Four Decades of Change in Sexual Medicine

Every spring since 2011 the International Society for the Study of Women's Sexual Health (ISWSH) Sandra Leiblum presidential lecture has been published as an editorial in one of the International Society for Sexual Medicine (ISSM) publications.[1] As president of ISSWSH I gave this lecture on February 8, 2018.

"Welcome to *fabulous*, *sunny*, *warm* San Diego, California. We are so glad you are here. We are told this 18th annual ISSWSH meeting is the largest ever—we are thrilled to be here at Mission Bay—a San Diego treasure. These 4 days comprising the 18th annual ISSWSH meeting will witness a traditional *amazing* multi-disciplinary collection of lectures, symposia, instructional courses, podium, and poster presentations on women's sexual health. I attend many, many sexual medicine meetings every year and *always* the ISSWSH annual meeting is the most interesting, most educational, most provocative, and the one with the most learning. We want to especially thank our Scientific program chair Dr Shari Goldfarb and co-chair Dr Sharon Parish for assembling this very diverse scientific program.

San Diego, of course, houses my hospital, Alvarado Hospital, which to my knowledge is the only hospital in the United States that has acknowledged Sexual Medicine for over a decade. San Diego also houses our San Diego Sexual Medicine facility—my *dream* work place. Sue and I have been here now over 10 years. Our San Diego facility is an approximately 6,000 square foot space with 12 employees where we have both a clinical research arm and a clinical practice in female and male sexual dysfunction. Our clinical research practice has participated in over 60 clinical trials since 2007. Our clinical practice is designed to have 3 patient stations and a detailed multi-disciplinary 4-hour initial office visit. Our sex therapist who sees all of our patients is Dr Rose Hartzell. Our pelvic floor physical therapists, from Comprehensive Therapy Services are under the leadership of Dr Cindy Furey. We have myself, 2 nurse practitioners, Julea Minton and Catherine Gagnon, and sexual medicine fellows, to interview and counsel each patient for approximately 1 hour, and perform biologic–based hormonal, neurologic, vascular, and vulvoscopic testing, as needed, for approximately 1 hour. This detailed biopsychosocial assessment is *awesome* and has allowed us to make numerous advances and insights into unusual complicated sexual health concerns, especially in the area of interest for this ISSWSH meeting—women's sexual medicine management.

My grandparents lived in a time when transportation went from horse and carriage to automobile to airplane. My parents lived in a time that computers have gone from whole buildings (Sue and I are Brown class of 1971 and there we had a whole building called the computer center that literally housed the very large IBM computer), to desktops to portable computers, to laptops. My children are living in a time we have gone from landline telephones, to portable phones, to cell phones, to watches for communication.

Why am I speaking about this?

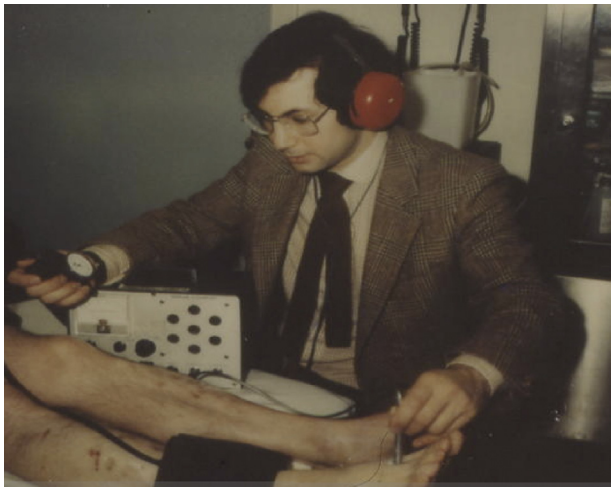
I have seen the physical changes in airplanes, the physical changes in computers, the physical changes in communication devices—like so many of you. But I have also been blessed to see the many changes in our amazing field of sexual medicine in both female and male sexual dysfunctions.

Now for most of you in the room, sexual medicine relates to women only. For those of you who have been in ISSWSH from the start, we actually started as a university–sponsored, continuing medical education (CME) course, initially in Burlington, Massachusetts (in 1997), and then in Boston (1998 and 1999). In 1999 the attendees of the CME course voted to start a society and named it "Female Sexual Function Forum" (FSFF) for the 2000 meeting in Boston. We identified a meeting organizer, developed bylaws and voted for officers, the first president being the late Sandra Leiblum. At the 2001 FSFF meeting, again in Boston, we changed the society name to the International Society for the Study of Women's Sexual Health. The original

FSFF bylaws have remained the underpinnings of our current society.[2] The scientific organization we know as ISSWSH is now 18 years old—we are 18 years old proud, and we are 18 years old leaders in women's sexual health!!!!

