

and creativity, so one hopes a sense of the ideas' complexity and connections will come across nevertheless.

Other, interspersed chapters of mathematical exposition explain, in an entertaining and elementary way, some problems in number theory extending from ancient Greek examples to the most up-to-date. These ideas, problems, and theorems include basic properties of prime numbers, solutions of algebraic equations in one and two variables with integral coefficients (rational, irrational, and transcendental), and congruences among the integral solutions. They culminate in recently solved and currently unsolved problems involving elliptic curves (cubic equations in two variables.) These explanations should be accessible to anyone who knows high-school math.

IN TWO AND A HALF PAGES of the "afterword," Harris quotes or mentions Nietzsche, David Hilbert, Goethe, Wilde, Richard Strauss, Schiller, Kant, Schlegel, Novalis, Felix Hausdorff, Mongré (Hausdorff's literary pseudonym), L.E.J. Brouwer, Georg Cantor, Schopenhauer, Alexander Grothendieck, Alexander Beilinson, Nikolai Luzin, Dmitri Egorov, and Thomas Pynchon. For better or worse, this gives an inkling of his wide range—and of the breakneck speed at which he operates. (Elsewhere in the book, Harris often brings up the Vedas and later Indian philosophy to give perspective on the Western philosophical attitudes that are his main subject. He also discusses Arab mathematicians and briefly remarks on other non-Europeans, like Omar Khayyam and Brahmagupta.)

I learned something new on almost every page. For example, Harris endorses the ancient Greek mathematician and philosopher Eudoxus's association of the pursuit of mathematics with the pleasure it brings practitioners. In his modern formulation, Harris writes, "The short answer to the 'why' question is going to be that mathematicians engage in mathematics because it gives us *pleasure*"—very much of a piece with his larger account of mathematics as human enterprise, rather than as any greater quest for an abstract truth.

Comparing mathematical activity and play, Harris says that "there is no need to seek the meaning of mathematics elsewhere than in the practice constituted by tradition; and the *telos* of mathematics is to

develop this meaning as a way of expanding the relaxed field [a field not subject to normal pressures of material gain and productivity....This book's] goal is to convey... what it is like to be a mathematician, freely choosing a tradition to which to adapt, not to serve the Powerful Beings of market rationality nor the metaphysical Powerful Beings of our own creation."

Granting the book's pleasures and insights—there is rarely a dull moment—Harris's writing is at times choppy, jumping from one level of discourse to another. It can be hard to follow the nuances and

consequences and connections among the ideas in their rapid flow.

With that caveat, I would recommend *mathematics without apologies* to anyone curious about what it is like to be a modern practitioner of this ancient field. You will encounter a unique, unapologetic account of the being (or Being?) of mathematicians.

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ALUMNI

A Broadcast Cornucopia

For 75 years, WHRB has moved beyond the "warhorses."

by CRAIG A. LAMBERT

THERE may not be another radio station in America that would air a show like the one WHRB (95.3 FM) broadcast in February of 2013: an hour and a half of music with no song longer than one minute. "It was the most stressful 90 minutes of my life," says Peter Menz '15, a former rock director for the Record Hospital department at Harvard's WHRB, who produced and deejayed the broadcast. "A minute can seem like a very long time. This was not one of those times. I had pulled 80 or 90 songs, and played 60 or 65": a torrent of music, with barely time in between to announce titles and segue to the next tune. "At the station, people subject themselves to ridiculous dares," he says. "Like this one."

Even more amazing, perhaps: many of the brief songs were musically complex works. "The station has always been *serious* about radio," says David Elliott '64, chairman

of WHRB's board of trustees since 1996 and an anchoring presence at the station for 50 years. "It is not a 'college radio station,' but a radio station run by college students, who knew from the very beginning that it takes only a second to change the channel. They had to compete on the air with their professional counterparts."

Indeed, the station that began in 1940 with a signal carried by the electrical system in Harvard's dorms has evolved into a 24/7 radio presence that matches the reach of the Greater Boston's commercial stations. WHRB (www.whrb.org) beams music, news, and sports from a tower atop One Financial Center in Boston to an audience roughly circumscribed by Route 495, a beltway about 30 miles from downtown. In an average year, about 150 DJs sit at its microphones in a warren of studios in the basement of Pennypacker Hall.

