

Jill Tietjen (Maiden name at UVA – Karen Jill Stein), Class of 1976, BS in Applied Mathematics

transcript edited for clarity/brevity, but original message remains the same

Keera: So, the first question is: tell us a few things about yourself, your family, your job, things that bring you joy, things like that.

Jill: Oh, that's a big question. Alright, so I grew up in Hampton, Virginia. My father was an engineer at NASA at the Langley Research Center and my dad started work at NACA in 1943. So, I grew up the child of a PhD engineer at NASA and the oldest and dad is a federal government employee. So, we're going to go to in-state schools, but we are going to go to college, that's a requirement, there's no question about it. So, I wanted to go to the University of Virginia, and fortunately for me, the University of Virginia began expecting women in 1970. So, I'm in the third class – the fall of 1972. I was the first class that didn't have a cap on the number of women who could be admitted, and I started as a math major. I loved calculus. I don't like the sciences at all. I like math, a lot, and I was in the College of Arts and Sciences, so I was in the wrong place. I saw what the engineering students are taking, and what their courses were and that's what I wanted to do. Halfway through my first semester, I went and I talked to the Dean and he made all the arrangements for me to transfer to engineering. I was an Applied Math major with a minor in electrical engineering and I was engaged while I was at UVA. He was a nuclear engineer – that was my first husband – and Duke Power really wanted him. So, we graduate and he figured out a way to get me a job in the Planning department at Duke power company, which was a perfect match for me; it's actually what I ended up doing for 45 years. I was a planner for electric utilities, and then I was a consultant, and I learned the field business. I was an expert witness; I wrote the reports and did oral and written testimony to get new power plants licensed and to get them into rate base after they were constructed, and it was a wonderful perfect job for me. So, in 1979, I did on-campus recruiting for Duke Power company; I was actually sent out to go recruit people to come to work for Duke Power, and there, at a card table in a gymnasium, at North Carolina State University, at a career fair, I found the Society of Women Engineers. I didn't know it was going to be pivotal in my life, but it was pivotal in my life. I wasn't very active when I lived in North Carolina, because the chapter was in the Research Triangle Park area and I lived in Charlotte, but when I moved to Denver in 1981, I became very active in SWE and in 1987, a very dear friend of mine went to the national convention and came back to Denver and said “Jill, I heard about this great Women in Engineering and Science essay contest and I think we should do it as an outreach program.” That's when I started researching historical women in science and engineering because I didn't know any of them. I now have 10 books and I actually just submitted a manuscript yesterday for Her Story, Kenya to a publisher in Nairobi, Kenya. So, that would be 11; I have two other drafts: one for Tanzania and one for Zambia that are already done. I'm working on Her Story magic and Her Story food, and all the other African countries, and so I'm really keeping out of trouble. I just became an advocate for women worldwide.

K: So, what did you do when you were a student at UVA?

J: I went to classes. I played the violin in the orchestra, I played in some kind of club sports for a little while. In my first year, I actually managed the men's wrestling team. Every that comes up in their records they email me and they say, "this must be a mistake," and I say "it's not a mistake. I did. I managed the wrestling team." I traveled with them to meets, so I was at practice every day. I was active in the engineering. I was an officer of the engineering school, I was Treasurer or Secretary or something, I was active in Trigon. I was a member of the Honor Council because I was an officer of the engineering school. I did a lot of stuff. I'm now a trustee of the engineering school and I've been on their board in one form or another since 1998.

K: Would you say women were encouraged or discouraged from joining extracurriculars when you were there at UVA?

J: It wasn't either way. When we were students at UVA, all of us, men and women – this is actually a bad thing to say – nobody cared about us. The primary emphasis at UVA at the time was on research and faculty, and we were kind of an afterthought. I was on the yearbook for a year, and I'm sure I did a ton of other stuff, but that's all I remember right now. So, I mean, there were no signs on any of the buildings to tell you what the name of the buildings were, and you just were kind of thrown into the water and expected to swim. So, there was no encouragement, but there was no discouragement, I mean – it was totally neutral.

K: What was your Greek life experience when you were there?

J: There were no sororities at UVA. I'm in the third class and there were none to my knowledge and I had no Greek experience from a sorority standpoint, but my first year I did actually date some guys in one of the fraternities, but I met the man who turned out to be my first husband in the fall of my second year, and then I had no Greek experience whatsoever at all.

K: What is your favorite UVA memory?

