On the other hand, I am unsettled sometimes by the idea that growth must be pushed upon us. One of the more colorful statements from the May report suggests that the program is a “chimera,” bearing the outward appearance of a Gen Ed program but the reality of a distribution requirement. My own anecdotal evidence supports this—consider, for example, the high number of my fellow senior social sciences concentrators who enrolled in SPU 19 alongside me, having also waited until their very last semester to tango with the hard sciences. For the scientists, I think the equivalent category is Ethical and Moral Reasoning, which for most conjures up images of Plato and late nights spent writing papers in the dining hall. Too much work, too little reward.

I’d argue that most current undergraduates perceive Gen Ed requirements as a mandatory game of chance. You have to play; you have no choice. You might end up in a worthwhile course you wouldn’t have otherwise taken, but you have an equal or greater likelihood of dedicating one fourth of your semester to a course you’re ambivalent about, or worse, despise. This seems at odds with the idea that our academic life influences us so deeply. Why make a risky bet with such high stakes? Why ask students to take courses they might not engage with, if our engagement with courses matters so much?

“I’ll admit that in four years I have taken only two classes in the sciences, both to fulfill Gen Ed requirements. The first taught me about evolutionary plant biology; it changed how I see the natural world and I am grateful. SPU 19 was the second. There, I learned about hydrogen fusion, stellar evolution, dark matter, and how to understand the fuss surrounding Iran’s uranium-enrichment program. But SPU 19 also taught me about my parents, the astronomers. I am fairly sure this is not what the Gen Ed planning committee imagined. Still, I am grateful for it, too.

I had spent so much of my time in college trying to explain to my parents the adult I was becoming. Now, somehow, as we commiserated over the phone about the lifespan of a hypothetical white dwarf star, the tables were turned. It is not easy to shoehorn such conversation topics into the daily life of a child. Our post-lecture debriefs and problem-set consultations represented the first time I had really and truly engaged, even if on an amateur level, with the research that brought them to the United States and defined their careers.

“I don’t really know much about pulsars,” my mother would begin, “but from what I can remember...” Radio telescopes and Hertzsprung-Russell diagrams became my window into a world where my parents were not just parents, but experts, thinkers, individuals with careers full of success and failure, of joy and disappointment. I was learning, for the first time, about the work that made them who they are.

How do we separate ourselves from the work that we do? This, to me, is another exercise in contradiction. The rigors of undergraduate life necessitate separating one’s sense of self-worth from one’s GPA, or any other measure of academic success. A failure to do so, as many of us know personally, puts mind and heart at risk. Yet, perhaps with the exception of certain cynics, we also commit to four years here with the belief that our education will change us in important and irrevocable ways. It seems we simultaneously live out two opposing truths: first, that through our education, we have a choice in deciding who we are and who we want to become; and second, that this very same education may alter our lives in ways unexpected and unasked for.

In the course of studying for my final SPU 19 exam, I came across a description of the Pleiades, also known as the Seven Sisters—the most visible open star cluster in the night sky. There are two types of star clusters. The other, globular star clusters, can be differentiated because they are more tightly bound by gravity into a spherical shape, contain fewer heavier elements, and are presumed to have formed closer to the beginnings of galaxies. As objects, both are interesting because they are important to the study of stellar evolution, and thus, the age and history of the universe.

Of course, the name Pleiades originates in ancient Greek mythology. In those stories, the Pleiades were the seven divine sisters who accompanied Artemis, goddess of the hunt. They were the daughters of the titan Atlas, who held the world on his shoulders, and a sea-nymph, Pleione. These are names and titles that have been familiar to me for as long as I can remember. They brought me back home. I’m sure that book has something to do with it, I thought.

I remembered, too, that my beloved book of myths had just as much to do with stars as it had to do with stories. Was it my mother’s choice of bedtime reading that made me a writer instead of an astronomer, or was it some essential self that demanded I write? Did my work and courses and reading shape me, or is it somehow the other way around? I’m not convinced one can be sure. Still, as the Greeks needed their myths, and scientists need their theories, doubt does not erase our need for a story to tell.

Berta Greenwald Ledecky Undergraduate Fellow Melanie Wang ’15 would like to pay tribute to astronomer Williamina Fleming, who paved the way.

SPORTS

“Foot, Ball, Goal”

On scoring in a low-scoring game

The Harvard women’s soccer team seized its moment on a Saturday afternoon last November. A week earlier, the Crimson had suffered its first conference loss in two years, falling 2-0 to Dartmouth; Harvard now needed a win at home in its regular-season finale against Columbia to guarantee its second consecutive Ivy League title.

