

to dabble in a new field); or

- transformational (you go to college to examine your fundamental beliefs and values).

The latter category accounts for a small minority of the students interviewed (fewer than one-fifth). Probably every college or university has at least *some* of each kind of students. The mix does vary with an institution's selectivity and mission, but the larger finding raises all sorts of interesting questions about how professors might accommodate their young charges, to expand their horizons and perhaps enlarge their aims and accomplishments, and how varying institutions succeed—or could do better—in encouraging such gains. Gardner's team found upperclassmen *more* likely to be transactional, and *less* likely to be exploratory, than entering students, perhaps as life after graduation looms; but they also detected an uptick in the small cohort who conceived of their higher education in transformational terms.

The typology is also a useful framework for thinking about alignment. At one point, Gardner reflected on Amherst College (he was a trustee). Some of its doctorally trained, liberal-arts faculty members, whose own career goals focused on academia, found themselves severely challenged in recent decades as members of a newly diverse student body, with different preparation and expectations, came to campus. Restoring alignment required pedagogical adaptations that achieved important educational gains. He also sketched other interesting examples of alignment, such as DePaul's "city as a classroom" fall-semester class for entering freshmen, a structured curricular commitment to service and civic engagement across most disciplines, consistent with that Catholic institution's Vincentian mission.

In the best social-science tradition, the research also points to some counterintuitive findings. Students' relative lack of expressed interest in details about the curriculum or pedagogy, Gardner noted, means that the experts—faculty members and administrators—are relatively free to make changes that might improve alignment within their communities and enhance the education they provide. And even though an academic community obviously must ensure that its members feel that they belong and can comfortably and safely pursue their work together, some degree of alienation is functional—to stimulate speaking out, prompting change, and pursuing intellectual growth.

Although much of the project's data analysis and publication of results lie ahead, Gardner underscored the importance for any school's leaders of knowing and enunciating its mission—and then investing accordingly. Public perceptions of luxe student centers and climbing walls to the contrary, the research suggests strongly that

such investments should focus much more on teachers, informed advisers, and skilled support personnel than on facilities or the latest technology.

Gardner and his colleagues are sharing their findings at <https://howardgardner.com/category/life-long-learning-a-blog-in-education>. ~J.S.R.

## SPORTS

# All Instincts

*For speedy center fielder Ben Skinner, slowing down is key.*

by JACOB SWEET

**T**HE THOUGHT of stealing makes Ben Skinner '19 smile. On the baseball diamond, speed is his biggest asset. But to steal second base, he needs to get to first, the only one that can't be stolen. To reach it, he can draw a walk or get hit by a pitch, but mostly he hits a ball into play and beats any throw to the bag.

Skinner is often looking to drive the ball up the middle, out of reach of the shortstop

and second-baseman. If he's ahead in the count—the pitcher has thrown more balls than strikes—he may swing for more power, slightly increasing the upward angle of his swing. If he's behind, he'll shorten his motion and just try to swipe the ball into play. He is known as a contact hitter, but making contact isn't easy. A baseball is less than 3 inches in diameter, and most Ivy League pitchers throw into the high-80s-miles-per-hour range, minimum. Almost every pitch reaches the plate in less than half a second.

Hitting was simpler in high school. Most pitchers, even around Moraga, California—

**After missing the first few games of the 2019 season with a concussion, Skinner has been among the Ivy League leaders in on-base percentage.**



Skinner's baseball-happy hometown—stuck to fastballs. Four-seam fastballs, the most common breed, depend on velocity and don't have much lateral movement in the air. Curveballs, sliders, and sinkers—off-speed or “breaking” pitches—curve, slide, and sink in mid-air, often leaving a batter off-balance and confused. Breaking pitches are notoriously hard to control, however. In high school, he could “sit on” a fastball, anticipating the ubiquitous pitch and swinging at just the correct moment.

Not anymore. Nearly every Ivy League pitcher has command of at least two, usually three pitches, and can throw them on any count. A first-pitch curveball, a high-school rarity, must weigh on Skinner's mind. If he expects a fastball and gets a curveball, his swing may be done before the ball reaches the plate. College pitchers are sharper, nestling the balls into the corners of the strike zone, where hitters are lucky just to make contact.

“In college, you'll typically have one pitch in the entire at bat where you have a chance to square it up,” Skinner explained recently. “If you don't swing at that pitch or you foul it off, you're typically out of luck.”

His freshman and sophomore years, he was “out of luck” more than he wanted to be. He hit for a .215 average his first year, followed by a .250—both below the team average. His on-base percentage, the most important statistic for a base-stealing threat, hovered just below and then barely above the team average. Skinner usually hit last in the batting order, guaranteeing the fewest at-bats each game among starters.

