crying, and everybody was, oh, what had happened to dad!

Liza Zapol: I was pretty sure you were some stranger we had picked up, and I wasn't too sure where my dad was. [laughter]

Warren Zapol: And my wife, as I came in the door, found the shaving cream. [laughter] And so I have pictures; there are pictures of me shaving that beard off. And picture, you know, with half my face covered with a black beard and half of it shaved off. So that was a truth, that was '85, that was Roger Hill years. And you and I and David and Nikki would ski with Roger Hill, we would go up to the Ray's cabin and we would hang out there in the winter.

Liza Zapol: So, I mean it's interesting, cause in this session we've talked about, a little bit about your relationship to your birth family; your relationship, a little bit, to, or we heard a little bit about your father's family, and now we're hearing a little bit about your experience as a father, but what do you think, what does it mean to be a father to you? What was the experience of fatherhood that you had? And what did you think your, what was your experience of raising young children, or raising children, what is your – so, first, what was your experience of your father? And then what was your understanding of what it means to be a father?

Warren Zapol: Yeah, I'm not gonna be strong on this, because my father was always busy, and he let me hang around, but he never really – he wasn't a counselor. He didn't say, 'What will you do today; what would you like to do today; where are you going today; who will you meet today?' I can't remember him ever asking me questions like that. I don't think I was very good that way either. Your mother was – your mother could start a conversation. 'What was your day like?' 'Who did you meet?' I almost never do that. I almost never do that. Partly cause no one trained me to do that; my mother didn't do that, and my father didn't do that. And I think in some ways I played second fiddle. Mom was the soloist, and then if she needed someone to drive somebody, or if she needed someone to take care of somebody while she did something else, and she didn't work for seven or eight years, and then when she worked, she had a lot of troubles, with people who thought she spoke out of turn, or whatever, and Concord, so she had to leave Concord, and we tried to get her a job at the Mass General, and that worked well for twenty years, and she'd make good friends, and she's a loveable person. But I think she committed herself to raising her children for the first decade, or fifteen years. Quite significantly. Put her career, Harvard Law School or not, put it in the icebox, and, though she had help, we brought home a maid from England --

Liza Zapol: A nanny, Margaret, yeah.

Warren Zapol: Margaret, but I think she, she committed to that. I didn't. I didn't; I kept working. I published. [laughing] I don't know what I did. Eh, some of it was useful to the world. But I was very different, I was very different, and so children – and yes, there were children, and yes I helped, but I don't think I was a primary parent. I'm nothing compared to DT or David, I just know I'm ten percent of them.

Liza Zapol: Yeah, I mean it's interesting, it sounds like it's a combination of a conscious choice to, that your career was where you wanted to, where you needed to focus, and kind of like you said, no one trained me, that hadn't been your experience.

Warren Zapol: No mentor. Absolutely not. Neither parent mentored me in mentoring children. So I often watch, but I don't actively participate, because I'm not secure? I guess?

Liza Zapol: Hm. That's interesting. So then, I mean, but watching, you learn a lot, too, I think, and you see a lot, in watching. So I imagine, I wonder also what, I mean this is a question I have here that is sort of appropriate, sort of not, which is what advice you would give me about raising children.

Warren Zapol: I think you're very good at this, so I don't, advising you --

Liza Zapol: About raising Juno.

Warren Zapol: I think it's relatively easy, just give her enough time. I think, that's the key. I think you already feel this tension, and kids need time. They do. They're full of questions, and things, but they need time to have them out and then ask them out and talk them out. And you do that. And mom did that, I think. What's bothering you? [laughs] And then, I think, the other key is to have, to be in a group of other people who are the right kind of kids, who are asking questions of the world, solving problems in the world, have good parents that provide safety for them – so I think, you know, my friends helped me a lot. I'm, to this day, Marty Rich is still my friend. Leon Greenfield appears from nowhere in Minnesota. People show up! And Stanley Greene, and they have become architects and lawyers and good, positive people, too, so I think you want Juno surrounded by children who will also become positive improvers of the world. That's what I like to think of us; our job in this world is to improve it. And I was reading Maimonides in the Jewish, there are ten stuccas or something, which is justice, means justice or something, and the tenth, the highest level one is to improve the world. And I'm thinking, that's exactly right. If you improve this world, and make it better for people, you can't do anything better with your life. And so, that's, that, to me, is, how do you get your child to improve the world, and that is you get your child [laughs] get them there, I don't know how. But I think who they're with makes a big difference. The group they're with, of people they learn from, cause they, it's like in my laboratory, the fellows learn from each other much more than – they get me, an overdose of me, but they really learn from each other.

