



Outside the Berklee College of Music, students and office workers hunch within bulky coats as they hurry along Massachusetts Avenue through the chilly twilight. Inside one of the college's low-ceilinged classrooms, where Stephen Webber is poised before a bank of three turntables, a mixer, and a bunch of expectant students, things are considerably hotter.

Traditional musical instruments — a piano, a drum set — have been moved to the sides of the room, for there is nothing traditional about what's happening here. You might even say a small piece of music history is being made. And if you're a hardline music purist, you might recoil at that.

"Everybody always told you: Don't touch the record player," Webber tells the students with a grin. "But it's very difficult to break." He proceeds to prove it by tapping the grooves of a vinyl record as it revolves on one of the turntables, then "scratching" it by moving it back and forth beneath the needle to the accompaniment of a throbbing backbeat from another record. The ensuing sonic effects are enough to melt the synapses, but Webber beams serenely as he works. With his full beard, shaggy hair, and mellow aura, the 45-year-old Webber looks like a folk musician; he has, in fact, played his share of bluegrass. Though he is trained primarily as a classical and jazz guitarist and won an Emmy for a score he composed for a PBS special.

All in all, Webber may seem an unlikely figure to secure a beachhead in academia for the urban idiom of hip-hop. But that is exactly what this professor of music production and engineering has done. The debut of Webber's "Turntable Technique" class on this Thursday evening in late January marks the first time an established music college has made room in its curriculum for a course on how to play the phonograph turntable, long a staple of hip-hop DJs, as a bona fide musical instrument.

For the next hour, when Webber is not scratching, he's talking: about pitch control, beat-matching, torque, and the "audio palindrome" created when you move a record forward and backward. "You find out some strange things about the audio spectrum, he says. There is no self-consciousness about him. At one moment, he invokes the names of legendary hip-hop DJs Grandmaster Flash and Kool Herc the way an English teacher might invoke Melville and Joyce; at another, as he rotates a record counterclockwise, he makes a wry allusion to the late-1960s hoax that claimed playing certain Beatles songs backward revealed clues to Paul McCartney's supposed demise: "Here's something I wish I had back when I was a kid."

Indeed, though it's hard to believe from his fleet-fingered scratching, Webber was a turntable novice as recently as the late 1990s. It was then that he bought two turntables and a mixer and began practicing in his Tyngsborough basement after hour, convincing his wife and two daughters that he had "flipped, totally lost it." He fought for five years, weathering three rejections along the way, to win approval for his course from Berklee administrators. Maybe that's why he begins this first class by blurting out "We're doing it!" in jubilation and perhaps a trace of surprise.

To be sure, hip-hop has been around for nearly three decades, is recognized as an art form, and is the subject of courses — many on its culture and sociology — at scores of universities across the country. But Berklee is putting its prestige behind the still-controversial proposition that the turntable is a legitimate musical instrument, not just a piece of playback technology. "We're teaching something that is very well known as a device for one function and using it for an entirely new function," observes Webber. "The fact that we're doing that at a college level, at a music college, is really revolutionary."

"Turntablism," which is largely a form of high-speed improvisation, is a key component of hip-hop, along with rapping, break dancing, and graffiti art. Hip-hop DJs, or turntablists, create new sounds from existing tunes by, for instance, back-spinning the record to rearrange its rhythms or adjusting the pitch control to speed up the record or play a new melody. Or they rapidly switch between two records, using the left hand, say, to grab a note from a jazz trumpet solo, then using the right hand to splice in a fragment from a percussive-synthesizer track, or blending a sinuous phrase from an R&B song with a sizzling fragment from a reggae tune. While all this is going on, they are also deploying the mixer to add some bass here, some treble there.

Webber is training his students to become not just disc jockeys but turntablists. The goal is to introduce them to skills that could eventually enable them to become recording artists or to perform in clubs or concert halls. More broadly, by teaching the artistic and production skills necessary to perform as a DJ and embracing the audacious premise that manipulating records on turntables is a form of musical expression that can be taught, Berklee is joining hip-hop's challenge to fixed ideas of what constitutes music.

Webber is aware that some eyebrows may be raised at the idea of a white music professor presuming to teach a technique pioneered and refined primarily by African-American artists from the inner city: "My reaction to that has always been to make sure I'm doing this for the right reason. I'm doing it out of respect and love for the music and a desire to share this with my students. I expect I'll get some heat for that; what I've tried to do is make sure my heart is in the right place.

