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MS171: Interview with Julie Knobil

Julie Knobil M.A., Ph.D.

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TEXAS MEDICAL CENTER
WOMEN'S HISTORY PROJECT

Julie Knobil

Interviewed by: Natalie Garza
Date: January 17, 2013
Transcribed by: Michelle Kokes
Location: Julie Knobil's home

NG: This is Natalie Garza. It is Thursday, January 17, 2013 and I am interviewing Julie Knobil in her home. Can you begin by telling me your full name?

JK: My full name is Julane Hotchkiss Knobil.

NG: Okay I was going to ask about pronunciation. And Hotchkiss is your maiden name?

JK: Yes. Hotchkiss is my maiden name.

NG: Where were you born?

JK: Born in Albany, New York in 1934.

NG: Can you tell me anything about Albany?

JK: No. Because my family did not live in Albany, New York, they lived in Kingston and various other places in eastern upstate New York State. The first place that I remember is Schenectady, New York and then we moved to the Boston area when I was about 6 and so I grew up in the Boston area and I lived there until I went to college.

NG: Where in the Boston area did you grow up?

JK: In Belmont, Massachusetts which is a suburb of Cambridge.

NG: I lived there for four years so I'm curious.

JK: Oh!

NG: Not in Belmont but in Boston. Okay can you tell me about your education before going to college?

JK: When we moved to the Boston area we (I'm speaking of "we" because I have two sisters, one older and one younger) started out in public school and for some reason my parents decided we should go to private school so I went to the Buckingham School which was a girls' school which my mother went to when she lived in Boston and I had some of the same teachers that she did. But I then graduated from the Cambridge School of Weston. I had a very good education. I didn't realize it at the time. I despised every minute of learning Latin and things like that but all those things turned out to be very useful indeed. I got my first exposure to science at the Buckingham School with a biology teacher by the name of Rosa Kuerti (K-U-E-R-T-I) whose son, Anton, is a concert pianist; anyway, and she was a tough old bird. But I thought from then on that science was the most interesting part of school. During one summer I was a volunteer at the Massachusetts General Hospital in a research laboratory having to do with kidney function and I thought that was pretty interesting too. So when I went away to college (I went to Cornell University because it was far away from Boston, about as far as I figured I could get). I then majored in science there too.

NG: Is there anything that you can identify that kind of caught your eye that was so interesting about biology? Or did you just think over all biology was interesting?

JK: Well, actually it seemed to me that science was easy. It was logical. The other courses that I took in fine arts and English and things like that were much harder for me it seemed. It just was easier and more interesting.

NG: What was Belmont like growing up?

JK: Well it was suburbia, the end of the bus line from Harvard square. I really don't have any particular recollections of Belmont per se because since the three of us were all in private schools most of our socializing was done with the friends at school. So I really don't have any particular memories about Boston.

NG: I want to talk a little bit about your family. What were the expectations, you said it was all girls, the expectations as you graduated from high school?

JK: There was never any doubt that we were all going to go do college. My mother was a college graduate, graduated from Vassar. My father graduated from Michigan College of Mining and Technology in Houghton, Michigan and he was trained as a mining engineer but it was the depression and he worked for the telephone company. He later went back into things related to mining engineering. I never remember any expectations except that one went to college and that was it.

NG: Was that the same amongst your peers?

JK: Yes. In highly rarefied private school education everyone was college bound.

NG: Your mom, did she work?

JK: Yes she majored in French in college and when the war broke out and my father was overseas, it occurred to her that there wasn't a chance in hell that she would be able to earn a living and support her family so she went back to school and got a degree in social work and worked first in adoption and then as a psychiatric social worker in Boston and then in the New York area as well. So she always was working. Carpooling to school meant you go with mom and she drops you to school and she goes to work. So this seemed perfectly ordinary to us to have Mama go off to work, along with Papa going off to work too.

NG: And you are talking about World War II?

JK: World War II, yes.

NG: Were other people's mothers working as well?

JK: I don't believe so. I think that she was quite rare at that, in that era.

NG: Do you think that her working had a big influence on how you decided to live your life?

