

Tales of the tape: cassette culture, community radio, and the birth of rap music in Boston

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Recent scholarship on peer-oriented production and participatory culture tends to emphasize how the digital turn, especially the Internet and the advent of the so-called 'social web', has enabled new forms of bottom-up, networked creative production, much of which takes place outside of the commercial media. While remarkable examples of collaboration and democratized cultural production abound in the online era, a longer view situates such practices in histories of media culture where other convergences of production and distribution technologies enabled peer-level exchanges of various sorts and scales. This essay contributes to this project by examining the emergence of a local rap scene in Boston, Massachusetts in the midlate 1980s via the most accessible 'mass' media of the day: the compact cassette and community radio.

Introduction

Recent scholarship on peer-oriented production and participatory culture tends to emphasize the special affordances of the digital turn, especially the Internet and the advent of the so-called 'social web' (Benkler 2006; Lessig 2008; Shirky 2008). While remarkable examples of collaboration and democratized cultural production abound in the online era, a longer view situates such practices in histories of media culture where other convergences of production and distribution technologies enabled peer-level exchanges of various sorts and scales. This essay aims to contribute to such a project by examining the emergence of a local rap scene in Boston, Massachusetts in the mid-late 1980s via the most accessible 'mass' media of the day: the compact cassette and community radio.

Our story focuses on a weekly radio show called Lecco's Lemma that aired from 1985 to 1988 on two successive local college stations in metropolitan Boston. Hosted by painter and disc jockey Magnus Johnstone and whimsically named after an imaginary, tape-hoarding computer running the show from behind the scenes, Lecco's Lemma was one of the first shows in the Boston area devoted to rap. Initially focused on vinyl from New York, it soon became a magnet for local MCs, DJs, and crews — and, crucially, their tapes — and served as a central node for Boston's emerging hip-hop scene and the community that gathered around it. Our sources for this essay are themselves a trove of cassettes: tapes of the radio and tapes for the radio. Drawing on several vignettes from the show, we explore feedback loops between production, broadcast, and reception, and examine how the show itself became an important real-time record of a community's coproduction of rap as a living, social music.

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The story of Lecco's Lemma and the rap scene it helped to coalesce bears witness to a moment of creative industry catalyzed by a convergence of low-barrier media technologies. While few of the artists involved ever gained access to the mainstream music industry – though many dreamed of such success – their individual and collective efforts were abetted by the wider recording industry. Indeed, the scene constituted a recording industry in itself, albeit one largely disconnected from the commercial recording industry. For Lecco's Lemma and the Boston rap scene, tapes were part and parcel: the simple but profound ability to produce recordings at home and send them out over the local airwaves sufficed to channel the enthusiasm of a sizeable community. Primarily an artistic and social enterprise, the brief history of Lecco's Lemma – a history itself committed to tape by local devotees – offers a window into the affordances of the compact cassette and college radio and their importance to local, grassroots music culture in the 1980s. In this article, we examine three vignettes from the history of the show, providing close readings that illuminate some of the remarkable ways that this moment of media convergence spurred cultural production and facilitated social networking.

Although collaborative youth culture tends to be associated with internet-era platforms, the compact cassette and community radio together facilitated an efflorescence of non-commercial, socially networked cultural production in mid-late 1980s Boston. In this sense, homemade demo tapes and college radio might be appreciated as a harbinger of, or indeed a foundation for, the forms of 'free', 'remix' culture that have become so spectacularly prominent in the digital age (Lessig 2008). Indeed, the story of Lecco's Lemma offers a vivid reminder that what Yochai Benkler (2006) describes as 'commons-based peer production' or 'large- and medium-scale collaborations among individuals, organized without markets or managerial hierarchies' are not so suddenly 'emerging' but, rather, such coordinated conjunctures of media and community have long had their moments.

The democratizing power of tape and the rise of cassette culture

Writing about the spectacular rise of online video, Henry Jenkins contends that 'the emergence of participatory cultures of all kinds over the past several decades paved the way for the early embrace, quick adoption, and diverse use of such platforms [as YouTube]' (Jenkins 2009, 109). Jenkins draws an example from queer video artists embracing the affordances of video home system (VHS). Likewise, we too have tales of the tape to share. The pivotal role of the cassette in rap's development remains a conspicuously neglected dimension of hip-hop history, and we aim to remedy that while contributing more generally to a growing ethnographic literature (Manuel 1993; Sutton 1985) and set of archival projects focusing on local cassette cultures (e.g., the Mixtape Museum).¹ Before we delve into the specifics of Boston's fledgling rap scene in the mid-1980s, however, the broader impact of magnetic tape on music cultures merits some attention.