"So far, I haven't gotten flak from the hip-hop community," Webber adds. "I've mainly gotten flak from the academic community saying, 'Should we be studying this?'"

DJ Qbert, a leading practitioner of hip-hop turntablism who is based in San Francisco, says Webber "has a great passion for it. He's always around, trying to learn things.... I've seen him at my shows a lot, and we'll talk on the phone." Webber also has a few things to teach: DJ Qbert says the professor has imparted to him some knowledge about melody and the music of Louis Armstrong.

This DJ at least welcomes his craft's adoption by the academy: "Kids that don't have any access to the art, because it is such an underground art form, he's exposing it to a lot of people," says DJ Qbert. "There's an infinity of possibilities that can happen with it. It's like another musical instrument, but in its own way. Kids can go to guitar class, piano class. Now



Turntablism 101

BABY SCRATCH Fundamental technique that is the basis for many other scratches. With the mixer's fader on, the DJ simply pushes and pulls the record back and

they can go to scratching class."

To Webber's eight students (four male, four female), the turntable course represents long-overdue recognition of a vital genre- "Turntablism is where hip-hop started," asserts Brian Ellis, 21, of Weston, Connecticut. "Hip-hop wouldn't survive without DJ-ing." Agrees Corey Moses, 22, of Wayland; "DJs have been the backbone of hip-hop from the beginning. Now, turntables are finally being accepted as instruments. It's a natural development in the evolution of music."

In the first class, Webber concentrates on the basics: cuing a record to a precise downbeat or drum break to achieve the desired effect ("What you really want to listen for is that kick drum. Hear that attack?"); finding the right stylus and cartridge (using another DJ's stylus, he says, is "like drinking with someone else's straw"). He shows them the basics of scratching: With his right hand, he adjusts the pitch controls on the console, or DJ mixer; with his left, he scratches the record by slowly dragging it back and forth to create offbeat percussion and fragmentary musical phrases. A record on a second turntable provides a continuous throbbing backbeat.

By the second week, he is demonstrating how to cue "on the fly" (with the record spinning) and how to slow down the beat by using the fingers to "drag on the platter" or "squeeze the spindle" of the record player. He shows the students how to speed up the beat by manually spinning the label or by adjusting the pitch control. He gives a primer on "beat-matching" (getting two records in synch with each other, then switching between them) and demonstrates how to flick the record with one's fingers to create "lasers" of sound and how to use a start-and-stop technique to put "tears," or spaces, between the notes. To untutored ears, it can sometimes sound like Alvin and the Chipmunks on speed, but more often, there is an arrestingly strange beauty to the sounds produced.

"Whether you're cuing or scratching, you're using the least amount of energy you possibly can," he tells the students. "The more weight that you put on, the more likely that you will bum the record. But the less weight you put on, the more likely that it will skip." Pedagogically speaking, this is terra incognita — a fact that seems striking even to Webber. When it's the students' turn to give it a try, Webber asks: "Everybody got their noise up?" He then remarks bemusedly: "I never said that in a class before."

The number of turntables has grown to a dozen, and the students are cuing and scratching, wearing earphones and bobbing their heads in time to the individual music they are creating. "This is so fresh," exclaims Ellis. "It's like science class when you have your own lab table." These members of the digital generation show a paradoxical delight in manipulating that hoariest of old technologies, the vinyl record. "Vinyl is really having a whole renaissance because of the DJ experience," remarks Webber. Ellis goes even further in describing the sensation of an old medium's rebirth. "If you've got an instrument, you have the old testament," he says. "When you put it on vinyl and scratch, that's creating new testament."

After he has laid the groundwork, Webber asks his students to all scratch records at once. What results is a kind of howling aural wind. "Cacophony!" he cries. "That was lovely."

WORDOFTHECOURSE spreads fast. By the second class, a week later, the waiting list has grown to 50, and the jittery soundscape created by Webber and his charges is attracting the attention of passersby, who keep poking their heads into the classroom. "How does this work?" mutters one puzzled student from the hallway. "How do you even *grade*?"

At the moment, Webber's charges have more urgent business than grades to think about. For one thing, the professor has asked them to come up with DJ names for themselves. So Ellis, a vocalist, volunteers that he might favor "Stink McCoy" as a handle. Rebecca Robinson, an alto saxophonist, announces that she'd like to be called "Sketch."