JK: I'm sure it did. She was a role model and we just thought that's the way life was supposed to be. So there was just never really any doubt. Skipping now to college, I majored in zoology, applied to and got into medical school and then had a crisis, a female kind of crisis of, "Oh what am I doing?" and quit. And then went looking for a job. This was after I had graduated from college and I sort of assumed that I was a hot prospect for anybody and I quickly found out that at all the job interviews I had which ranged from the New York and Boston area the first thing I was asked was, "Can you type?" And I can't. I mean, I'm not a touch typist. I can two-finger it but they all said, "Oh dear, that's really too bad we just have a wonderful job for you if you could type." So that clued me in that I wasn't prepared to do anything, anything! But one of the guys that I interviewed with was the retired Chairman of the Department of Biochemistry at the Harvard Medical School (A. Baird Hastings). (I was referred to him by one of the guys that interviewed me for a job). Dr. Hastings and I talked briefly and he said, "I got a place for you. You've got to go to graduate school." He said, "You're accepted." (He was apparently on the admissions committee). I thought, "Oh dear! What am I going to do with this?" But this was August, graduate school started in September and my job interviews had been disheartening to say the least so I decided, let's do it!

NG: How did you decide on your major in graduate school?

JK: Ah ,unfortunately, it was the choice of the least evil. I joined the Division of Medical Sciences which was a small graduate program at the Harvard Medical School. There were about twelve students and the first year was a smattering of everything. Intensive anatomy, intensive biochemistry (I had never had biochemistry and that was total Greek to me), pathology, microbiology, physiology...and perhaps something else, and physiology seemed to me much the kindest and most interesting of the sciences. So I decided that after that one year you are supposed to pick a mentor and go into a department. So I picked physiology.

NG: That was when you were at Harvard right?

JK: Yes.

NG: What about when you were getting your Masters.

JK: That was toward the end of the year in the Division of Medical Sciences. What happened was that somebody came through in April of that year, when I was just having a terrible time (not the best student in the world) and said, "If you want a Master's degree, sign up, pay \$10, and get your Master's Degree at the end of the year (if you pass)." I said, "I don't know if I'm going to survive this year but I'm going to pay my \$10 and see what happens." So at the end of the year, exhausted and having signed up for physiology and unsure if I passed that first year, I went home. My family then lived in Connecticut and my mother said, "How come you never told me you got a Master's degree?" I said, "I did?" She said, "It's in the paper, in the local paper!" I said, "Show me!" She said, "Local girl gets Master's." I said, "Well, for goodness sakes, nobody

ever told me about that.” So that’s how I found out that I’d passed the year and was able to go on.

NG: So you were already in graduate school at this point?

JK: Yes, the first year of graduate school ended if you passed. Then you were ready to go on or a Ph.D. in whatever field you fancied.

NG: I want to go back a little bit to Cornell, what was it like to be a student at Cornell during that time?

JK: Oh I had a very good time. I was active in extra-curricular activities. I did fairly well in course work. I never made Dean’s list, never got any academic honors of any sort. But I must have done enough of whatever it was to apply to medical school and be accepted. I guess that’s what made me think I was hot stuff when I really wasn’t. I joined a sorority at Cornell and regretted it ever since.

NG: Why is that?

JK: It seemed to me to be a very picky society with values that I didn’t appreciate. When I was a junior we pledged a girl who was Jewish and it caused a huge ruckus in the sorority higher-ups. I thought, “What kind of snobbish stupidity is this?” So my roommate and I and we lived our last term in college in the sorority house, we spent it bitching to each other about how unfair this all was and why were we here and why did we do this?

NG: Cornell was the first of the Ivy’s to allow women integrated in the school.

JK: I believe you might be right.

NG: I know there were a few that at that time still weren’t co-educational.

JK: Yes but that's really kind of a little different. Harvard was Ivy League but Radcliffe was always the...

NG: The sister school.

JK: ...female arm of Harvard and sometime in the early 60's it became kind of integrated. When I got my Master's degree they said, "Do you want it to be from Harvard or Radcliffe?" I chose Harvard. So I guess at that point things were really pretty well integrated. I don't know how they manage it now. But it always was kind of integrated.

NG: By the time you got there?

JK: Yes.

NG: And were there many women in the Ph.D. program?

JK: Yes. Of the 12 of us in the first year of the Medical Sciences program, there were probably 5 women. It didn't impress me as being segregated in any way. And also at that time they were accepting women into the medical school. They had been accepting women all along, but very, very few. But each year they were (as all the medical schools were) accepting more and more women. Now I guess at the UT Medical School there are more women than men.

NG: You mentioned that when you got into medical school that you had a women's problem, can you explain that?

JK: A crisis of confidence. I was dating a guy at that point and I had this thing about, "Oh my gosh, do women... do girls really do this kind of thing? What do I think I'm doing? Should I really be getting married?" My problem I think was that I did not choose to talk to anybody about this. I should have talked to my mother and my father and say,

“Look, am I doing the right thing or what am I letting myself into?” And talk to other women who were in the business, and find out how marriage figured into this.

NG: What were your expectations of what you were going to do with your degree, with your Ph.D. degree?

