Disclaimer: This article and the associated work-parenting stories were prepared in February 2020, before the added burden parents are currently experiencing due to the pandemic and the shut-down of schools and childcare facilities.

This article from the Women in Acoustics (WIA) Committee (see womeninacoustics.org) does two things. First, it highlights the professional careers of two recently honored two pioneering female acousticians, Evgenia (Zhenia) Zabolotskaya and Ilene Busch-Vishniac. Second, using these two women as a starting point, we take a glimpse into their family life to explore the challenges of maintaining work-family “harmony.” Although many speak of the elusive work-family balance, we intentionally choose instead to use the word harmony (McMillan et al. 2011; Berger 2018). Balance seems to imply that all the pieces are in one perfect arrangement and that the slightest nudge will send all the pieces flying. We propose that a more useful paradigm is work-family harmony because harmonies come in many beautiful varieties. Harmonies ebb and flow just as our family and work responsibilities change over time.

We hope that the family stories of our two honored women can serve as case studies of parents of their generation, and we are grateful for the insights they provide. We complement their parenting stories with thoughts and quotes from younger Acoustical Society of America (ASA) parents about their own experiences in parenting. Our goal is that these ideas will encourage everyone to do the best they can at creating work-family harmony, allowing themselves to accept support from others, remain flexible, and take it one step at a time as they strive to enjoy life’s journey.

Evgenia (Zhenia) Andreevna Zabolotskaya
Evgenia (Zhenia) Andreevna Zabolotskaya completed her bachelor’s degree in physics at Moscow State University (MSU) where she met her husband, Yurii (Yura) Ilinksii (Figure 1). They married in 1963, and Zhenia then returned to MSU to complete her PhD. Zhenia’s PhD included a model equation for nonlinear bubble dynamics as well as the first effective medium theory for nonlinear propagation of sound in bubbly liquid. She later created, in collaboration with Rem Khokhlov, the KZ (Khokhlov-Zabolotskaya) equation for nonlinear sound beams, which has had far-reaching implications on sonar as well as high-intensity focused ultrasound. Zhenia and Yura moved to the United States in 1991 to collaborate with Mark Hamilton at the University of Texas (UT) at Austin where they also began theoretical research on nonlinear Rayleigh waves and a research program in biomedical acoustics. Zhenia was the first woman to receive the ASA Silver Medal in Physical Acoustics in 2017.

Ilene Busch-Vishniac
Ilene Busch married Ethan Vishniac in 1976 (Figure 2). Both pursued graduate degrees and became tenure-track faculty at the UT at Austin. Ilene has made several career transitions that allow her to appreciate the full breadth of what ASA members experience as students, academics, administrators, and now working in industry. She was the first woman to receive the Silver Medal in Engineering Acoustics in 2001 “for development of novel electret microphones and of precision micro-electro-mechanical sensors and positioners.”

1. Dr. Zabolotskaya passed away in early June. A full obituary will appear in the fall issue of Acoustics Today.
Now, Ilene is grateful to work with talented people at a small business to create a device that detects pneumonia and tuberculosis early enough to save patients’ lives. Her team recently won the MIT Solve-Tiger Challenge prize in Bangladesh for the development of a respiratory device that can monitor, record, upload, and classify lung sounds and that is now being used worldwide.

**Work-Parenting Harmony**

Zhenia and Ilene were honored by the WIA Committee because of their contributions to acoustics, but instead of just including a regular biography in this column, we asked them to share their experiences as parents to begin our discussion about work-parenting harmony.

Zhenia and Yura have two daughters, both of whom were born once Zhenia’s degrees had been completed. Zhenia credits her very supportive husband as well as her mother in raising her daughters (and her first daughter in raising the second after Zhenia’s mother passed away). Zhenia remembers, “In Russia at this time, women were often discriminated against when working in science, and having children certainly didn’t help. Nonetheless, I persevered, continuing my work through the scrutiny I faced. A pressure that was certainly relevant through the years of having children and working was the difficulty of balancing both. This is never easy and can’t be made easy. It is made doable only through the support of your partner, employer, family, and friends.”

Ilene was granted tenure three days before her first child was born and right after the end of the fall term. At the time, no process existed at UT at Austin for dealing with child-bearing women professors. To allow time off, she worked out a deal to split her next semester’s class with a colleague, where he took the first half of the semester and she took the second. This arrangement gave Ilene a few months of unofficial (and much appreciated) “maternity leave.” She and Ethan then hired a full-time caregiver five days/week so she could work. Ilene’s second daughter was born during the summer when she was not teaching class and so she took the time to be with her family, meeting occasionally with her research students. She also credits her extremely supportive husband for making this work.

As their daughters got older, scheduling became easier because of daycare and then after-school programs. Ilene recalls, “The stress when kids are young is all the energy you must devote”; however, the most stressful period with her children was during the preteen and teen years. Ilene, who was a dean at the time, found it difficult to be expected to be out of the house 3-4 nights/week during dinner, knowing that her daughters would have benefited from her presence. “I stuck [the deanship] out as long as I could,” she recalls. “I didn’t sleep a lot and had a wonky schedule. I finally stepped out of the deanship to have more time.”

Zhenia’s and Ilene’s stories represent those of many parents at that time. To explore how things have changed, we polled several ASA members about their paths as parent scientists/acousticians. With permission, we have shared their stories on the WIA webpage. (We invite others to contribute their stories as well by emailing to tbn@byu.edu). From the stories we collected, several main themes emerge. We share some quotes that represent these themes but refer readers to the full stories for context and examples of different ways parents have tried to find harmony at different stages of their children’s lives.

