Kevin S. Baldwin: Statement of Teaching Philosophy and Experience

What is a liberal arts education? To me, it is practice in the ability to travel through space and time in attempt to understand the world through a variety of modalities (senses, identities, cultures, disciplines, languages, etc.), in the hope of gaining understanding, empathy, and humility, in order to better navigate the present and to better prepare for an uncertain future. No single disciplinary approach has all the tools or answers to do this, but collectively multiple branches of knowledge provide criticisms of one another and delineate the boundaries of their domains of expertise, and their respective strengths and weaknesses.

In my science classes, in addition to having students collect data and write it up in standard scientific format, I take a more liberal arts approach. For example: In my Advanced Anatomy and Physiology class, which is typically filled with future occupational and physical therapists, I have students read about star-nosed moles, which navigate the world using 22 finger-like appendages on the tips of their nose, that are packed with sensory organs that map onto their brain's sensory cortex. Then I ask students to write a paragraph or two on what they imagine it is like to be a star-nosed mole. My rationale for this is to prepare them to imagine what it is like to be differently-abled and/or neurodiverse.

Similarly, I have a lab exercise where I attempt to give the students an idea of what aging is like. They wear earplugs and try to have a phone conversation. They wear heavy gloves and are asked to tie their shoes and engage in other everyday tasks. They wear goggles that mimic a variety of degenerative eye conditions, breathe through straws to simulate obstructive pulmonary disease, and so on. I ask them if/how this experience might affect how they interact with elderly patients. I also ask them to reflect on aging in the context of a typical feedback-control system that consists of a stimulus that supplies an input to a receptor that is then integrated by the central nervous systems and responded to via outputs from muscles. By doing this, students gain additional insight into things like why falls are so common and debilitating to the elderly.

Embracing locality is a strategy I've employed since moving to the Midwest. Herpetologists refer to this area as the Great Corn Desert for a reason. Rather than grieve, I got creative. My road to Damascus moment happened while I was stopped at a railroad crossing as a mile-long train of tank cars filled with high fructose corn syrup rumbled by (When in Rome,...). It inspired an honors course on Corn that took advantage of the fact that I was literally at the center of US corn production. Monsanto (now Bayer) located their field testing site in Monmouth because 80% of US corn is grown within a days' drive, so farmers could literally see the results of their genetically engineered products in the field. We visited and got Monsanto's perspective on corn. The University of Illinois has an agricultural research station at the edge of town. We toured there and saw how cutting-edge ag research is done in the field. Half an hour to the south, Western Illinois University has the Allison Organic Farm. We saw that perspective in the field. Of course ours is not the first civilization in this area to be corn-based. The Dickson Mounds Museum is nearby, with dioramas and accounts of Native American life. We saw bison bones with butchering marks from stone tools and some early domesticated corn with pinky-sized ears. Our civilization's use of corn was made clear by a survey of food ingredients at a local grocery. Students found one ultra-processed food item that contained 9 different ingredients that were derived from corn (corn syrup, high fructose corn syrup, maltodextrin, hydrol (corn molasses), corn sweetener, corn starch, corn oil, gluten, gluten meal, germ meal, lecithin, ethanol). Most of what's in a supermarket is derived from corn

in some way. The course culminated in a tour of the Smithfield pork processing plant where 12,000 pigs per day are slaughtered. We got onto the kill floor and followed their disassembly all the way to the refrigerated shipping docks where semis were loaded with various products (Henry Ford got his idea for an industrial assembly line from the Chicago slaughterhouses of Upton Sinclair's *The Jungle*). The pork plant is largely staffed with workers from Central America, West Africa, and Myanmar, and is now owned by a Chinese company, so immigrant labor and multinational corporate power were on full display. Over a dozen languages are spoken on the factory floor. Many of the workers have families with young children who are educated at our local schools. As brutal as the kill floor was, some students were impressed by the conditions for workers who were at that time working an 8 hour shift, shoulder-to-shoulder with power tools: A 250 lb. pig can be split from stem-to-stern in seconds with a big saw! The whole process is remarkably efficient: Only about 250 lbs. of waste is incinerated per day (one pig's worth out of 12,000!). The rest is turned into product! At the same time, it is remarkably energy intensive. Each pound of pork requires 7 lbs of corn to produce. Shipping that many hogs by semi requires hundreds of trucks. Refrigerating or freezing that much meat requires many kilowatt hours of electricity. The Great Corn Desert is in fact an oasis of opportunity that contained many of the complexities and contradictions of 21st Century life.

Another locality-inspired class was an honors course about the Mississippi River. By design, it was very interdisciplinary. One of the more memorable student projects came from a pair of (role-playing) gamers who imagined a riverboat as an arena of play. It was Dungeons and Dragons meets Herman Melville's *Confidence Man* and Mark Twain's *Life on the Mississippi,* with a 77 page long instruction manual(!) and an extensive bibliography. The students did a great job of imagining how characters would interact on the boat and how they would be challenged by diseases and wild animals as they travelled the river and stopped to deliver goods, refuel, and gather supplies. I mention this example to show that student engagement can develop in interesting ways.

I feel confident that I could take advantage of the Deep Springs Valley, which is well known as a Mecca for geologists. I can imagine putting together a course that drew from John McPhee's books on geology and Mark Reisner's *Cadillac Desert*, which explores the history of water use in the West. I would imagine there is a record of previous courses that have been taught at Deep Springs that could be built upon. I would very much like to talk to the other Deep Springs Chairs about curricular possibilities, which I have the luxury of being able to explore over the next 10 months.