JK: Well you’ve skipped over a bunch of things here which are pertinent.

NG: Okay.

JK: I went into physiology and I chose to study with one of the guys who was teaching the physiology part of my first year and his name was Ernst Knobil. Another classmate (H.M. Goodman) in Medical Sciences and I joined Dr. Knobil’s laboratory as graduate students. We started on the 4th of July weekend in 1957. As it turned out he (Dr. Knobil) was more interested in me than I knew at that particular time and I married him in 1959 which shaped the whole rest of my career really. I got my degree in physiology at the Harvard Medical School. We moved to Pittsburgh in 1961 and I hadn’t finished up my degree by that time. I had finished up the thesis work (the research part) and was writing my thesis when we moved because my husband became the chairman of the department of Physiology at the University of Pittsburgh Medical School.

I finally finished up my dissertation and had to go back to Harvard to do the oral exam and that was an eye opener. By that time, since I had married my original thesis supervisor, I had to change thesis supervisors. Eugene M. Landis, Chairman of the Department of Physiology at Harvard became my new supervisor was the Chairman of the Department of Physiology at Harvard and was kindly, but not really interested in what I was doing. I don’t know whether other people’s oral PhD exams were as cuckoo as mine. It seemed to me that the panel of guys (from other institutions in Boston) that

were examining me had not even read my thesis. It seemed to me that they were asking idiotic questions. Here I was, just absolutely terrified and rigid with fright with this exam and they kept asking me the most obvious things. I received my degree in April of 1962. By this time, I had had a baby in 1960 and my husband who was starting a new department said, "Hurry up, we need you! You have a job" in his department. So I had a ready-made job and the rest of my career is sort of based on the fact that there was a job always available for me.

NG: So what was your research on?

JK: It had to do with the regulation of growth in the guinea pig. Guinea pigs are funny animals and during this era, Ernst Knobil's lab was interested in growth hormone and the regulation of growth. His rule for graduate students was that each person had to have a thesis project to do alone, independent of anything else that was going on in the lab. My project dealt with the anomaly of growth in guinea pigs. To do this, you have to take out their pituitary gland (hypophysectomy) which prevents them from growing. Not in the guinea pig! They kept on growing. They looked funny. They were obviously sort of physically deranged. Replacement hormone therapy (growth hormones from a variety of species) was totally ineffective. Clinicians were, at that time, treating people with short stature with growth hormone derived from cows but it was ineffective, resembling what was found in the guinea pig. As it turns out, growth hormone is very highly species specific in certain animals. My thesis research was a whole lot of hard work with zero results because nothing that I could do altered of growth in guinea pigs. And we now know why: it was H.M. Goodman (my old compatriot) who later figured that one out.

NG: Let's see... one of the questions I was doing to ask you was about the professional support you received from your husband. How did he support you being a professional and your career?

JK: He was supportive in that he expected me to use my degree and work in Physiology. Because of him I had an instant job in Pittsburgh. But I had the traditional problems of combining family and a career. I said, "Look I have a young child I don't want to work full time and I'll only work if I can get good household help." I had to solve this problem. I got my own grants to do research work; I also did research work at his laboratory as well, and helped teaching first year medical students which I was familiar with because I had done that at Harvard as a teaching assistant. And after about 5 or 6 years of this it occurred to me, "I am going to work every day. I'm working just as hard as that guy and that guy and that guy and I'm getting half time salary and no benefits." So I went to see my boss (my husband) and I said, "Let's talk about this. I'm working here every day. I'm doing as much as everyone else. I'm teaching as much as anyone else in this department. Don't you think I should have a full time appointment?" He said, "I wondered when you'd get around to thinking about that." I said, "Why didn't we talk about this earlier?" So I became full time and that was it. I kept doing what I was doing and now I was full time, getting paid double (which wasn't very much) and getting retirement benefits.

NG: Did you feel that there were any prejudices in the work place either being a woman or because your husband was the boss?

JK: I think people treated me with kid gloves then and for the rest of my career as well because of my husband. Whatever gossip was going on I was not in on. But as far

as the work place in Pittsburgh there was a big push to ensure there was diversity in the departments. And the Department of Physiology at that point won hands down. There were 3 women, 2 Asians, and a handful of Caucasians. We had more diverse department than anyone else. It was a fine place to work.

NG: Are you talking about diversity in the faculty?

JK: Yes.

NG: In the late 1960's and early 1970's you were still in Pittsburgh at that time?

JK: Yes. We moved to Pittsburgh in 1961 and my husband came to Houston in 1981 and I followed in '82.