The students have a sophisticated musical vocabulary; they know about dynamics and note values and rhythm, and if Webber likens the manipulation of the turntable's tone arm to a violinist's bow stroke or says to them, "Swing the eighth notes into triplet feel," they get it. The students respond to Webber's warmth and enthusiasm, the fact that he so readily praises other musical "cats" he admires. "He's so easygoing, so responsive to his students' needs," says Moses. One of the students knows the professor very well: She is Webber's daughter, Aubrey, an 18-year-old cellist, who has apparently reconsidered her early verdict on her father's obsession. "The turntable is probably the coolest instrument out there," she says, her classmates nodding in agreement.

Not everyone sees it that way; in fact, not everyone agrees that the turntable is an instrument or that scratching and miring records is a form of musical expression. Weeks before the first class meets, when Webber is asked whether he expects a backlash, he laughs long and hard. *Of course* he expects a backlash; it has already begun, with some alumni writing the college to complain about his course. But Webber believes he has both history and the future on his side. He knows, for instance, that there was also a backlash when Berklee introduced electric guitar into the curriculum in the 1960s. "Right now, it's probably cooler to be a DJ than to be a guitar player if you're a 15-year-old kid," he says. "What Berklee is all about is pushing the envelope, being innovative, exposing our students to the important musical movements of our time - and hip-hop is certainly that. . . . Berklee is a precursor to what's going to happen at a lot of other places."

Whatever happens later, Webber and Berklee are now wading foursquare into the murky question of: What is music?

IT IS A QUESTION the music world has grappled with before, and not just with rock 'n' roll. "This same debate went on 75 years ago when jazz appeared," observes Gary Burton, an internationally renowned jazz vibraphonist who doubles as executive vice president at Berklee. "People said, 'You aren't reading this music; you don't know what you're going to do when you get up there; you're not trained.' It was a long time before the so-called legitimate music crowd got comfortable with what us jazz musicians were doing. . . . We find ourselves today adapting to another one of these seismic changes."

Still, it took awhile for Burton himself to get comfortable with what Webber proposed to do. In fact, he twice rejected Webber's course proposal, because of logistical, budgetary, and curricular issues. When Webber learned the course had been rejected a third time in the spring of 2002, he sent Burton an e-mail that said "What's up?" in the header and asked to open a discussion.

Historically, Berklee has been a venturesome place, always eager to stay on the cutting edge of contemporary music as it produced generations of jazz and rock musicians. Even in choosing a new president last month, the college took a path less traveled, naming Roger H. Brown, founder of the child-care chain Bright Horizons Family Solutions.

forth in rhythm.

BEAT-MATCHING Synchronizing the tempos of two different tracks playing at the same time in order to switch between or combine them without losing the beat.

CROSSFADER A fader that moves from side to side (rather than up and down) to select between or combine audio signals from two turntables playing simultaneously.

CUING To locate a specific point on a record and have it ready to play.

DJ Derives from the term "disc jockey," but in hip-hop refers to an artist whose medium is the playback of recorded music.

DRAG When baby scratches are slowed down to half notes or whole notes, they become drags. The DJ tends to use more of the record when performing drags, and the pitch of whatever audio is on the record (the sample) is lower.

FADERS Sliding controls found on a DJ's audio mixer, used to adjust the separate volumes of each turntable.

HIP-HOP A culture that was born in the Bronx and has spread virtually worldwide. DJing is one of the four main expressions of hip-hop; another is dance in the form of rocking, breaking, popping, and locking. The third is visual art in the form of graffiti; and the last is the literary forms rap and slam poetry.

RAP Music in which vocalists — rappers — speak in rhythm and rhyme, often accompanied by a DJ. The musical form originated in the mid-1970s in the discos of New York City's African-American neighborhoods.

SCRATCHING The rhythmic manipulation of the record by hand, often in conjunction with a crossfader or other controls found on a DJ mixer. (The record is not literally being scratched.)

TEAR Splitting up the sound of drags or baby scratches by pausing partway through.

TURNTABLISM The art of playing the turntable as a musical instrument. This can include extending breaks, a scratching, cutting, beat juggling, melody playing, and the live remixing of records

Brown, who will take over at Berklee on June 1, has said he is intent on making "people more aware of what an extremely cool place this is,"