For me, however, as a sexual medicine physician, examining sexually dysfunctional patients on a regular basis, my career goes back to the year 1978, now 40 years ago. At that time, as a second-year urology resident under the mentorship of Dr Robert J. Krane, I was assigned to help manage men with sexual health concerns in the New England Male Reproductive Center in Boston. This was one of the first biopsychosocial facilities in the United States assessing patients with sexual dysfunction. We had a psychologist, psychiatrist, vascular surgeon, endocrinologist, neurologist, and two urologists to help with assessment and treatment of men with sexual dysfunction. My prime role was to perform erectile function testing, vascular and neurologic, to help distinguish primary psychologic— from primary organic—based erectile dysfunction.[3]

I have seen so many changes in the field over the last 40 years—actually I have seen the genuine development of a new clinical medical field—sexual medicine for men *and* women—over these last 4 decades.



How many of you have heard of Masters and Johnson? They were giants in our field in the 1970's who brought attention to male and female and couples' sexual dysfunctions, but they believed that sexual problems were primarily psychologic.[4] That was the world in which I grew up and went to medical school. Sexual dysfunctions were considered to be mainly psychologic concerns with few biologic pathophysiologies and few biologic treatments available for patients with distressing sexual health problems. Sexual medicine, 4 decades ago, was a field of mostly talk therapy.

And then the world of sexual medicine changed forever. In 1973, there was the milestone urologic development of the penile implant. Penile prosthesis insertion was a biologic treatment for what we assumed to be indicated the rare organic "impotence" diagnoses. In 1973, Dr. Brantley Scott reported not only the implantation of penile prostheses in men with "impotence"[5] but he trained other urologists in this technique including Dr Krane. Bob Krane went on to become my amazing department chair and most avid supporter and advocate of the innovative sexual medicine efforts that were performed in our facility[6,7] in research, diagnosis, and therapeutic advances for the next 20 years, from 1980 to 2000. *Thank you Dr Krane!*

I graduated from Brown University as an electrical, biomedical engineer who played varsity hockey for my 4 years of college. In 1976, as a surgical intern, I was asked to scrub on a urologic case. This happened to be a penile implant insertion. I recall being completely mesmorized by the case, in particular the need to have liquid nitrogen in the operating room to temporarily freeze the implant cylinders so they could be stiff enough to be inserted and passed all the way into the corporal cavernosa underneath the glans penis. But, at the end of the case, the device was inflated. The otherwise flaccid penile shaft turned into a sustained rigid column with excellent axial rigidity—right in front of me. That was just so cool!! I knew at that time that sexual medicine would be my future!!

I subsequently found out that at that time, the 1970's, we did not understand the physiology of penile erection. We also did not understand how to diagnose potential contributions to biologic pathophysiology. Was "impotence", as it was called at the time, indeed purely a psychologic phenomenon? I was not convinced. I was awarded a 3-year National Institutes of Health (NIH) investigator award and then over the next 20 plus years our group continued to be funded by the NIH to research the physiology of penile erection and the pathophysiology of erectile dysfunction in various animal models. I subsequently worked with an aerospace engineer, Dr Daniel Udelson, and published multiple manuscripts analyzing the engineering characteristics of erectile hardness, developing a new formula based on an adaptation of Euler's equation, relating column strength to column mechanical properties.[7–11] That was *very cool.*

In the year 1983, another sexual medicine milestone occurred. Researchers were struggling to understand what regulated the penile erection. Was the penile smooth muscle required to contract—to trap blood within the erection chamber? Or was the penile smooth muscle required to relax to allow arterial blood to enter the erection tissue? In walked Giles Brindley…literally. Imagine, it's 1983, specifically Monday, April 18, 1983 at 7:00 pm. I am a young urologist, excited to be presenting my research at the Urodynamics Society symposium entitled "Physiology of Erection and Management of Impotence" during the annual American Urological Association meeting. I went to the bathroom before my talk and in the next stall is an older gentleman in a track suit. I know many of you dress casually at ISSWSH, but a track suit? Ten minutes later he is on stage, the speaker before me, telling the audience he gave himself an intracavernosal injection of the smooth muscle relaxant phenoxybenzamine in the bathroom prior to this talk. He offered