NG: So this was a big period of transition in terms of social movements in the United States, the Civil Rights Movement and various other ethnic movements that went along with that and the Women's Movement. From your perception what was the impact of this time period on society? In particular with the Women's Movement, what was the impact on society?

JK: I don't know if I really remember it. It never occurred to me that there was any discrimination against women although I know now in retrospect that women were being paid less than men and you should speak to Anna Steinberger about that because she had a great deal to do with that, getting equal pay for women here at UT. But I was really not aware of any particular problems.

NG: So now in this time period looking at women trying to balance career and family life, and these types of things have probably been discussed from the 1960's until now, but recently there's been a lot of articles about, can women have it all? Can women have the career that they want and the family that they want? Did you ever grapple with those

kinds of things or did you just feel like there are things that need to get done and I'm going to get them done?

JK: You know I never really had to grapple with that because I always had a job because of my husband. When he came here he was Dean of the Medical School and the deal was, "Love me, love my dog" (change that to wife) and I got an immediate appointment in the graduate school and they offered me a tenured professorship in the graduate school and it was not because I was a hot shot type of scientific person, it was because the deal was my husband was coming down as Dean. I turned it down because I thought that I would like to work, but I don't want to have the burden of being a courtesy tenured professor. If I'm not doing my job, I want to be fired. So I never had a tenured position but was called a research professor. But I was treated just the same as everyone else. And although my appointment was first in the graduate school and my office was in the graduate school, but my lab was in the medical school. I was a member (sort of on the fringe) of the Department of Physiology at the University of Texas Medical School at Houston. The chairman of the department was Dr. Stanley G. Schultz, a well-known scientist who had been a member of Ernst's Department in Pittsburgh. - so he was an old friend. He said, "Come on, we can use you." So I transferred to the Medical School faculty. So life was always made easy for me.

NG: But at the same time you still had a family.

JK: Yes. I had more family than you know. My husband was married before and he had two children. Shortly after we were married the kids came to live with us. So right now I have at this point a 65 year old stepson, a 61 year old stepson, a 52 year old son and a 49 year old daughter. The kids just all grew up as brothers and sister to each other.

NG: How old were your stepsons when they moved in?

JK: Let's see. It was in the early to mid 1960's. Mark was about 11, Erich a little older.

NG: And so that's what I kind of mean about having it all. Did you feel that home life was neglected or did you feel that you were able to balance?

JK: I'm sure it was difficult to balance everything. I never was a soccer mom or things like that. My two kids, two younger kids went to the University school and that was right where the medical school was. I did the morning car pooling and then other mothers did the car pooling on the way home. The oldest step son, after a checkered career in high school, graduated in '65, drew draft number 22 (Vietman war), went to Cornell got thrown out (Mark) was in 6th or 7th grade and he got picked up by the school bus. He was pretty independent kind of kid. So things worked out. Also I had good household help. I hired somebody when I first went back to work in '62 and she worked for me until I left Pittsburgh in 1982.

NG: Did you have help when you moved to Houston or were the kids older?

JK: No, the kids were gone. My daughter graduated from high school in 1982 and she went off to college and we left, sold the house and moved to Houston. All the kids said, "Oh how can you leave Pittsburgh? It's our home town!" I said, "It really isn't anymore. You're not coming back here." So we were empty nesters by the time we moved to Houston.

NG: So throughout your career you've done research and teaching?

JK: Yes.

NG: Did you find any kind of negative attitudes towards you in the classroom or anything like that?

JK: No. I worked a lot with students because during the last few years that I was at UT (that would be the 90's) I was running the physiology course for first year medical students. It is the killer course of the first year. I dealt mostly with the students who were failing. For medical students who have always been over-achievers, this was probably the first time they have ever flunked an exam. They came into my office and just burst into tears, grown men! And we'd try to figure out a way to solve the problem by getting their act together and we develop a plan to work through this. A lot of people flunk the first exam and you just figure what you have to do to not flunk any more exams. So I rarely got to know the ones at the top of the class because they sailed through without any trouble. I never had any problems at all with the students except for one. We had special tutorial groups and he wanted somebody else because he said I scared him. I was quite flattered! Imagine, me being scary! I was delighted to be able to scare someone! I never had any problems with any members of the department. Everybody was kind and nice and we worked well together.

NG: Did you find the culture of UT different from the University of Pittsburgh?

JK: Not really. I think the thing that I dealt with the least well was I was the wife of the Dean and I was a very bad wife of the Dean. There are certain social obligations and things like that, that one was supposed to attend to and I just said, "Oh phooey, I'm not doing that! I don't want to do that." We had a kind of interesting first two years anyway because I went and bought a house in West U and the day we moved in my husband said, "I can't live in this house," and we put the house on the market the day we moved in.