Enter Margaret “Midge” Purce ’17. The lone player in league history to be named rookie and player of the year as a freshman, Harvard’s star forward had been uncharacteristically quiet in Hanover. But just under 30 minutes into a scoreless matchup with the Lions, that changed instantly. Em-
ily Mosbacher ’16 sent a cross into the box (a pass into the rectangular area in front of the goal) and Purce, using the outside of her right foot, redirected the ball past the Columbia goalkeeper. 1-0 Crimson. In the second half, with the score now tied at one apiece, Purce struck again. This time, she headed a cross from Bethany Kanten ’15 into the side netting for the final margin in Harvard’s 2-1 win, ensuring that the Crimson would hoist the Ivy League trophy and return to the NCAA tournament.

In two split seconds, Purce had saved Harvard’s season. But when asked about those goals a half-year later, she emphasizes the lengthy, collaborative buildup that preceded each strike. “For me, it’s the most beautiful thing to see a ball go from our goalie through everyone else on the team—all touching the ball and sharing “the same end goal: getting the ball in the back of the net,” she says. “And then I get the great opportunity to be the person who just happens to be the last one to touch it.”

Purce’s humility aside (a trait women’s soccer head coach Ray Leone identifies as one of her many laudable attributes), her comment is also a window into how she has become an expert at scoring in a very low-scoring game. In fact, just halfway through her Harvard career, she already ranks tenth on the school’s all-time scoring list, with 21 goals.

Purce calls “combinations” the foundation of goal scoring; a series of three to four quick passes with a teammate that facilitates beating a pair of defenders. This hinges in part on outthinking the opponent. (As Purce recalled, one of her former coaches on the U.S. women’s national team, April Heinrichs, suggested likening the process to a game of chess.) It also requires moving off the ball and talking to her teammates on the field. But above all, the success of the combinations depends on Purce and her teammates having an intimate, almost telepathic, understanding of one another’s tendencies—a byproduct of extensive, and some times harsh, on-field dialogue.

Take her relationship with Dani Stollar ’18, a midfielder who followed Purce as the conference rookie of the year last fall. Earlier in the season, the two women sometimes failed to connect, leading Purce to demand that Stollar make clear what she was expecting Purce to do, and vice versa. In time, Stollar began making similar demands of Purce. Now all it takes is a tilt of the head or a slight hand gesture for the two to anticipate each other’s movements. “Somewhere around that thesis and antithesis, you find the synthesis,” says Purce of the dialectic that leads to team chemistry.

Yet goal-scoring requires more than strong passing and teamwork. It takes a player who can quickly decide where to put the ball—and then actually direct it there, amid enormous excitement about the possibility of scoring. “There’s a split second,” Purce explains, “where you have to relax and focus on finishing” the play to actually score the goal.

“Finishing” requires mental and physical prowess, and Purce has both. Even to the untrained eye, her deft touch, speed, and powerful shot stand out. But Leone says one of her foremost attributes is her balance. Much like Michael Jordan did in basketball, he says, “She rolls with [contact] and stays on her feet and adjusts... so she can change directions very quickly with and without the ball.”

Purce plays with similar mental balance and power: Jim Bruno, her coach at Our Lady of Good Counsel High School in Maryland, points to her composure. Purce agrees. “Foot, ball, goal,” she tells herself whenever she has a scoring opportunity. But she counterbalances that calmness with a healthy dose of aggression and risk-taking. “As a forward,” she admits, “sometimes you’re a little selfish because you want to go to goal, you want to score, and you want to do that for the team.” It’s extremely helpful, she stresses, to have teammates and coaches who are “supportive of my taking risks.”

Purce’s talents did not materialize overnight. Growing up in Olney, Maryland, just outside Washington, D.C., she was initially overlooked. On her first youth team, teammates nicknamed her “Midge” because she was relatively small. But her father, James, impressed upon her the importance of working hard—something Purce took to heart. As a youth player, she joined early-morning pick-up games with her older brother, J.P., and his friends. As a high-school player, she went out on the field by herself in the dead of winter. At Harvard, she meets Leone in the Athletic Complex’s bubble at 5 A.M. to train. For some athletes, hard work is a cliché, but for Purce, hard work is a creed. Her Twitter handle is “100Purcent.”

Currently on a pre-med track, she plans to eventually become a pediatric psychiatrist, but she hopes first to pursue a career as a professional soccer player and a member of the U.S. women’s national team. (She has been a mainstay in the team’s youth development program since high school.) From Leone’s perspective, both those goals are well within striking distance, but—fortunately for him and the Crimson faithful—Purce has two more years at Harvard during which to continue delivering scoring strikes on Soldiers Field.

~David L. Tannenwald

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