



JCES Raises Issues of Ecology in Engagement

From the Editor

Dr. Marybeth Lima is the Cliff and Nancy Spanier Alumni Professor at Louisiana State University

I know that this column is for inclusion in the fall 2019 issue of *JCES*, and that you will be reading it in October. However, to publish this issue on time, my column is due smack dab in the middle of summer. I am writing on the couch, about five feet from the door, where it is sunny outside and the heat index is 101°F. I am on vacation, in fact I am on almost back-to-back vacations. Right now I am calm and relaxed—summer is always when I do my best thinking. I like to joke with my students that summer represents the three months of the year in which I can hear myself think.

My thoughts right now are with two recent trips I took; the first was to the American Society for Engineering Education conference. I attended many sessions and, as usual, was inspired by the great work of engineering educators who, like me, fight against engineering being a technocratic force with some largely unexamined biases. The most memorable talk I attended was a distinguished lecture by Alice Pawley. She posed a question that I am still thinking about, and it is this: “What, as an engineering educator, will you do to prepare your students to design in a world which will require 50% fewer carbon emissions in 11 years?”

Two days after this insightful question was posed, I decided to put it in the back of my mind as I traveled on a long overdue trip with my wife Lynn to Baja California Sur, Mexico—it was the first time we’d taken a proper trip in eight years. We spent nine days in a place where desert meets ocean, and where we were essentially illiterate and dependent on others to be bilingual. In this place, we had wonderful adventures and interesting observations. We stayed in a small town called Los Barriles, where animals were clearly front and center in the community. Dogs and cows walked across the street and down the sidewalks and were treated with as much reverence as pedestrians—there were five or six animal hospitals in a community of 1,200 people. The other thing we noticed was that traffic signs were observed only casually.

About halfway through our trip, we did a day of guided birding with a company called Birding Los Cabos. I had never been to this region of the world

and as a result, I was able to see a number of bird species I never had before, like Xantus’s hummingbird, ruddy ground-dove, and yellow-footed gull. Our guides were friendly and talkative and after a couple of hours, I asked them about my observation that while driving, people seemed to treat stop signs as a caution, rather than a command.

“Well of course,” said one of the guides. “Why on earth would you stop when no one else is there to stop for?”

She had a point. I continued to consider cultural practices, like the difference between negotiable and absolute. My thoughts on culture were further animated some two hours later, when, as we were leaving a salt flat on state-owned land, a police car charged up to us and T-boned quickly, blocking our exit and whipping up clouds of beige dust on the dirt road. Our two guides said matter-of-factly, “Oh, police,” as they each got out of the car and stood next to their front and passenger doors. Lynn and I cowered in the back seats—in America, you definitely do not exit the car when stopped by the police. One of the guides ducked her head in the car as three police officers brandishing machine guns approached and said, “Get out of the car!” We did so, with wide eyes.

Two of the officers began a conversation with the guides in Spanish, which I understood only a tiny fraction of; the third began speaking with Lynn in English. He wanted to know if we were okay. Yes, Lynn assured, we were having a wonderful day seeing birds around the area. He smiled broadly, and after brief conversations and waves goodbye, the officers retreated, we re-entered the car, and followed them out of the salt flat.

“Wow, in America, you never step out of the car if you are pulled over by the police, not unless they tell you to do so,” I said.

“Really?” one of the guides replied, “Here, that is what you are supposed to do. I didn’t know it wasn’t like that in America.”

“Those officers were friendly,” she continued. “Sometimes, we have to show our certified bird guide certificate and identification.”

Lynn and I have been pulled over by the police several times while birding in the United States, so that cultural phenomenon wasn't different; once, we were even boxed in by three police cars, and the cops used a bullhorn to tell us to show our hands through the windows before they approached our truck to see what we were doing. The difference in expected behavior though, on whether to exit the vehicle when stopped by police—compounded with potential language issues—could quickly lead to a dangerous situation. This day reminded me, in small ways and in big ones, about how important it is to understand and honor cultural traditions and people to ensure safe, full lives. An article in this issue, "*Realmente Tenemos la capacidad: Engaging Youth to Explore Health in the Dominican Republic through Photovoice*," details one way to accomplish these important goals.

Our fantastic trip to Mexico is now over, and as I finish out the July 4 weekend, I am again considering that somewhat terrifying question, about what I will do as an engineering educator to prepare my students to design in a world that will require 50% fewer carbon emissions in 11 years. I don't have the answer to that question yet. I suspect that it's going to take a lot of time, thought, research, and collaboration to try to do justice to that question. Still, I have ideas, signposts if you will, and many of them involve themes that are explored in this issue of *JCES*.

One of those signposts is ecology, and the importance of considering the well-being of living things in connection with the entire ecosystem. Humans are only one part of a vast ecosystem—if we treat those other beings with reverence, and with the ecosystem at the center of design, rather than people, we could begin to change the way that we engineer, in part by changing the way that we frame problems to help solve or changes to help facilitate. The article entitled "An Ecological

Approach to Understanding Program Management Practices for Food Pantries in Rural Communities" sheds insight into how we can use principles of ecology in our engagement endeavors. Another article—"Catalyzing Change Through Engaged Department Cohorts: Overcoming the One-and-Done Model"—focuses on changing engagement from a course to department framework.

Another signpost is as follows: while framing problems and facilitating changes, we must engage meaningfully with our communities. *JCES* has a strong history of publishing articles in this genre, and two articles in this issue provide insights accordingly: "Leading the Charge: Outcomes from a Student-Driven Engagement with a Veteran Community" and "Using Community-Based Participatory Research to Assess the Needs of HIV-Related Services for Individuals Infected with HIV/AIDS in Rural Communities."

A third signpost involves building capacity, which follows from using an ecosystems approach and engaging meaningfully with our communities. The articles entitled "Partnering Academics and Community Engagement: A Quality Enhancement Plan for a Diverse and Non-Traditional University" and "Promoting Engaged Scholarship among Undergraduate University Students" detail capacity-building efforts to build engagement within a university, and to enhance research-based solutions to community-identified needs respectively.

I hope that you enjoy this issue of *JCES*, including student and community voices and book reviews. Everything in this issue invites readers to think; it is my hope that each of you is able to enjoy this issue in a calm, relaxed, reflective space.