NG: What was wrong with the house?

JK: Well it was kind of a bad redo and it had a lot of glass on it and my husband said, “Everyone can look in and see what’s going on and I don’t like it.” We had a real estate agent, he’d seen the house, etc. and then he said, “I can’t live here.” And there were three solutions to that problem: homicide, suicide, or divorce, and seriously I really considered all of those and I’m sure he probably did too. But after he said that he never said any other thing about the house except for the fact he said, “No one that I know here in Houston is going to come into this house.” That solved some of the social problems because if we had to meet with somebody we took them out for dinner. But it was a terrible house.

Twenty-two months later somebody came by and decided they had to have it and bought it. Then we moved to our current house (1984). So my three solutions became a thing of the past. I don’t think I ever told my husband the three solutions I had to the problem. And then he got fired from the Deanship. They do that a lot at UT. In 1984, he came home and said, “Quick grab your stuff we’ve got to get out of here.” I said, “Why and where are we going?” He said, “I don’t know let’s go to Big Bend.” He wanted to get out of the house because he had just been fired and he figured that the press would be breathing down the back of his neck to find out all about what was going on. We were gone for maybe 4, 5 days and I don’t think the press ever paid any attention. He was not the first Dean to be fired and he’s probably not the last Dean to be fired. The Dean serves at the pleasure of the administration. You have to deal with the administration here which tries to control the Dean from the top, and from the other end, the faculty which are always complaining about every thing. So the life of a Dean is difficult and he pissed

off a bunch of people (with good reason). So he moved back into full time research as a stand-alone Laboratory for Neuroendocrinology. That was his real love anyway so that was good. But in the letter of “resignation”, the deal with the administration included some concessions (by the administration) one of which was “Thou shall not touch my wife.” I wish I could find that letter!

NG: So you kept your position?

JK: I kept my position. Nobody ever said anything and I just went on.

NG: Did he end up then becoming a professor?

JK: Yes he was simultaneously Dean and the H. Wayne Hightower Professor of the Medical Sciences. The professorship remained after the Deanship ended. So my life was unchanged.

NG: Your research over time has not stayed with growth in guinea pigs?

JK: No. I received my degree in physiology (subspecialty of endocrinology) so after teaching various parts of physiology, I also taught a lot of endocrinology in the first year of medical school and my research was in endocrinology, largely reproductive endocrinology.

NG: Is there anything that influenced that shift?

JK: Yes, my husband. Because that was his field of research, I became sort of an arm of his laboratory along with doing my own little stuff on the side.

NG: So as I was reading through articles that you’ve written.

JK: Oh my God you read some of those things?

NG: I was trying to understand what’s going on and trying to piece together what your broader research is and one question that I had is what was the broader purpose or was

there a broader purpose? Was this simply for knowledge sake or were you hoping that this research was going to have I guess for non-scientists a practical implication?

JK: Oh I guess the push when you start anything like this is that there's something that you want to know and all the sudden practical applications as you find out more and more become quite evident. Years ago, before I knew my husband, he was teaching endocrinology at the Harvard Medical School and he was teaching reproduction to Harvard Medical Students based on the reproductive cycle of the rat because that was fairly well understood and it occurred to him that it bore little resemblance to what the human reproductive cycle is like. Why teach medical students something that doesn't have to do with people? So he sort of segued into trying to figure out: what is the reproductive cycle like in the human?

Since you can't really use humans and research animals, he had access to a rhesus monkey colony and his group was initially studying adrenal function, thyroid function, and diabetes using the monkey as a model. Monkeys have a reproductive cycle very similar to that in humans (e.g., they have a 28 day menstrual cycle). But the problem was there were no techniques available for studying the details of reproductive function in people or monkeys so that you had to start by saying, "This is what I want to know. What do I need to figure out how to do in order to study this?" So you have to set up techniques for studying the reproductive cycle in monkeys. The role of the ovary is well recognized. But what controls the ovaries? It's got to be the pituitary gland because if you take out the pituitary gland everything goes south. So what is it about the pituitary gland? What does the pituitary gland make? It has been well known that the pituitary

secretes hormones that control the ovary (and the testes for that matter too). Anna Steinberger is a testes expert.