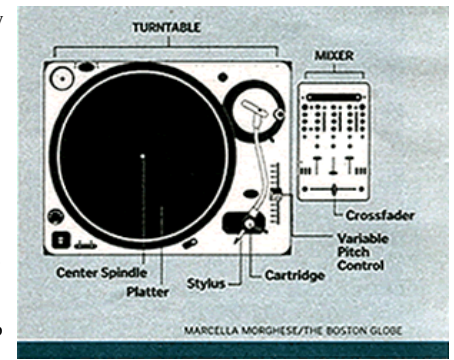
Webber came to Berklee in 1994, but within a couple of years he was looking for a different music idiom to teach, something that wasn't "derivative of the Beatles, as much as I love the Beatles." Something that would set young minds on fire. In 1997, a student showed him a tape of a hip-hop DJ competition run by the Disco Mix Club, an international DJ organization, and he was bowled over. He embarked on a crash course on the art of turntablism (his preferred term), studying with local DJ and Berklee dropout Edan Portnoy. Webber started frequenting turntable contests. Increasingly convinced the turntable should be seen as a musical instrument, Webber wrote a how-to manual titled

Turntable Technique: The Art of the DJ. Once he secured a book deal with Berklee Press in 1999, he thought the time was right to propose a course on turntablism.

But Burton and other top Berklee administrators had questions. Even though Burton freely admits that "I'm never going to be as much a fan of hip-hop as I am of Miles Davis," he says the "issue with turntablism was not so much whether we liked it or didn't like it or thought it had a place in music, but how did it fit into a college curriculum? For one thing, there's no agreed-upon way of writing it down, notating it, and to us that's a pretty basic element of music." They also had to consider, he adds candidly, "What will people think? We want to maintain our credibility as a major, important school." But, he says, he and other Berklee officials were largely receptive to the idea, seeing it as consistent with "our mission, which is to be current."

So Webber and Burton put their heads together and concluded that the way to resolve that question was to form a study group of faculty members (as the college had done when it introduced rock music into the curriculum). Webber brought in recordings, documentaries, and video demonstrations of their craft so the study group could assess it. The faculty members got a taste not just of the musical possibilities of turntablism but of the enthusiasm for the genre within the student body (where a turntablist club has been going strong for years). When hip-hop artists DJ Logic and Brian Transeau (known as BT) conducted clinics at Berklee, they drew standing-room-only crowds. "It would have been easy to say, 'Let's wait a decade or two and let this thing fill out a little more,' but we had increasing student interest," says Burton. "More and more of our students, we learned, were beginning to buy the gear to learn how to do it on their own."

Finally, last summer, Webber's course got the green light. He breathed a sigh of relief and got to work so he could add Turntable Technique to his already bulging course load. "I didn't think it would take as long, and I wasn't prepared for the amount of reservations there would be," says Webber. "But, putting it into context, it was only four or five years. And if hadn't been Berklee, it wouldn't have happened at all."



"THE ART OF SCRATCH" Students in the Berklee College of Music's groundbreaking courses on hip-hop turntable technique are poised to spin vinyl

Some alumni apparently wish it hadn't, even though it is just one course and not a full-fledged major for Berklee students. "I've had a few letters from alums around the world, questioning, saying, 'I read about the turntable thing; what on earth are you doing?'" acknowledges Burton. His reply to them, Burton says, was: "Music is evolving, and we're doing our absolute, conscientious best to make the right decisions.... If we don't keep up, pretty soon we become pretty irrelevant."

Whatever else Webber's course may be, it is not irrelevant, at least to the students taking it. Moses says he hopes to perform and perhaps even record after finishing the class:

Ellis says he wants to work as a hip-hop DJ on radio or in live shows. He argues that adding turntablism to a college curriculum will bring to hip-hop the "full spectrum" that it needs to grow. "A lot of people said hip-hop was going to be a fad," he says. "But it's proven its power in terms of connecting with people."

Evidence of that staying power is all around. From Stanford to Duke to Temple University, colleges offer courses and host conferences on the history and culture of hip-hop. The Hip-hop Archive at Harvard University has become a leading repository for recordings, videos, papers, and other material related to hip-hop. Last October, in a development driven largely by hip-hop artists, the top 10 songs on the *Billboard* charts were by black performers for the first time in the charts' 50-year history. The hip-hop duo OutKast was a big winner at the Grammy Awards last month, and the genre is ubiquitous on TV commercials.

Webber and his students believe all of this is just the beginning and, moreover, that turntablists will be a key part of hip-hop's future. The professor talks excitedly about technological advances that will push the genre even further, stuff like digital turntables and DVD players that will expand the expressive possibilities of DJs. Webber may have come late to hip-hop, but now that he has pushed Berklee to venture to the academic frontier, he seems determined to stay there.

"This is an important culture," he says. "It has definitely grown into one of the major musical and cultural movements of our day. Hands down."



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