This fall, WHRB



WHRB's Bruce Morton '52 interviews freshman Henry Lorrin Lau '54 of Hawaii.

celebrates its seventy-fifth birthday on October 2-4, bringing together many of its 3,000 alumni, known as “ghosts” in the station’s lingo. There will be a reunion banquet, ghost panel discussions, and audio and video presentations. Although WHRB is staffed and run by students, ghosts sit on its board, help the station financially, and contribute expertise to its operations. Trustee Bill Malone ’58, for example, is a broadcast-law expert who, as an under-

graduate, helped shepherd the station’s application for an FM license through the Federal Communications Commission. Trustee Marie Breaux Epstein ’90, an accountant, watches over business procedures. Richard Levy ’58 and trustee Robert Landry ’79 are professional broadcast engineers living in the Boston area who provide invaluable help with technical problems, including the rare emergency fix-it call.

Some would argue that WHRB is the best classical-music radio station in the United States: an audacious, if untestable, claim. But WHRB (“whirr-b” to fans) airs nearly 70 hours a week of classical music, and does certain things no other station does. In the “real world,” nearly all “CM” (WHRB shorthand for “classical music”) stations deploy a rather limited playlist. Most selections are “warhorses”—familiar compositions like Beethoven’s Fifth or Ninth Symphonies, Tchaikovsky’s Piano Concerto No. 1, or Mozart’s “Jupiter”

From top: Lynn Joiner, the host of *Hillbilly* at Harvard; a glimpse of WHRB’s collections and organizational style; Record Hospital veteran Peter Menz tests a rock-and-roll 45.

Symphony. “Warhorses are fun,” says Louise Eisenach ’16, a former co-director of the CM department. “These pieces are famous for a reason.” Yet listeners rarely hear them on WHRB except as part of a *Warhorse Orgy* during one of its famous “Orgy®” periods.

“What makes us great is our extensive library,” notes Eisenach, “and our rule that we never play the same piece of CM twice in one academic year.” WHRB’s catalog contains 49,000 CM items (80 percent on CDs); the station also draws on Harvard’s vast Loeb Music Library, and thus can cue up just about any recording of anything. It doesn’t even air consecutive pieces from the same historical era, so there is no “Baroque Hour,” only shows like *Afternoon Concert* or *Special Concert*, plus thematic programs dedicated to the Cleveland Orchestra, say, or the *British Choral Tradition*. For sheer diversity and depth of repertoire, WHRB is unrivaled.

The same ethos also enlivens the jazz department as well as shows called *The Darker Side* (soul, hip hop, R&B), and *The Record Hospital* (known as “RH,” which doesn’t treat ailing vinyl discs, but airs punk and its indie successors). “We try to play things that will surprise people,” says Menz. “People can open up Spotify, Pandora, iTunes, or YouTube and play whatever song they want at that moment. So you have to keep them engaged by playing stuff they’ve never heard before. Someone like Kurt Cobain is a punk warhorse. In the RH lounge, you might see a sticker on his records that says, ‘DO NOT PLAY THIS.’

“Sometimes I play stuff that is so weird that either [listeners] turn off the radio immediately, or find that they *can’t* turn it off,” Menz continues. “We have some compilations that are really out there. There’s a CD called *Incredibly Strange Music*, for example, with a track by a Swedish Elvis impersonator who sounds *nothing* like Elvis Presley: he slurs all his words and has a thick Swedish accent. If you heard it on the radio with no context, you’d think you were in a demented fun house.”

The orgy tradition, another hallmark, began in the 1940s with Harold van Urmersen ’44, A.M. ’48. Exhilarated after having nailed some “major academic accomplishment, like turning in his thesis or finishing exams,” says Elliott, he dashed over to the studio and celebrated by playing all nine of Beethoven’s symphonies, rounding up a passel of 78 rpm discs and



some help for the party. Orgies have become a staple of Harvard exam periods, when students can use some good listening while they study.

Orgies now embrace a wide range of nonstop broadcasts spread over hours or days and organized around composers, performers, periods, whimsical themes, or almost anything else in classical and popular music, from a weekend devoted to the viola to an orgy musically recalling the court of Catherine the Great. In the winter of 1985, Michael Rosenberg '85 made WHRB the first station anywhere to air the complete works of J.S. Bach, in a nine-day, round-the-clock orgy that celebrated the tercentenary of the great composer's birth. The station, says Elliott, "has done all kinds of composers complete, from

the traditional greats to moderns such as Schnittke and Ligeti." The winter 2013 orgy period included celebrations of Cuban House (a genre of electronic/house music), jump blues, jazz guitar, and a festival of music from the Tremé neighborhood of New Orleans—all within its first week. Fans can be highly enthusiastic: in 1998, Elliott recalls, a Canadian couple drove to Boston and checked into a hotel for three days just to hear an orgy devoted to pianist Sviatoslav Richter.