But there was no way to measure these pituitary hormones. It takes a long time to develop these techniques and then it turns out that the pituitary gland, often called the master gland, really isn't in charge. Above the pituitary gland is the hypothalamus (part of the brain). And then what controls that? The practical application of Ernst Knobil's research is that he became the world's expert in the brain effect on reproductive function. If a woman (or a man, for that matter) is infertile, the infertility may be due to the gonad (ovary or testis), pituitary malfunction, or is it hypothalamic malfunction? Often times, with various kinds of infertility, every gland is waiting to work, except the little clues from the brain aren't coming through. This is akin to the prepubertal state. But clinically this can be remedied. The brain hormone must be administered about once every hour or 90 minutes to "wake up" the pituitary gland which then wakes up the ovaries and the testes to allow them to function normally. This is what happens during puberty.

NG: Can you explain to a lay person the significance of this?

JK: The significance of this is that if reproductive function doesn't occur, then the species doesn't propagate. If you can figure out where in this chain of events the error is you can correct it.

NG: So this has consequences then for people that are infertile?

JK: Yes. Say a child never goes through puberty. Well, what's the matter? You look at all the parts of the system and figure out what the matter is and if it happens to be that their pituitary is there and it seems to be normal that it may be above the pituitary gland in the brain and you can cure this very simply. One of the off shoots of this is the fact that

if you give this particular hormone intermittently, the reproductive function both in men and women will work normally (if the problem lies in the hypothalamus, all other players being present). But if you give this hormone continually, the reproductive function shuts down. This is useful in the case of e.g., prostate cancer where you want the biological functions to shut down so that the cancer will turn off. So you can either turn gonadal function on by giving it intermittently or turn it off by giving it constantly. Both treatments have their uses.

NG: Can you tell me what the hormone is called?

JK: Gonadotropin releasing hormone (GNRH, a ten amino acid peptide for which the Nobel prize was awarded to Roger Guillemin in 1977 secreted by the certain part of the hypothalamus). Now the question that arises is - how come kids are physically immature and don't acquire reproductive capability until they are 10, 11 or 12 or so? And why is this system functional at birth, and then shut down during childhood?

NG: It also occurs to me that this has implications or practical applications for now, you hear more about children who have gender identity issues and want to stop puberty?

JK: Well, if you want to stop puberty you can do it by giving this hormone in a constant fashion. But children and people in general who have gender identity problems - that's a whole another game entirely - and I have no idea if this system has anything to do with gender identity problems..

NG: It's very interesting.

JK: Oh it's fascinating I think. It's just great!

NG: How has the Texas Medical Center changed over time from the 80's from the early 80's when you arrived to now? And I know that physically it has grown a lot.

JK: You know I really don't know because I was really in a little corner by myself with my head down. I was sort of an interloper on the coat strings of my husband with a job which I really wasn't quite sure that I really deserved but I worked hard at it and I didn't get fired. So I was a non-tenured research professor and I don't really know that anybody except for the powers that be, and maybe the department chairman, really knew that I was a non-tenured faculty member. In spite of being non-tenured, I was chairman of the curriculum committee of the medical school and on the admissions committee. I did everything just like anyone with tenure but I did not have the same credentials.

NG: Do you think that the Texas Medical Center in terms of its research and its position within science and the medical field has changed over time?

JK: You know that's a question you should ask Anna Steinberger, because she had much more to do with that, much more.

NG: Okay. You've been involved in all kinds of organizations and committees so we can't go through all of them, but are there any that stand out to you as particularly important for you or that you were really proud of the work that was done?

JK: I guess it was when we were in Pittsburgh (I can't remember when) I served on a National Institutes of Health Study Section and to review and assess grants. The good ones get funded and the bad ones don't, you know that routine. Why I was appointed to that may have been because I was a member of the Endocrine Society and I was also President of the Women in Endocrinology sort of society of the Endocrine Society and I had the feeling that many of these, or some of these appointments, were made because "Oh we need a woman on the committee." "Well let's see what they've got on the Endocrine side. Oh we'll take her." It was interesting and you know it lasted for a little

while and then it went away but I never was a mover and a shaker in my own right. I feel quite strongly about that.

NG: Why do you feel that you were selected because they wanted a woman?

JK: Well I think by that time people were saying, “Oh diversity, we need more representation from women and oh, there’s one.”

NG: But of all the women they would pick you?

JK: Yes.

NG: So I think there’s something to that.

JK: Well, there weren’t that many women because I guess I wasn’t really conscious of the fact that faculties were unequally divided between men and women. So the people looked around and said, “Well you know the pickings are slim. We’ll take the first one we get.”

NG: Why did you decide to serve on committees or participate in organizations, what was the importance of that for you?

JK: It was important to me! For instance, the curriculum committee was important because I was a teaching faculty member. There were things going on that made you think – we’ve got to fix this.” So when somebody said, “Would you serve on the curriculum committee as our department representative” or whatever I said, “Sure, sure. Let’s do it.” Anything to make things go better, you just wanted to pull your weight.

