

income applicants to seek admission.

In the era of the \$45,000 bill for a year of college, Fitzsimmons said, "Many parents won't even allow their sons and daughters to apply to private colleges, while others allow their children to attend but experience real pain in paying the share we ask of them." He also cited survey research showing that students from the highest-income groups enjoy "differential access" to the undergraduate experience. Aid recipients are constrained in their ability or willingness to explore unpaid research opportunities or internships, to spend time with friends (as opposed to working or helping their families secure loan funds), to study abroad during the summer, and so on. Fitzsimmons called this finding a "kind of *Upstairs, Downstairs* situation," resulting in a "diminished experience" for half the student body.

There is strong evidence that such effects linger. In "Constrained after College: Student Loans and Early Career Occupational Choices," Jesse Rothstein and Cecilia Elena Rouse of Princeton's Firestone Library found that "[D]ebt causes graduates to choose substantially higher-salary jobs and reduces the probability that students choose low-paid 'public interest' jobs." Their paper, published by the National Bureau of Economic Research last May and based on the decision early this decade by "Anonymous University" to eliminate loans from its financial aid, also found "some evidence that debt affects students' academic decisions during college." In an essay on "Expanding Equal Opportunity" in the Winter 2007 *Harvard Educational Review*, Shirley M. Tilghman, president of Princeton (which fits all traits attributed to "Anon U"), says its proportion of students on financial aid rose by 17 percentage points in a recent class, and representation of low-income and minority students has increased strongly, since it did away with loans in 2001. She also cites accumulating evidence that students are "taking up positions in nonprofit, governmental, or educational fields."

Hence many of the elements of Harvard's new aid policy.

THE CHANGES not only build on prior efforts to bring private education within reach of lower-income families, but also

## HARVARD PORTRAIT



David Charbonneau

**On camping trips** in northern Ontario as a Boy Scout, David Charbonneau, Ph.D. '01, Cabot associate professor of astronomy, remembers looking up and watching the stars. "I'd lie on my back with a little star map," he says, "and try to piece together constellations." The son of a geologist and a psychiatrist, Charbonneau studied physics, math, and astronomy at the University of Toronto, where he also joined a co-op and applied his scientific acumen to brewing homemade stout. While a graduate student at Harvard, he remained active in co-ops by tutoring at one (through Dudley House) and founding another during a year-long stay in Boulder. In Colorado he also made an important discovery at the High Altitude Observatory. Until 1999, astronomers possessed only indirect evidence of planets in other solar systems, but by measuring the change in a star's brightness during an eclipse, Charbonneau proved the existence of the planet causing it (see "Distant Planets," July-August 2000, page 22). That research won him a fellowship to Caltech for postdoctoral study, during which he flew back East on weekends to visit his wife, who was doing her residency at Boston-area hospitals. He joined the Harvard faculty in 2004 and recently received a Packard Fellowship to build eight 16-inch telescopes at the Whipple Observatory on Mount Hopkins in Arizona. His original research turned up only "gas giants"; he will target the new scopes to identify small, rocky planets like our own. "We really are poised," he says, "to understand whether the solar system is commonplace throughout the galaxy, or whether we're unique."