J: Oh, I have many, many memories, but one that I really remember a lot – it snowed. You didn't see snow very often when we were students at UVA and my first husband and his roommate Mike and his then-girlfriend Debbie all went sledding and it was just this almost out of body experience. It was so nice. I mean, we were engineering students, so we were always doing labs and doing problems sets and we were always working, and there we were, just having fun. It was really, really cool.

K: So, what was the most challenging thing about UVA?

J: Well, I guess it was the fact that there were so few women and there were so few women faculty; at the time, I think in engineering, there was only one in the entire engineering school at the time. I know who she was, and we become friends since I graduated, but she I don't believe she was my professor. So, I had no women professors, and I do remember I had an experience with my thermodynamics teacher. I went to see him right before I went home for Thanksgiving, probably in my second year. He said "Well, Miss Stein, I think you're the top man in the class so to speak." Then, he was trying to give me some direction and guidance and we were still using slide rules at the time because calculators were still too expensive for every student to have one. So, he said "You have too many significant digits. You shouldn't have that many significant

digits.” So, I mean, that was just hysterical. But, it was just an example of the faculty not knowing how to deal with us. Oh, alright, so there’s a building now called Paul Wilsdorf Hall and it’s named for Doris Coleman Wilsdorf and her husband Hines and they were in material science and they were housed in physics. So, It was maybe 2008 and 2010 and Doris spoke at the dedication and she said “only the first 25 years were hard. You know, being the only woman in physics. Maybe, there were – I’m sure – some women professors I imagine in medicine and nursing somewhere over there, but all of the undergraduate students are male. Most of the graduate students are male.” Just think of that, and I mean – she really said it. Because I was just sitting there going “oh my goodness, she actually really just said it.” I didn’t have a problem when I was with the other students, or really with the faculty, and I have actually said this recently in an article that was published that I shared with my brothers – it was published in Design World on March 25th – and it says that the reason that I didn’t have any problems at UVA was because I had endured merciless teasing by my two brothers. Well, one brother says he has nothing to do with it and the other brother admits to it completely and totally, and he still does it. So, nobody at UVA, even if they teased us, I mean, I think was back at the time when I was in high school there was a dress code and girls couldn’t wear pants to school, and we were kind of in the transitioning phase, but I mostly wore pants to college, and if I wore a skirt, all the boys fainted and didn’t know what to do and all this kind of stuff, and they could never do anything as bad as what my brothers can do to me.

K: So, tell me about a woman at UVA who inspires you – either right now, or when you were at Grounds.

J: I don't think anybody when I was there that I knew inspired me. But there is a woman there now, who is a very good friend of mine, actually, and her name is Pam Norris, and she's the executive dean of the engineering school. Pam is not only an excellent engineer and an excellent administrator, but she is also dedicated to the concept of diversity in engineering education. She’s done a number of presentations and I just watched one in the last couple of weeks, actually. She uses a picture of herself when she’s probably four years old and she’s making mud pies. She says “you know, engineering isn’t just for little girls and little boys who know how to take car engines apart or who know how to do other mechanical things. Engineering is actually a career opportunity for little girls who make mud pies because that’s me.” I just love it. I just love that that’s what she does. I love that she’s so dedicated to diversity. She has legions of her graduate students that just adore her because of how she treats them. She’s developed mentoring programs for faculty. She really cares about people, and she really strives to help each person achieve his or her maximum potential. So, I just really admire her.

K: So, what relationships did you form with other women on Grounds, and did you find it easy to make those connections?

J: I formed connections with women in my first-year dorm, and my second-year dorm. Out of my engineering class, there were 7 of us women out of 220ish, so I knew them all really well. I’ve actually had the opportunity to talk at length to one of them; so, I graduated in ‘76 and her name was Cass Corliss and I saw Cass at the Society of Women Engineers national conference in 1998. I spoke – I almost always speak at the National Conference – and she came up to me after