THE INITIAL STRUGGLES didn't discourage him. He had long before embraced a slow-burning, fundamentals-focused approach. He joined his high-school team as a freshman, gunning for the starting short-stop or second-baseman slot, where he had played all his life. In his first game on the team, however, the team's junior second-baseman (now playing professionally in the minor leagues) hit two home runs. “I remember talking to my dad on the phone and being like, ‘Yeah, I don't think I'm gonna play much this year,’” he recalled.

He considered his situation. He was a

couple years younger and less physically developed than his competition. If he wanted to become a starter, he'd need more strength. He touched weights for the first time his freshman year, focusing mostly on leg, core, and oblique work—crucial for baseball, for which throwing and swinging require quick and forceful rotations. His team, skilled in the middle infield, was weaker in the outfield. Middle infielders need speed, but center fielders cover the most ground.

While center field was an adjustment, he followed the approach of his older teammates, many of whom would go on to play baseball at the top collegiate level. He could get there too in a couple of years if he focused on improving his fundamentals every day. Tracking a fly ball, hitting for contact, reading a pitcher's windup before stealing a base—all are skills based on razor-thin margins and built through focused repetition. Skinner said there's nothing unusual about his style of preparation then or now; he just concentrates in practice as he would in a game. When the starting center spot opened his junior year, he excelled immediately and got recruited by and committed to Harvard within months.

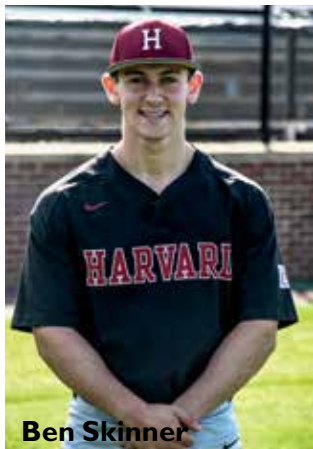
When standing in center at O'Donnell Field, Skinner has a simple goal: “Just run down the baseball and catch it.” “If you go out there and just be a good athlete,” he added, “you're typically going to have success.”

But there are plenty of reasons why Usain Bolt or LeBron James couldn't just get out there and mimic Willie Mays. Before a pitch is thrown, Skinner positions himself where he thinks the ball, if hit, will end up. If he knows a right-handed batter is a pull hitter, he'll move a few steps to his right, alerting the other outfielders to do the same. If a lefty is swinging late, he'll slide the same way. If the batter is the four-hitter—typically the team's most powerful—he'll take five or so steps back. But if the four-hitter has two strikes, he'll take a few steps in and to the batter's opposite side, knowing the swing may be short and late. The adjustments are near constant and

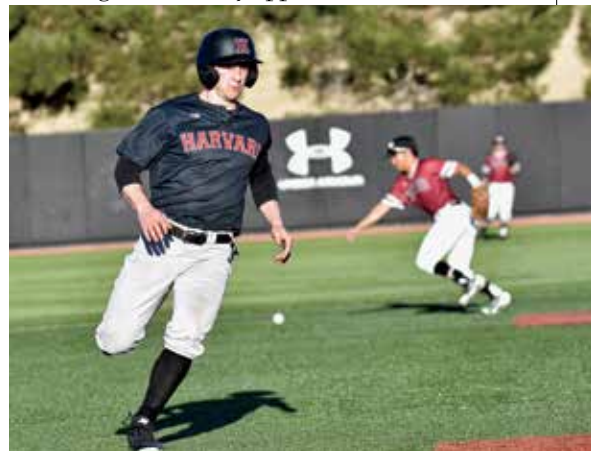
depend not only on the pitcher and batter, but on the stadium's size, the inning, and even the temperature.

By the time the ball is hit, Skinner hopes to be leaning in the correct direction, ready to run. Evaluating its trajectory is a matter of practice, and every ball he catches makes him minutely better. In most cases, the best route is a straight-line path to the ball, begun within half a second of contact. A routine running grab is anything but routine.

During the winter, he can't practice this skill as much as he'd like. Harvard's domed indoor training facility, The Bubble, within the Stadium, can't accommodate many high-arching fly balls, so much of the practice comes against actual opponents. And there's not much time to shake off rust. Harvard's 39 regular-season games are packed into a period of just over two months. When Skinner suffered a concussion this season after taking a pitch to the head, he missed a tenth of the team's games in just a couple days. Consistent with the Ivy League schedule, Harvard plays almost every game on the weekends. The last classic Major League Baseball double-header, in which two teams play each other back-to-back, took place in 2017. Harvard has 10 such double-headers this year, including one against each Ivy opponent. In the half-hour



**Ben Skinner**



**Any fielding mistake by an opponent can mean an extra base—or two—for Skinner.**

break between two three-hour games, he'll grab something to eat, then get back on the diamond, which may very well still be freezing in late March.