Across histories of music and sound recording, the story of magnetic tape is one of media democratization. Since its development in the 1930s, magnetic tape has enabled independent record labels and Nagra-wielding field recordists, four-track home studios and reel-to-reel remixers, handmade mixtapes and musique concrète. As with the phonograph, the compact cassette was initially a low fidelity medium imagined by its creators as perhaps best suited for dictation. Tape thus offers a classic example of what Jonathan Sterne calls the 'plasticity' of audio technologies, or the degree to which they can be put to use other than those intended, which he considers no less than 'the distinguishing characteristic of sound media' (2003, 182).

Spurred by the promise of a mass-market for home-taping. Dutch manufacturer Philips introduced the compact cassette in 1963, improving previous cartridge designs by making them smaller and compatible with the first portable, battery-powered players, which Philips also manufactured. Twice the length of long play (LP) records, cassettes could accommodate longer recordings, but that came coupled with the constraint - or is it a feature? — of not being able to skip around easily, encouraging an unbroken, or programmed, listening experience. The first commercially released albums on cassette in the United States did not appear until 1966, and it was not until much later, in 1983 with the advent of the Walkman, that commercial cassettes began to outsell vinyl (Haire 2009). Notably, tape and radio have been intertwined from the start: early in its history, magnetic tape figured crucially in the production of radio. At the consumer level, cassette playerrecorder manufacturers have long designed products with the tape-radio interface in mind: e.g., Philips' 'Radio Recorder', introduced in 1969, which some consider the first boombox. Featuring a handle for portability and built-in speakers, the Radio Recorder allowed listeners to record from the radio onto cassette without any external cables. 'All of a sudden', according to archivist and documentarian Miles Lightwood, 'you've got a very easy music-sharing culture' (Oatman-Stanford 2013).

Not only were portable cassette players among the first mobile musical devices — the forbears of yesterday's boomboxes and today's smartphones — as recording machines they enabled the first mass movement of audio compilers and collagists enthusiastically exercising what Glenn Gould presciently dubbed the 'splice prerogative' as early as 1966 (2004, 122). Because blank tapes were relatively inexpensive and reusable (and commercial tapes easily 'taped over' and repurposed), all manner of everyday recording projects and grassroots industries flourished (Jones 1992). From Grandmaster Flash to patrons and fans in the Bronx (Armstrong 2014), to Panamanian reggae singers making specials for minibuses (Szok 2010), to the tape-swapping hordes of Grateful Dead fans and their jamrock descendents (Marshall 2003) — or for that matter, their counterparts in the metal underground, where Metallica's demo tape became a 'fixture' and helped propel them to major label success (Grow 2015) — cassettes initiated and supported myriad forms of cultural production, and the coalescence and diffusion of countless subcultures and musical subgenres.

This explosion of activity was initially received warmly in the mainstream press, but the profusion of new production soon overwhelmed traditional press outlets. As music journalist Adam Harper recounts:

In the early '80s, the rise of the home-recorded cassette was welcomed with open arms by both musicians and the music press as the essence of indie creativity unfettered by musicindustry intervention. Beginning in 1981, NME [New Musical Express] ran an independents column, Garageland, that almost always featured homemade cassettes, sometimes exclusively. Cassette reviews were given even more space in US magazines like Op, Option and Sound Choice. But eventually the DIY cassette bubble burst. Idealistic magazines promising to review any tape sent in whatever the genre were soon drowned in awful garage rockers and avant-garde knob-twiddlers looking for their 15 minutes. Some writers ultimately couldn't stomach the lesser sound quality. Then when indie and alternative rock began to gather steam — on vinyl — the 'cassette revolution,' as it had been called, was dropped from the music press almost completely and buried in fanzines. (2014)

Irrespective of this boom and bust, just as fanzines persisted in covering 'underground' music, musicians of all stripes continued to exploit the affordances of tapes to circulate their performances. At the same time, listeners and enthusiasts continued to

record the radio and make their own 'mixed tapes', and emergent grassroots genres like hip-hop gathered steam in large part owing to tape's democratization of the means of production.