my session, and she said, “you don't know who I am” and I went “Oh yeah, I know who you are.” She was actually part of an exhibit booth at the conference, and so I went to her exhibit booth, and we sat, and we talked for an hour and a half. I said “Cass. Did you know that there weren't any women in engineering?” I mean, we know there aren't any women in engineering at the University of Virginia, but we just thought they were everywhere else, and it wasn't until we got to the workforce that they we realized that there weren't there either. She said “No, I had no idea.” We just had the most wonderful conversation. I have a really, really good friend; her name is Anne Kellan. She was actually in Mary Mumford with me second year and she lived on the lawn with me in the fourth year. She was a journalism major or an English major or a media major, whatever. You know, she was doing radio and doing journalism and she went on to become a science reporter for CNN. I saw her in 1999 at a conference and we kind of reconnected but it was at our 40th reunion in 2016 that I was very interested in media projects for the Her Story work that I'm doing writing women back into history. I went up to her at this reunion and I said “I'm really interested in talking to you about this project. Where do you live?” I saw on her name tag that she lived in Atlanta. I said “I'm in Atlanta six times a year because I sit on a corporate board in Atlanta. I'm in Atlanta all the time. Why don't we have dinner?” So, we've been having dinner three or four times a year since the reunion, and we just have the most wonderful time. It's just really wonderful, we have these three-hour dinners – they're just wonderful dinners – and we have so much in common and we're the same age. We even had a dinner in November of 2020 outside of the restaurant. She and I have really gotten to be good friends.

K: I think I know the answer to this one based off of what you've said so far. What was the presence of women groups or women movements on campus? I'm assuming that there weren't many, if at all.

J: Correct. Yeah, I'm just trying to remember if there were any women's groups and there certainly weren't any women's movements going on. I mean, there wasn't a NOW chapter at UVA and I don't think there was any the Society of Women Engineers was there, because I would have been a member if it had been there, but I didn't find them until 1979, three years after I graduated; by then, there was one at UVA, because I actually came back and spoke with them, so I know that they were there in '79. That was actually when my troublemaking brother was actually a student at UVA – he graduated in '82 and got married in the chapel. I mean the only thing that was even women centric was Mary Mumford, the dorm I lived in.

K: So, what were your experiences with sexism and misogyny on Grounds?

J: Well, I mean I told you about my thermodynamics professional. But, I mean, nobody knew what to do with us. They just didn't know how to relate to women. I mean, I don't remember having any bad experiences. I can tell you about plenty of them during the course of my career in terms of discrimination, in terms of sexism, in terms of stupid things were said to me. I have friends who have been assaulted. I have friends who had all kinds of bad, bad experiences, but at UVA, I don't remember. Oh, there was, there was a really funny story, and no one remembers this except to those of us who were there. At the beginning of first year, one of the things that used to happen, and I don't think it happens anymore, but there was a physical health exam for

all of the first-year students. So, we went to a building, you know where the Women's Center is and those kinds of things. Well, the first one closest to the ranges, that was the medical complex. Apparently, all of the boys, I think they just took off everything and they were just kind of herded around and then I guess we were in our underwear – I don't even remember exactly – segregated from the boys, and they still were trying to figure out what to do with us, you know, and so it's just an interesting memory. Someone is probably still around – maybe not, because the students are ourselves getting pretty old – but maybe someone else is around who remembers that. But no, I can't say that I experienced sexism in any other way, except that they just didn't know what to do with us.

K: So, the next question is, was there an open LGBT presence when you were at UVA?

J: No.

K: So when you were in college, did you feel pressured to go into a certain field or avoid a certain field?

J: No, we can skip this question, but I want to tell you a little story because it relates to this last question. So, I went to see the Dean of Engineering, and by the way, I had placed out of a semester of calculus and a semester of English, which is a very unusual combination. I went to see the Dean and I made all the arrangements to transfer and then I called home. So, calling home at that point in time meant there was a pay phone in the hall of the dormitory and Humphreys and that was the only phone that there was. We didn't have cell phones, there weren't individual room phones, there was just a payphone in the hall in Humphreys. So, I called home collect, because that's how you did it or you'd have to put quarters in the machine, and I told them I had transferred to engineering. My mother said no. I said "I don't think you understand. I'm just calling to tell you that this is what I've done. My dad was actually very excited. So, did anybody tell me that I should or shouldn't go into any field? No. Did anyone tell me that I should consider engineering that I had those talents and abilities? No. Did my guidance counselor tell me not to bother applying to the University of Virginia and certainly not to bother applying early decision? No, no. I didn't get the encouragement to pursue fields that I believe I should have gone for, but the only person who said no was mom and then it was too late, I was going to do it anyway – I mean, that's how she raised me.

K: Did she ever give a reason why?

K: No, and she's not with us anymore. I believe it was because her sister did math and because of all of the problems she had in her career along the way. That's why I think mom said that and probably mom knew that there at NASA Langley, there weren't any women well that's not true. There was Mary Jackson, who was one of the Hidden Figures. And there was probably one or two others, and mom probably knew that. But I know that wouldn't have discouraged me I mean it didn't discourage me to go to UVA because I was in the third class. So why would it have discouraged me to go into engineering?