Liza Zapol: Well, I can see that in this story, the oral, in your oral history that we've been working on, too, because you have, of course you said, your buddies growing up, but Stuyvesant, and then MIT, the crew you were traveling with, and Joe Silk from camp, and, you know, that you learned as much and sort of created yourself --

Warren Zapol: And you meet your wife.

Liza Zapol: -- as much, out of those relationships – and, of course, your wife. And your wife. And most significantly your wife --

Warren Zapol: Right.

Liza Zapol: -- then, that those familial relationships happen early on, and are formative, but that, yeah, that it's later on where --

Warren Zapol: Becoming secure with others, I think, is very important, so others – not all others are for you, but learning how to pick the ones that are, and then working closely with them and sharing has meant a lot to me. The Hochachkas, the Vamsi Moothas, these, the people who you, you, you work with and collaborate and, you know, it's harder to improve the world by yourself. You're probably not gonna be able to do it by yourself anymore. Certainly not in

science; it's teams, and teamwork. So how do you build a team, how do you select a team, and then how do you keep it playing handball happily? [laughs] So those are things that you learn. I mean, they're all learned. And they often come from working in such a group. I didn't so much, I mean my chief was a loner, but once you begin to learn to work in groups, and they smoothly operate, and you learn what the customs are, you can often advance nicely.

Liza Zapol: I mean, I think you're talking about that in terms of science, but it's hard not to think of that in terms of the family, too --

Warren Zapol: Sure.

Liza Zapol: -- that that's a group that works together, it's a unit.

Warren Zapol: Absolutely. And I haven't thought about it that way, but you're absolutely right. There you don't pick 'em, you're related, but in a sense you do pick the relatives you want to relate to. Which I think you heard a bit about with Stanley, that we weren't' keen, these weren't relatives we were keen to relate to at the time, but Jeff Winkler, we were – I mean, there are others – Tasha –there are others we were close to, so you pick the ones that are right for you and your family at the time.

Liza Zapol: And then within the family itself you find ways to collaborate and work together toward a shared goal, I think, like--

Warren Zapol: Mm, a little. A little. In America, it's so, we're spread across the country; you're three thousand miles away, you can't go there this weekend. It's very hard.

Liza Zapol: It's very hard, but you're of course now collaborating with my brother, with Davey, both as a son and working on with him with a scientific invention --

Warren Zapol: Yeah, unbelievable.

Liza Zapol: -- so despite, over that distance, it sounds like you're still working in this very way that we're talking about.

Warren Zapol: Unbelievable, this has been unbelievable; but I think only because he worked in Africa before [laughing] so this is a little closer. No, but it is all unbelievable, that is all totally unbelievable, that, if he succeeds with an invention of his father's, that is both great for the father, great for the son, good the world. Hey! So we'll see. We'll see, but it is a crap shoot, and there's six or seven million in it now, and it may be crap shot up to fifty or a hundred – yeah, it could change the world, we don't know. But it's for him; it's beyond – you can invent and build a device, but then it's got to go out to industry for safety, reliability, durability, all that stuff. That's a lot. Those are tough words, each word of there has ten people working behind it.

Liza Zapol: Uh-huh. I think we may, but just to give a little more context for this, we talked about the nitric oxide story, and I think, I can't remember if in our last session, I'm trying to remember, if we had talked about the invention overall, or the idea of doing, going beyond the tanks of nitric oxide to a small sparker. I think we may have talked about it a little bit. But, essentially, what you're trying to do is make the ability to make nitric oxide much simpler and easier and more transportable through Third Pole.