Despite such classics as EPMD's 'Please Listen to My Demo' (1989) or De La Soul's 'Ring Ring Ring' (1991) paying tribute to the phenomenon, the role of demo tapes in hiphop — and taping practices more generally — is mostly invisible in rap scholarship. With some exceptions (Harrison 2006), the role of cassettes in rap scholarship takes a backseat to vinyl, video, and, more recently, digital media. When cassettes do figure in the discussion, the mixtape tends to dominate as the canonical form. More crucial than the quasicommercial circulation of mixtapes by working DJs (and, later, as promotional vehicles for rappers and labels), however, demo tapes and radio tapes were essential engines in hip-hop's development. When cassette technology was combined with community access to radio broadcasts, substantial barriers to mass media access fell and nascent regional networks of artists and audiences began to connect around this new urban art form.

As has been recounted in various histories of hip-hop, community-oriented radio played a significant role in facilitating the local development of rap music and hip-hop culture in New York, Los Angeles, and Oakland (Armstrong 2014; Chang 2005; Charnas 2010). Cassette-based demo tapes were important inputs for such shows, and in the form of recorded broadcasts, tapes proved key vectors for listeners' access to rap radio shows across time and space. The celebrated program hosted by Stretch Armstrong and Bobbito García on Columbia University's WKCR (89.9 FM) from 1990 to 1998, for instance, became a crucial conduit for emerging artists to broadcast their demo tapes to their hometown and beyond. Indeed, in Armstrong's opinion, 'the importance of tapes cannot be overstated' when discussing the development of hip-hop. Because hip-hop was a live form before it was available on vinyl, cassettes — in particular, 'tapes of live jams... widely copied and distributed hand-to-hand' — were fundamental to its circulation and cultural memory. 'Without the cassette', he writes, 'these live jams would have only been remembered by those that were there, confining hip-hop, DJing and MCing to the neighborhoods where they were born' (2014).

Moreover, Armstrong attributes his own show's resonance, and indeed his career, to tapes:

Later, after getting my own radio show, I learned over time how critical the cassette was to the success of that show and the recognition I received as a tastemaker and DJ. Informally called the "Stretch Armstrong and Bobbito Show," we broadcasted from a disheveled, student-run studio on Columbia University's campus over a weak signal at 89.9 on the FM dial from 1am to 5am on Thursday nights. How was it that so many people heard this show, and not just people in NYC and the tri-state area? Tapes. There were never any metrics for the show, and to this day we have no idea how many people were tuning in. But it's obvious that more people heard the show on tape than live. Tapes of the show were traded, dubbed, sent across the country and overseas. No tapes, no show, no Stretch. (2014)

The combination of tapes and 'disheveled, student-run' radio likewise proved a potent cocktail in Boston during the mid-late 1980s, a formative moment for the local scene. Matt Reyes (DJ Spin), a devoted listener and, later, active contributor to Lecco's Lemma, fondly remembers taping the show, an act which served as a gateway into a new community of affinity:

We taped show after show, learning all the names, the songs, the disses, the battles, and above all Magnus' eerie voice holding it all together. Charlie called the show so much

Magnus started recognizing his voice. By the beginning of 1986, we just knew we had to go down there 2

After providing a brief history of the Lecco's Lemma show, we turn to three examples from the tapes that provide revealing perspective on how the combination of cassette technology and community radio facilitated the emergence of a local, DIY rap music scene in Boston, MA.

A brief history of Lecco's Lemma

Unlike in New York, where commercial radio stations had been featuring rap music since the early 1980s, commercial radio stations in Boston remained fairly closed to rap well into the 1990s. As late as 1993, *The Boston Globe* was reporting how little rap music had penetrated commercial radio in Boston (Bickelhaupt 1993). Local college radio shows provided outlets for local rap artists with no access to commercial stations. Among the earliest and most important of these was Magnus Johnstone's Lecco's Lemma show which began in 1985 on MIT's WMBR (88.1 FM) and ended in 1988 at Boston College's WZBC (90.3 FM) (Foster 2009). Like many community stations, both WZBC and WMBR maintained a certain number of slots for community members.

A lifelong visual artist and college radio DJ, Johnstone always seemed years ahead of musical trends. An autodidact with an insatiable appetite for new music, by the time he launched the Lecco's Lemma show in 1985, he was already well known in local art and music scenes and hosted a weekly reggae show on WMBR. Although his tastes ran strongly toward African and Caribbean music, Johnstone was also a fan of German electronic bands like Kraftwerk and an avid soul and funk collector. When rap music first circulated commercially with 1979's 'Rapper's Delight', he was well prepared.