K: So, this next question asks, what was relationship and or hookup culture like during your time at UVA?

J: There was nothing that even closely resembles hookup culture. Now, remember the numbers were really good for the women, because there were 500 women in my class and for the previous years there were not very many women. So, the numbers are really good, I mean it was the first time I really dated, and I met the man who became my first husband. I had lots and lots of male friends – I mean, most of the other engineering students were my friend and they were almost all men, and I was in the Trigon Engineering Society, and they were all my friends.

K: So, was there any talk about things like consent, or respecting women on campus.

J: No and remember that this is also at a time when the men were doing what was called rolling. Have you heard of rolling?

K: I have not.

J: Okay, so, rolling was going to the women's colleges and the big thing that these men had done for years, is they had spent their weekends, and I don't exactly know how they spend their weekends, but at these women's colleges, where they were dating was these women. So, ym, no, there was no talk of concern, there was no nothing. The only thing that was a concern was that in our first year, we actually had 24-hour open visitation on the third floor for the girls and some people thought "Virginia Tech isn't allowing 24-hour open visitation for girls, why should UVA?" but that's how it was.

K: So, you did speak a little bit about this, but what was your journey after leaving UVA?

J: Well, my journey was that I went to work for the power company, I was there for five years. My first husband and I, in the interim, had started skiing in North Carolina, which I don't even consider skiing, I consider icing, since all you're doing is on ice and we had skied in Utah. In maybe 1980, we said okay we're going to leave to our company, and we want to be somewhere where there's still an energy industry, and where we can ski. So, that ended up being Denver, Colorado; so we moved to Denver, and I went to work for Mobil Oil Corporation in their mining and coal division. I was there for a little over three years, and I survived one or two or maybe three layoffs, but I knew I would be gone the next one. I answered an ad in the Wall Street Journal and got a job in western management consultants, which combined the utility experience that I had and the fuel knowledge of the electric utility industry together and started my consulting career in 1984 and that's what I still do. I haven't done any really since the fall of 2019, but I do sit on to corporate boards now and stuff which was down in Stone and Webster and then I worked for another firm called Hagler body and then I went back to Stone and Webster, and then I was the direction of the Women in Engineering program at the University of Colorado at Boulder. So, I did consulting work and I started writing, I was speaking, I was married to my second husband by then, and I kept telling my mother and my mother-in-law "I'm going to go out on my own." My mother-in-law said "Oh, I wouldn't want to work for your boss." Yeah, I'm kind of a mean boss. I have so much I want to do.

K: So, is there something that you learned at UVA that you apply to your life now?

J: I learned all kinds of things at UVA that I apply to my life now. I mean, all of the self-discipline that I probably had before, but that I had to learn, the self-motivation, the leadership

skills that I developed, the skills that I developed in terms of working with other people, the engineering knowledge that I gained. You may or may not know this, but at that time and actually, today, an engineering student cannot graduate from the University of Virginia without doing an undergraduate thesis, and it really is kind of like a master's thesis, but it's not quite as involved, but it still has to be an independent topic. Mine involved research on dissolvable sutures. I've had those sutures that I researched in me, and so did my cats. It's glycolic acid sutures and it's known as micro. and they had another suture out and they there it's probably glycolic acid sutures it's known as micro. So, I became a member of SME and I competed in the student paper regional competition in Greensboro, North Carolina. 10 papers were accepted. Nine boys and me. I was last to perform and the boy before me was from Clemson and this boy gets up and starts attacking the University of Virginia. Nasty. I mean, really really nasty. So, when I get up to speak, I really feel compelled to defend the University of Virginia. So, I got up to give my talk and I said whatever I was going to say, but it made me really nervous what I was doing, you know, to get up there and to talk, and there were nine boys. So, I'm standing there – I've written about this a lot, actually – so, I'm standing there, gripping the podium because my knees are shaking so badly that I actually think I'm going to collapse. So, when Duke Power offered me the opportunity to be trained as a speaker and to become a member of the speaker's bureau, I actually leapt at that opportunity, because I never wanted to be that scared again. Now, I spoke Wednesday, I spoke Tuesday, I spoke five times the week before. I speak all the time. Every time I served as an expert witness, I actually was trained. I got training every time. Witness prep. So, I'm trained to handle hostile questions. Most of the times I don't get them and most of the times I tell people I'm trained to handle hostile questions and I'm hoping your questions won't be hostile and then they just laugh and ask me questions. Alright, so, here's the last part of that story. So that night, there's a fancy dinner with round tables and the prizes were awarded, and I won second prize. So, I'm walking to the stage past all the students and professional members, particularly the officers of SME that are there, and they have their wives with them because all of the people who are in SME at this time are male. So, I'm walking to the stage to get my prize and this woman says to me "You go, honey!"