Warren Zapol: Absolutely. Universal, cheap, from air, no pharmaceutical deliveries required, no trucks, and just safe, reliable delivery of nitric oxide to children and heart surgery patients and adults who might wander around and need it for pulmonary hypertension. Yeah. No, no, it's very possible --

Liza Zapol: You must be --

Warren Zapol: -- that it succeeds.

Liza Zapol: -- quite proud, or, what does it feel like to see your son in that capacity, sort of as CEO of this company around your invention?

Warren Zapol: It's unbelievable. You know, twenty-six years ago he was sitting around this table with you, as I described this strange thing, this strange idea that we would use tiny amounts of this poison gas that is naturally made by the body from arginine, to dilate the pulmonary circulation. And then it works in adult lambs, lambs, maybe three month old lambs, and it works in fetuses, sheep fetuses, and then we try the first babies. And y'all were around the house when we were doing, from '90 to '92, we did the babies, and then of course it's the people you work with, right? It's convincing Jay Roberts, a young neonatologist baby doctor anesthesiologist that it's not crazy.

Liza Zapol: Right, I mean we've talked, you've, we've shared this story, but then, so Davey was at the table as a teenager at that point

Warren Zapol: Right! And now he comes back, I don't know, twenty-five, thirty years later, that's '90, but then we invented electric NO in '94, '95, and then the gas company just sat on it, killed it. And now, they're making four hundred million dollars in the United States selling nitric oxide, and it's just, our patent's long disappeared, and it's just unconscionable. So much of the world doesn't have nitric oxide; none in China, none in Africa, none in South America. Let's just make it available now, and economical. And also doctors in America would use it a lot more, but we can't, cause it's a hundred and fifty dollars an hour, and people don't want to spend that. So it's, I think it's time, and I wish I could remember how David got into it, it was a few years back, but we wrote a grant and he had a very good friend who came by who we took up to see a baby on nitric oxide, and he had his own baby who was blue when his baby was born, and who was treated, and he doesn't remember exactly how, but I think it's – the baby story often grips people, because they feel like they've been through this, and would like other people to have therapeutic possibilities. Not go through this gut-wrenching experience of a blue baby. So I think Jeff, his buddy, was very helpful and raised money, essentially. Millions! But it's taken years. But David, in Africa, had gotten into the raising money and building a company, but not got his hands dirty, but now he's not only raised the money, but he's also found the engineers who will then build a company. And he's building it in Massachusetts, which I think, for the first part he was hiding behind Mass General Hospital so we could protect him; the big boys aren't suing, protect their four hundred million. So partly it was to hide, and then I think secondarily it's the fact that we knew what the right answer is, we know what NO is and what levels it should be at and what its toxic properties are and whatnot, and how to clean them out, so I think he wanted to be nearby so we could have a fatherly look at what was going on. So he's built a company somewhat on, in terms of administration in California, much of it in Boston, now with new facilities in Arlington.

Liza Zapol: That's cool.

Warren Zapol: Yeah, it's totally cool. I never thought I would see my son do this, and it comes at a particularly good time; I don't know how much time I have, so it's been great to spend a week a month with a son. Not something I thought was gonna happen, but it certainly has been a great benefit for mom, for me.

Liza Zapol: It brings you closer.

Warren Zapol: Yeah.

Liza Zapol: So I think we're probably – or, tell me how you're feeling.

Warren Zapol: Yeah, yeah; we should stop.

Liza Zapol: So this has been an interesting, far-ranging, but more about your --

Warren Zapol: Me.

Liza Zapol: You, in terms of your personal history and our relationships than some of our other sessions.

Warren Zapol: Yeah, no, I try to be honest.

Liza Zapol: [laughs] Yeah, how are you feeling?

Warren Zapol: Ok, ok.

Liza Zapol: Next we can talk about Denmark, grandchildren, [laughs] stories of traveling with Ruthie in China. We'll see.

Warren Zapol: Oh, it'll never end.

END OF RECORDING