**Accept Support from Others**

As a parent, the demands on your time and energy can be immense. Almost all of our contributors expressed this sentiment and credited understanding employers and advisors for supporting them to find workable solutions for their situation as well as life partners, friends, and family members who helped to shoulder the load.

**Give Yourself Credit**

Working parents often feel that they are not able to devote enough time and energy to either their families...
or their careers. “Just existing and engaging in science and engineering as a woman, as a parent, or as both is advocating for opportunity and diversity in STEM” (Lora Van Uffelen, Physical Oceanography, University of Rhode Island, Narragansett).

**Be Flexible and Do What Feels Right**

Many early-career acousticians considering a family may worry that in the fast-paced atmosphere of STEM disciplines, it is more challenging to step back for a period of time to raise young children. “Be creative and open to professional opportunities that will allow you the flexibility you want or need as a parent” (Lauren Ronsse, Architectural Acoustics, University of Nebraska-Lincoln).

**Don’t Become too Attached to Plans**

“The only thing certain during parenting is that things are going to change,” remarks Aran Mooney (Animal Bioacoustics, Woods Hole Oceanographic Institution, Woods Hole, MA), father of two. Regarding her decision not to return to her tenure-track job after the birth of her son, Lauren Ronsse recalls, “This was not the plan and was the hardest decision I had made in my professional career to date. I knew I wanted more time with my son than a full-time job would allow, but this was the first time that I had not prioritized my career, and I did not know what the next steps would be for me professionally. I just knew that I had to do it for myself and for my family.” Jazmin Myres (Signal Processing, Naval Air Systems Command) had a different experience, “I grew up planning to be a full-time mother but was always incredibly driven and passionate about school and work. This resulted in serious cognitive dissonance when pregnant with my first child as I realized that my planned path (staying home) did not align with my personality or natural talents. With my supportive husband, we sacrificed financially to each take unpaid time off when our children were born, and I negotiated fiercely to secure a part-time schedule for the first few years. I love my family, and I love having a career.”

**Try to Focus on the Present**

Although uncertainty is unpleasant, the time children are young is short. Marcia Isakson (Underwater Acoustics, Applied Research Laboratories, UT at Austin), who worked part-time until her children were teenagers, reflects, “Looking back, I don’t think that my decision to work part-time affected my career as much as I thought it might. I believe this is due to the forward-thinking policy at my lab coupled with my being in a nontenure track position. Now that my kids are grown, I am really glad that I had the ability to make the choices I did when they were young.”

**Respect All Decisions**

The needs of individual children and parents and overall family situations are different. Decisions to continue working full-time and decisions to modify your schedule should both be supported; all paths come with difficulties. “It is difficult to scratch the surface on the tactical reality of this topic (maternity leave, pumping breast milk, childcare costs, spousal support, scheduling, and on and on) let alone the emotional depth. My husband and I have prayed and wept and cheered and grown and loved because of our decision to both work after our children were born” (Jazmin Myres). “Despite initially planning to return to work full-time after three months, I have continued on four years later in a soft-money position part-time because I wanted more time with my son. This is despite the massive challenge it has been to maintain soft-money cash flow, complete administrative tasks, mentor students, and do research in the hours that I manage to piecemeal together when my son is in some form of childcare or sleeping” (Alison Stimpert, Animal Bioacoustics, Moss Landing Marine Laboratories, Moss Landing, CA).

**Encourage Family Friendly Practices**

Everyone can encourage family friendly practices that recognize the benefits of investing in our children. “Maternity, as well as paternity leave, should be made more accessible and not be seen as a hindrance towards success in a scientific career” (Zhenia Zabolotskaya). In addition to institutional policies, Ilene Busch-Vishniac recommends that “some concrete steps for improving things for working parents are to set a more reasonable expectation than the work 24/7 model. Make it more expected that it is OK to preserve family time, and train managers and bosses to be more careful about when they send emails to respect time that employees don’t have to be working.”

Many ASA members over the years have worked hard to formalize family friendly policies at different institutions, but more can be done. “Don’t be afraid to be that squeaky wheel at your institution or university. Speak up for your needs, and when you become that mentor (no longer the mentee), it’s probably even more important to speak up.
for family and work-life balance needs. The system won’t change if we don’t make it happen” (Aran Mooney).

Stay Involved in the ASA

During the changes that accompany parenthood, support also comes from having a professional connection. Traci Neilsen (Underwater Acoustics, Brigham Young University, Provo, UT) kept attending ASA meetings while stepping back from her career to raise her children. “Members encouraged me and included me as part of the Society even when I was only able to keep one toe in. I am grateful to have a professional home that has accepted me and allowed me to contribute as I have pursued my non-traditional career path.” Support from the ASA Women in Acoustics Committee “was very helpful and affirming for [Lauren Ronsse], and it gave [her] some comfort to see others who had followed similar paths.” Recently, Laura Kloeppper (Animal Bioacoustics, Saint Mary’s College, Notre Dame, IN) brought her baby to an ASA meeting and shares her experience in this issue of Acoustics Today.

We conclude with two thoughts from our honored women and remind readers to read the full stories of our quoted parent acousticians online to appreciate the breadth of paths when harmonizing career pursuits with raising children.

“The beauty of life is the many roles we reflect upon ourselves. We begin as the children of our own parents, ...and at some point, if the universe chooses to bless us with our own family and children, we take on the role of a partner and parent. Many of us who have gotten the pleasure of a career and raising a family understand the struggle that can come with balancing both” (Zhenia Zabolotskaya).

“Work always expands to fill all available time and comes without the same biological boundaries as family. At any point, you can postpone a promotion or a move, but there is a limit to the time you can postpone having a family... Regardless of what’s going on, the most important thing is to love your kids and that they know and feel that you love them” (Ilene Busch-Vishniac).

References