In 1948, Dwight Benton Minnich '51 ("Pappy Ben" on air) launched *Barn Howl* on WHRV (the AM predecessor of WHRB-FM), feeding the appetite for country music shared by many Southern World War II veterans at Harvard. His early effort evolved into the longest-running, most highly regarded country/bluegrass program on Boston radio, *Hillbilly at Harvard*, a Saturday morning fixture now hosted by Lynn Joiner '61 ("Cousin Lynn").

Joiner arrived at WHRB as folk music



WHRB members in action during the 1950s



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was taking off in 1959 and came to host the weekly *Balladeers* program—one night featuring a local teenager named Joan Baez. “We may have been the first to air her,” he says. Typifying the playlist, he says, are artists like “the Stanley Brothers [a bluegrass group, *floruit* 1946-66] and George Jones, the greatest singer in the history of country music,” Joiner adds, “with the possible exception of Hank Williams.” Joiner co-hosted with Brian Sinclair ’62 (“Ol’ Sinc”) from 1976 until Sinclair’s death in 2002. Their formula was one bluegrass, old-timey, or Cajun cut for every two country numbers. “Now it’s just me,” Joiner says.

He has carried on with gusto plus input from a loyal, knowledgeable audience. *Hillbilly* promotes local concerts and often brings in musicians for live interviews and performances. Joiner plays contemporary country artists, but doesn’t do “pop country” with its lush arrangements, sticking

to the fiddles rather than the violins. In 2014, the International Bluegrass Music Association gave *Hillbilly* its Distinguished Achievement Award, its highest honor outside Hall of Fame induction.

WHRB began streaming its programs in 1999, connecting the station with a global audience—and now with a local one: as Menz notes, “I’d be hard pressed to find a current Harvard student with a radio in his room.” Online, the station’s newly refurbished website “allows us to post more Harvard-specific content,” explains Martin Kiik ’15, a recent WHRB general manager, “and also to communicate in a medium that college students can conveniently access—and do! The focus is the music, but our DJs have an opportunity to write something insightful *about* the music on the website—to tell a story about how they found this artist, and how this piece might relate to

the rest of the genre.” (The site’s Spintron listing gives the full names, composers, and artists for every cut “spun,” together with its airtime, and even enables clicking to buy the recording.)

Jazz and many other forms of popular music have always been part of the station. *The Jazz Spectrum*, broadcast in the contrarian slot of 5 A.M. to 1 P.M. weekdays, has long offered sophisticated programming as a refreshing alternative for commuters on the “morning drive” shift. From 10 P.M. until 5 A.M., *The Record Hospital*’s DJs expose listeners to “the latest in punk, hardcore, emo, noise, psych, new wave, no wave, post-punk, garage, indie, crust, and whatever else we can damn well get our hands on,” as their Web page announces. On Friday nights, local bands play live on air.

Regardless of genre, WHRB’s underly-

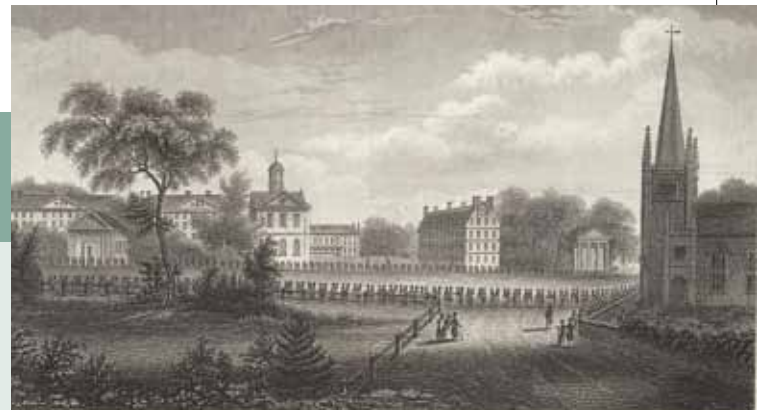
175 Candles

On Commencement Day, August 26, 1840, a small group of Harvard College graduates established what is now known as the Harvard Alumni Association (HAA)—but only after drafting former U.S. president John Quincy Adams, A.B. 1787, LL.D. 1822, to

lead the organization. Adams accepted, according to Harvard historian William Bentinck-Smith ’37 (“Aid and Light in Great Objects,” September-October, 1990, page 74), “though he had worries about his ‘inefficiency’ for the office.”

Clockwise from upper right: An 1840 etching of the alumni procession during Harvard’s bicentennial celebration in 1836; Professor

Edwin O. Reischauer at the second annual meeting of the Associated Harvard Alumni in 1967; a poster promoting an Associated Harvard Clubs’ gathering in 1910; Harvard president Derek Bok and Radcliffe president Linda S. Wilson greet alumni at the 1991 Commencement



From the start, Adams said that the organization would “embrace all alumni without discrimination” and “have a happy influence in promoting mutual friendship and union among the graduates of the College.” Those are still the association’s top priorities—even as it counts more than 325,000 University alumni across the globe—and as it celebrates its 175th anniversary this academic year.