Johnstone was captivated by early rap's DIY energy and preferred playing his favorite new records on the rare occasions when he filled in on the station's urban music show, 'The Ghetto'. Although the show's standard playlist featured more of the synthesizer-heavy funk, R&B, and club tracks than he preferred, when Johnstone played rap and electro records on his guest appearances, the community reaction was immediate: the studio phone began to ring almost as soon as he started playing. It got to the point where listeners would call in to ask for him by name, before he had even announced himself, based entirely on his selections. On the strength of this response, Johnstone pitched a new rap and electronic music show to the WMBR station management, and Lecco's Lemma was born.

With the debut of the Lecco's Lemma show on a late Saturday afternoon in September 1985, local rap fans finally had a home on the airwaves, and the response from his largely teenage audience was instant. Fans credit the show with exposing them to the latest releases, and artists cite it as an inspiration and outlet for their homespun creations (Foster 2009). For young people hungry for this new music, Lecco's Lemma was an oasis amid a top 40 and rock-dominated radio landscape that rarely included rap, let alone self-produced tapes by local artists. Like many of the show's devotees, DJ and producer Matt Reyes remembers discovering that a community of other local artists was engaged in similar home-studio hip-hop production:

By the summer of 1985, we had the keyboard, turntables, a Dr Rhythm and a mic plugged into the mixer, and taped stuff onto one tape deck and ran it back through the mixer and

recorded onto another tape deck while adding more cuts and keys (a primitive version of tracks we called 'layers'), and we were just starting to create our own songs when one day Charlie found Magnus Johnstone and his Lecco's Lemma radio show on MIT's WMBR 88.1 FM. With mouths and ears wide open, we were suddenly exposed to this new world of underground local hip-hop: Disco P & The Fresh MC, Rusty The Toejammer, Bodyrock, MC Capers, The RSO, The RCC, FTI, The Tuff Crew, MC Fantasy, MC Spice... THIS was where we'd been headed all this time, and we didn't even know it.

As soon as the show started each week, the phones would ring with young fans calling in to ask about songs, cheer Johnstone on, and leave shoutouts and messages to their friends across the city. In his mysteriously accented and notoriously informal voice-overs, Johnstone would introduce his favorite new rap releases, announce local shows and, most importantly, play almost any local artist at least once — as long as they had a tape. In doing so, his show gave voice to a rap scene that had been restricted to live neighborhood performances and peer-to-peer distribution of cassette tapes among friends.

In December 1985, Johnstone started to invite local artists to perform live on air, a development mirroring the MCs who toasted live over instrumental tracks on his earlier reggae show. From this point on, the show became a lively face-to-face and virtual meeting place for young, aspiring rap artists from Greater Boston. In the fall of 1986, Johnstone moved the show to Boston College where the show continued on WZBC (90.3 FM) until 1988.

Although Johnstone rarely taped his own shows, he did preserve a collection of approximately 300 demo tapes that were sent to him by local artists at the time. Unbeknownst to Johnstone, Willie 'Loco' Alexander, a friend and fellow traveler in Boston's vibrant alternative art and music scene, taped the show regularly on a boombox at home. Together, Johnstone's collection of demo tapes and Alexander's recordings of the broadcasts offer a unique collection of firsthand accounts of rap's emergence in Boston, just as it was reaching suburban teenage audiences but well before it had become such a major player in the broader recording industry. In the next section, we examine three moments from the show's history to illustrate how cassette technology and a college radio program with a magnanimous host helped to catalyze a local rap scene in Boston.

Tales of the tape 1: rapid cycles of production, broadcast, and reception

It is clear from interviews — and broadcast snippets on demos — that fans and artists regularly taped episodes of Lecco's Lemma. What is less clear is how the availability of cassette technology and rudimentary home studios (Figure 1) combined with college radio to accelerate cycles of production, distribution, reception, and local diffusion that had previously transpired primarily through neighborhood friendships and face-to-face events.