NG: For the curriculum of the medical school then. How do you feel like you influenced that?

JK: Well, I’m not sure I individually influenced them. I remember there was one comment made by someone in Emergency Medicine. “If somebody had a heart attack at

the bus stop on Fannin who would you yell for?" You think they would say "Doctor!" "No way", he said. "You'd yell for a god damn Boy Scout because they know CPR and first aid! We're not training our medical students to take care of routine emergencies. We need some kind of training for our medical students so they are at least as good as Boy Scouts." And so we set up a committee to study that. As committee chairman, I told the Emergency Medicine representative "You brought up the problem you're going to be the chairman of the committee and next meeting come back with your plan." That's all.

NG: Can you talk about the organization of faculty wives and women faculty of the UT Medical School?

JK: This was first started by the wife of the first Chairman of the Department of Medicine. Anna can tell you all about that because the medical school started in the 1970's.

NG: I think around '70, '72.

JK: Something like that. The first class was 12 students or something like that and the medical school wasn't built yet. People said, "Why do we need another medical school in the medical center? Baylor was already there but there was a big congressional push about we need more doctors and so we need more medical schools. So when the first group of faculty arrived, the Faculty Wives Association was set up to get to know each other and see what they could do to help. It was sort of just a social group and it still is mostly a social group with an agenda now to figure out how can the faculty wives (and now women faculty as well) help out in the medical school? About ten years ago we published a cook book and raised \$80,000 for scholarships and now that scholarship fund is over \$200,000. There were events that took place around exam time where it was

supplying goodies for medical students to eat during studying for exams and things like that. But still it's mostly a social organization get together for doing things together. I think I can give you a copy of the cook book and you can take a look at it because I think the history, the basic history of the faculty wives is in there. I have been a peripheral member of the group but didn't really do anything until after my husband died in 2000. Since then I've been fairly active with the group but, and I publish their newsletter.

NG: What do you think it is the importance of this group for the women involved?

JK: Well I think it is an avenue for women to get together socially. There are probably maybe only 50 to 75 people that even pay dues and less that attend functions of any sort. We do have wonderful get-togethers, an active book club and other functions, such as the Art Wall auction in the Medical School which raises money for the scholarship fund.

NG: I think it's interesting because I think I told you all last time we met that my husband is in the nursing school.

JK: Oh!

NG: And we went to an end of the semester function and I was talking to one of the spouses who is a man and he was sort of desperate to start kind of a support group. It was interesting and so it made me think that you know the medical field can be very demanding and that the support groups or these kinds of social organizations that they may seem kind of superficial but they probably play a very important role in the lives of the families and kind of the jointly the lives of the people involved in the medical school.

JK: Yes! The name of our group used to be The University of Texas Medical School Houston Organization of Faculty Wives. Then maybe 10-20 years ago or so it got amended to being Faculty Wives and Women Faculty because why should they be left

out? And most women faculty people don't necessarily pay much attention to us because they are awfully, awfully busy. But mostly it's wives and mostly the aging wives. We try to attract the younger group but that's a problem. There are various programs that occur once a month or so that are fun to do. These are things you think, "Oh I'll do that someday" but that day never comes but you get to do it because well the group is going and it will be fun. But our primary mission is raising money for student scholarships.

NG: And I'm sure that means a lot to the students who are receiving that money.

JK: Yes! Since it is a very young medical school it really doesn't have much of an endowment for scholarships and they are just desperate to fund as many of those as they can and so we are well appreciated in that regard.

NG: And it's probably a way of attracting better candidates to the medical school.

JK: Yes, but the very best candidates of course are being courted by every medical school in the nation which are very well funded and can afford to really pay through the nose to get the good student. Since I've been associated now with three medical schools, what I can see about medical schools is that they are more alike than they are different. The curriculum is really very well controlled by the AAMC (the American Association of Medical Colleges) because each institution has to be accredited every 5 to 7 years. So you have to turn out a product that is good enough to meet their standards. The tuition for in-state students is cheap. My daughter went to a UT medical school.

NG: So your daughter went to medical school then?

JK: Yes. She went to Southwestern (University of Texas Medical School in Dallas). It used to be (I think) the best medical school in Texas. She was of course accepted here

at Houston but she said, “Oh are you kidding? With my mother and my father there forget about it!” So she wanted to be as far away as she could.

NG: Does she live nearby?