The HAA has benefited from the heritage embodied by earlier alumni and alumnae groups: the Associated Harvard Clubs (which merged with the alumni association in 1965 to form the Associated Harvard Alumni; the name reverted to the Harvard Alumni Association in 1982) and the Radcliffe College Alumnae Association (which held its last formal meeting in 2003). HAA staff members are now collecting archival images and stories that will help highlight the role alumni have always played in sustaining the University, for celebratory events. “Alumni have made Harvard what it is today, and will continue to shape Harvard into the future, in terms of governance, volunteerism, interviewing and recruiting potential students, in philanthropy, and any number of other ways,” says HAA executive director Philip W. Lovejoy. “Alumni care about Harvard more than anybody.”



ing musical mission is to uncover fresh, high-quality material—and to share such discoveries with its audience. Undergraduate membership renews steadily; everyone who completes the comp gets on. Many compers bring an impressive store of knowledge with them—RH's Sam Wolk '17, for example, had done significant work at commercial radio stations in Los Angeles before college—which keeps the mix

musically erudite and percolating. Elliott hosts occasional CM programs as well as one on opera singers of the past that follows the station's live Metropolitan Opera transmissions on Saturday afternoons.

"The people who've come to the station have gained an appreciation of what a radio program is and can be," Elliott says. "It's a special presentation of words and music. It isn't about using focus groups to

figure out 'what people like' and checking the ratings every 15 minutes. You try to discover the really great music for yourself, and your discoveries will be the listeners' discoveries—and they will love you for it."

Craig A. Lambert '69, Ph.D. '78, former deputy editor of this magazine, is the author of Shadow Work: The Unpaid, Unseen Jobs That Fill Your Day (Counterpoint).

Global Alumni Fan

"Diversity of talents and people in fields everywhere"

THE NEW PRESIDENT of the Harvard Alumni Association (HAA), Paul L. Choi '86, J.D. '89, plans to promote "University-wide, global citizenship" on his travels this coming academic year. "As alumni," notes Choi, a Chicago-based partner in the international law firm Sidley Austin LLP, "we are part of this global network with an incredible diversity of talents and people in fields everywhere." He hopes to link that diversity to the work of his immediate predecessor, Cynthia A. Torres '80, M.B.A. '84. She focused on building ways for alumni to connect with undergraduates—as mentors, through internships and job-shadowing, and—especially during Harvard's Winter session—in career workshops and panel discussions. Such connections, Choi says, are "an important, very practical benefit of the alumni network, not only for students struggling to get summer internships and developing a career, but also in thinking about how to help [mid-career] alumni who may want to change jobs or move to a new geographic area."

The proud Pforzheimer House alumnus also wants to bolster ties between fellow alumni and their own Houses. He has already met with peers and with some House masters to figure out ways for alumni to develop relationships with undergraduates and each other—again, particularly in the professional realm. "If there were students interested in talking with a practicing lawyer," he explains, "it would be great if a House had its own network of alumni who work in the field." In general, he adds, surveys show that Harvard alumni want to interact with students and share their knowledge and expertise. They

also want to stay in touch with "Harvard's intellectual resources, promote access to cutting-edge scholarship, and reach out and join with other alumni through HarvardX" (the University's digital learning initiative).

Choi himself has a long history of involvement in alumni activities. As a current board member and former officer and president of the Harvard Club of Chicago, he has helped attract more graduate-school and young alumni to new networking and social activities there. Previous roles at the HAA include secretary and elected director of its board and vice president of engagement and marketing. In addition, he has served in reunion leadership positions for his College and Law School classes.

Born in Seoul, South Korea, Choi was three when his parents immigrated to

Chicago for his father's medical residency at Northwestern. Choi assumed he would also become a doctor, but he discovered at Harvard a preference for economics ("an insightful tool to analyze a breadth of problems") and pursued law because he was drawn to examining systems of government and policy. Now a partner in his firm's corporate group, he is the global co-leader of the mergers and acquisitions practice. A "true believer" in the value of a liberal-arts education, Choi says that "the analytical approaches to reasoning and the communication skills, written and oral, are the kinds of fundamentals that drew me to Harvard College and Harvard Law School—and those are the skills I draw upon every day." What makes the Harvard global community so vital, he adds, is its array of such applied knowledge and talents. "And the fundamental reason our alumni network is so strong," he points out, "is that it's filled with people who want to maintain a connection to Harvard—throughout their lives."

~NELL PORTER BROWN



Paul L. Choi