“I don't know if I'd grown up here how fond I'd be of baseball,” Skinner said, jokingly. “It's a different animal.”

STILL, the Northern California kid has adjusted well. His junior year, he moved from



ninth to first in the batting order, and at .416 had the highest on-base percentage among Harvard starters. One of two players to play all 42 games, he led the team with 55 hits, 13 doubles, and 17 stolen bases, recording a .325 batting average—to go with a .990 fielding percentage. After the season, in which Harvard went 22-20, he was one of three Crimson players voted First-Team All-Ivy.

"I think junior year was when everything started to slow down," Skinner said. "I don't

think there were any major physical adjustments I made per se, but all of a sudden I was just seeing the ball a lot better."

In the first couple hundred milliseconds after a pitcher throws a ball, Skinner might notice a dot-like pattern in the spinning seams, alerting him that the pitch is a slider. If he's preparing to steal second and notices a pitcher getting locked into a routine, he can take off at the moment the pitcher lifts his left foot. And though he is

the team's only engineering concentrator, he said his approach to baseball and engineering are separate. Engineering is about analysis; baseball is about instincts.

Sometimes it's no secret that Skinner will steal second. The pitcher knows, the catcher knows, everyone in the stadium knows. It is at times like these where everything slows down and his intuition kick in. Then, it's just a footrace.

"That's the most fun," he said, smiling.

## One Shoe, No Problem

BY THE TIME Kieran Tuntivate '20 gets on the line for a race, he's already run it countless times in his head. During warm-ups, throughout practice, at night before the meet, he's imagining how much it's going to hurt: his form stiffening, his legs overloaded with lactic acid that won't go away. He thinks about how fast the pace might be and which runner will challenge for the lead and when.



About two laps into the Ivy League Indoor Track and Field Championships 3,000-meter final, at Harvard's Gordon track, on February 23, Tuntivate's left shoe popped off. In the scenarios he had rehearsed, this one had not come up.

It wasn't a shoe-tying problem. Some 300 meters into the race, a runner from Columbia stepped on the back heel of his left shoe, pulling it under his foot like a slipper. For 100 meters his options—none ideal—raced through his head. His first thought was to slip the shoe on while running, but the maneuver wasn't possible. He thought about

moving to an outside lane and adjusting, but he had tightly tied his spikes beforehand and didn't know if he could slip it on without falling hopelessly behind. He then allowed himself a moment of annoyance at his unluckiness, subtly pointed out his shoe situation to Alex Gibby, associate head coach, and let the shoe fall away without breaking stride.

"And when the shoe came off, my fourth thought was just, 'Alright, whatever, relax,'" Tuntivate recalled. "I could almost feel some of the nervousness from some of my teammates and from Coach Gibby. It's weird, but their nervousness almost helped me relax."

Tuntivate makes relaxing seem easy, but it's not. Lost shoe aside, this was his biggest weekend of the indoor track season. He came into the race as the favorite, but there were 15 other competi-

tors, and he had a target on his back. He was also hoping to race, and win, the 5,000-meter championship less than 24 hours later. The focus during the 3,000 was not just on winning, but doing so without any undue strain.

Injuries while running barefoot were also a concern. Harvard's indoor track, renovated right before this season, has a "tuned" layer of butyl rubber with embedded granules, giving runners more bounce and traction. "It's not sandpaper, but it's damn close," said Gibby. Indoor tracks generally stretch half the length of an outdoor track, so there are more frequent and tighter turns, placing an increased centripetal-force burden on his now-shoeless left foot. Continuing the race meant both coach and athlete accepted that the foot was going to be carved up by race's end.

Even more serious, every athlete was wearing track spikes: ultra-light, tightly-fitting running shoes equipped with metal spikes for increased traction. In a race of this caliber, no one would wear a bulkier, more supportive, spike-less running shoe. In a sea of spikes, one does not want to be barefoot. But Tuntivate continued. "Generally, I'm not going to drop out unless my coach literally pulls me off the track," he said. "It would've been nice, but it was never a really a serious option."

As the shoe slipped off, Gibby considered pulling his athlete out of the race, watching for any signs that he was losing control. "Kieran, in general, is somewhat of a stoic," the coach said. "You're looking for mechanical changes. You're looking for tension, frustration—things of that matter boiling up. And none of that was present." He was also thinking about the long-term consequences of the race. If the injuries were serious, Tuntivate could be hindered for weeks or months, jeopardizing his competitiveness in major outdoor meets. A dual-citizen of Thailand and the United States, Tuntivate has national-class ambitions. After dominat-

**Kieran Tuntivate '20,  
shoeless and in the lead**