K: So, what does the UVA alumnae community mean to you?

J: Well, they're my sisters. I participated as part of the Retold program and that was just an amazing experience. I was one of the speakers with Tori – I don't remember her last name – but Victoria was the one who wrote the article and has done all the research on the Black nurses and we had so much rapport and we had such a wonderful time, and our session was really very well-received. Now that I've become an advocate for women, I understand how important they are, and how important my relationship with them is, but to tell you that I have a lot of relationships with UVA women isn't really true – I live in Denver. Well, actually, there is a young woman that I met, who is a 1995 graduate of systems engineering and she's now a financial advisor. She's one of my financial advisors, she's here in Colorado as well. So, maybe it's just that I haven't thought about it enough. But there's a there's a strong rapport with women who are graduates from UVA when I meet them.

K: So, in your opinion, what is the legacy of women at UVA?

J: I think the legacy of women is strong. I think women at UVA demonstrated that they belonged at UVA and now, like basically, your reactions to the things that I'm saying demonstrate to me that women belong at UVA, they always belonged at UVA, it's just that they weren't always there.

K: So, the next question is, if you could impart a piece of advice to a female student on grounds today, what would you tell her?

J: I would tell them – actually, I have a whole talk on this, but one of the things that I would say, because that's what I wish I had known when I graduated from college, that's actually the name of my talk. One of the things that I say is take advantage of every opportunity that comes your way while you're at UVA; so that means extracurricular activities, that means projects, that means relationships with people, that means papers, that means everything, so that you feel that you've had the full experience and that you've not deprived yourself of anything that you could have done. One of the other things I say, when I talked to students, just trying to remember a lot of the lessons I've learned are specific to engineering students, but it's really important to have fun when you're at the University of Virginia or when you're in college in general, because you never again have the same social structure in the rest of your life that you have when you're in college. Everybody's right there. Your friends are right there. They don't have family obligations, they don't have jobs, they don't have all the other obligations that come from being an adult. Some do some, you know, some are working full time to put themselves through college and some have other responsibilities as well, and some are interning and have other things, but in general, you don't have that same social structure ever again in your life. So, you need to take advantage of it and have fun while you can.

K: So, is there anything related to women's history at UVA that you would like to learn more about?

J: Well, I learned very recently, contrary to what I had heard before, that the court case that was filed in 1969 actually didn't go to trial. So, I'm sure there's plenty of women at UVA in history that I don't know about. I didn't know about the black women nurses; you know that Tori's done all that research on that. There were women in the Education School, there were women in other parts of the university, I don't actually really think I knew that either. I should have figured it out that they were in the nursing school, I mean that was too obvious, but then apparently there were some women graduate students in many of the fields, and particularly in engineering that I didn't know about that there were there. So, there's plenty to learn.

K: So, this is the last question. What do you think the biggest difference is in terms of your experience at UVA, and what is happening now in 2021?

J: Well, right now, or the last number that I heard, the percentage of women in undergraduate degree programs around the country is about 54% of the student body and I don't know what UVAs percentage is, but it's certainly more than what it was when I was there. It's been, you know, just a few years, like 45 years since I graduated. And so, I expect that the experience is totally different. Society is different, expectations are different, what women have done in the workplace has been different. Women are CEOs, women are astronauts – women weren't

astronauts. When I went to UVA, I mean, women weren't lots of things – women weren't news anchors, women weren't all kinds of things. The experience is just totally different. There's definitely so much more to talk about diversity, both with women and men in so many other different things. I mean, I believe now – I don't actually have proof – but I believe that my high school English teacher was gay. Nobody would have ever said that out loud when I was in high school and he would never have admitted it. I mean, this was back in a time when if a girl got pregnant in high school – and apparently two of the young women that I went to high school with did – you actually had to disappear because you couldn't be pregnant and go. My fourth-grade teacher, which is a little bit even farther back, so that's 1964, when she got pregnant, she couldn't teach anymore. That was the rule. I hated her so that was great, but the woman that came in to teach us that fourth grade year, I loved her, so, you know, it really wasn't bad for me, but the fact that those were the laws. Those were the rules at the time. Okay, so lots and lots and lots has changed, but there's still, as you've already said, there's still a long way to go.