JK: She lives in Shanghai right now. Much to my husband’s consternation, when she graduated from medical school and went through a residency at University of Michigan and a fellowship at Johns Hopkins, she went “commercial”! She was interviewing for various places to go practice medicine and the practice of medicine was pretty bleak at that time and she went to work for GlaxoSmithKline and she is in charge of clinical trials worldwide and is now based in Shanghai. And they spent 3 years before that in London .

NG: Did any of the other kids go into the sciences?

JK: No, the 3 boys all agree that Kate, the youngest and only girl, was the son that my husband always wanted. Erich, the oldest, who had a very checkered college career, was an early IT nerd and worked for various programming companies (Texas Instruments, Rolm) and then got religion and is now the treasurer of a small church in Wisconsin. Mark was always interested in photography and he’s been a cinematographer for his whole life every since he was a kid. I thought this would pass but it didn’t. He went to college and in the middle of his senior year said, “I’m done.” After sons #1 and #2 never graduated from college, son #3 said, “Dad I’m going to be your first college graduate” and then he had a little trouble in high school and he said, “Dad I’m going to be the first one that doesn’t graduate from high school.” And he is (at the moment) the CFO of a small concrete manufacturing plant in Maine. And he’s done a little bit of everything with his life but actually he did go to college, and graduate. He did graduate. I don’t know what he did in college but he managed to graduate with a degree in English. Then

Kate was the straight arrow. She just breezed through high school, breezed through college, went to medical school. She probably earns more money than all her brothers put together.

NG: It's interesting.

JK: I know. I'll tell you!

NG: What do you think is different for women today in I guess with sciences broadly and in the TMC more specifically?

JK: I think the opportunities are here for women like they have never been before. I think they can do anything and I think that they just have to make up their mind what they want to do and it's a whole lot easier if you get started young. If you decide to go back to school when you're 40 I think that's tough, that must be really tough. But I think women can have it all in the sense that whatever they want to do they can do but I think it really also helps if you are married if you have the support of your husband. There are a lot of failed marriages along the way or no marriage at all or no interest in marriage and no interest in children or that kind of thing because that's a whole other ball of wax that you have to cope with. And husbands I think are important in this. I look at my daughter whose husband is a house husband. He takes care of the kids and she is traveling all around the world. He loves to travel so it's worked out well and my guess is that was the deal when they married. They were both in their middle 30's and my guess is that he wanted kids and she said, "I don't know..." and the deal was she got the better job and he got to take care of the kids, My husband would not have understood that at all however.

NG: Well I think the opportunities are there but it's still interesting that if women want to go that route there has to be a deal made and there have to be more conversations about it.

JK: Yes, as soon as they are working on this themselves. That's fine and dandy but as soon as you start getting involved with a husband or a partner of some sort and all of the other things that come with a family, you know that just complicates everything. But people deal with it.

NG: Well is there anything that we haven't talked about that you were expecting to talk about or were hoping to talk about?

JK: No well the only thing that I feel about this whole thing since I'm the first interview is that I don't belong in this group because I really took the easy way out because I had a husband who said, "You got a job if you want it" and so I never really had to struggle at all.

NG: Well I didn't ask you about what you felt your role was in the TMC because I think you've expressed that you don't feel that you've...

JK: No I really don't.

NG: However, I think regardless of how you feel that you got easy jobs because of your husband. I mean you were here teaching for all of those years and so there's... and serving on the committees and curriculum and all of that so it seems to me that you've made a significant impact in particular on how the medical school has developed and on all of those students that you taught, so that to me is very important a really important role that you played. I mean there are all of these students out there or doctors out there

that have gone through your class and I think that, that's something that's really important.

JK: Yes, I feel like I tried hard to pull my weight but I was never, never a leader.

NG: Do you think it's important to be a leader all the time?

JK: I think if you decide that you are going to do something you better do your damndest to do well and break ground. But no, that wasn't me. With one hand I was trying to keep the family going and the lab was just a wonderful outlet that kept me off the streets and I loved it all (except for the episode about the house).

NG: Well it's interesting you didn't, we didn't really talk about you said with one hand you kept the family going. We didn't really talk about that, that you felt like you had maybe one hand somewhere else all the time?

JK: I look back on it now and think, "How the heck did I do all that?" Because I guess it's called multitasking and I can't do it anymore. I can only do one thing at a time and then I have to rest, which I think is a function of aging. It's like juggling, I guess. You've got to keep all those balls in the air and you do what you have to, to keep everything going. It just works out and of course the kids were a great help. They were a pain in the neck and a problem every now and then but it was all worth it.

End of Interview

Addendum:

Of her life as a retiree, Julie Knobil wrote, "I am a disaster worker with the Red Cross (locally and nationally) and edit two newsletters."