The following recollection, a MySpace comment from one of the show's early suburban fans and contributors Coolie J, illustrates the rapidity of these cycles:

It's Saturday, 9:00 am, most kids are headed to baseball practice, some are sleeping in. Me, I'm on my way to Dedham. The journey begins on the 104 Bus in Everett square. From there, I take the orange line from Sullivan Square to Forest Hills. At Forest Hills, I catch a bus to the Dedham mall. Once at the Dedham mall, it was about a 2 mile walk to either Matt or Charlie's house. In all, about a 2 hour journey...I wrote a song for this trip and it started: "Coolie J is back" ... I must have recorded at least a dozen versions of a song with this title later on, but this day's version would be special. I worked feverishly to lay the vocal. Take after take, line after line. If we could finish by 5 pm, Charlie and Matt assured me they could get it on Lecco's Lemma that night. 4 pm rolls around and my time is up. I need to get



Figure 1. DJ Prime, one of several local producers who sent tapes in to the show, in his home studio in Carver, MA.

walking so I don't get home too late. My part of the song was finished. I rode the bus, then sat on the train, then rode another bus and finally, walked to my house. It was probably about 7 pm when I stepped in my house that night. I called my Everett friends and decide (sic) a night at the Palace was in order. My crew and I walked up to the line, which was probably a 100 (sic) people long. I remembered a week before, the FTI crew had started rapping and were able to cut the line. I, however, needed no such trick. I knew just about everybody, including the doormen at the Palace. I strutted past the unknowns and as I approached the front of the line I heard the most unusual thing. Some classmates of mine who were in line were singing a song. It wasn't something I had heard before but there was something vaguely familiar about it. They were singing *Coolie J is back*, *Coolie J is back*. One of the kids grabs my hand and starts telling me he loves my new song. I shake my head, thanks (sic) and keep on walking. I thought he must have been crazy. It turns out that as I was on my long journey home Matt and Charlie were crafting a masterpiece.

Although there are many features of this story that are worthy of deeper examination, it seems particularly striking that before music circulated through the Internet and web, a song could be produced, recorded, broadcast on local mass media, heard and memorized by a fan, and sung back to the artist all within the space of a single day. Such a rapid cycle between production, distribution and audience engagement is typically associated with digitization. This story illustrates how similar dynamics were afforded by cassettes and community radio in the pre digital era.

The importance of cassette technology in this process is amplified in Matt Reyes's reply to Coolie J, in which he recalls how the specific challenges of DIY tape recording combined with the timing of the show to affect the sound of the final product itself:

I'd forgotten about us making you rush your vocals so we could get the song on Lecco's by that night, but that explains why some of your words on the first version are garbled here and

there...I guess we left it because doing another take would mean going back to the beginning. There was no punching in, no tracks, this was actually before the 4-track recorder and we were still doing the old-fashioned "layers": recording a take then playing it back through the mixer while adding more stuff.

In this sense, the material constraints of tape offer a strong contrast with digital media. With the deadline of the show approaching, and no way to escape the confines of painstaking, real-time recording, compromises had to be made. Unlike in the era of digital audio, where alternate takes are unlimited, 'non-destructive editing is a commonplace, and making microscopic splices is as easy as dragging a mouse, the production techniques used by these artists demanded constant negotiation with the limits of the technology itself.

Tales of the tape 2: local radio as platform and tape as history

Because Johnstone actively solicited and played demo tapes from local artists, Lecco's Lemma became an important platform to expose artists to broader audiences. Because it was also regularly taped by artists and fans alike, the show stood as a permanent record of their creations and progress. A monthly Lecco's Lemma playlist, which included separate sections for national releases and 'local tapes' which Johnstone proclaimed was 'distributed to local record stores and sent to record companies and listeners', provided a concrete target for their efforts and discussions. Tape battles adjudicated by listener telephone voting and in-studio MC battles stood as platforms for aspiring acts. Because the monthly Lecco's Lemma playlist represented a monthly distillation of these popularity contests, they were extremely important to local artists and fans. The fact that they also contained a monthly chart of the regional and national releases that had been most popular on the show only reinforced the cachet of appearing on the list for local artists.

Of all the local artists to enjoy early exposure on Lecco's Lemma, Keith Elam, later known as Guru of Gang Starr, would gain the most national acclaim. His first appearance on Lecco's Lemma, still going by MC Keithy E, provides a wonderful example of how important the show had become as a record of accomplishments for Boston's aspiring rap artists.

A native of Roxbury, one of Boston's largest neighborhoods and a longtime center of Boston's black community, Elam had just returned from Morehouse College in Atlanta when he appeared on the show for the first time with DJ Mikey Dee. Johnstone begins the interview by saying how surprised he was that he had not heard of the MC before (it seems clear that Magnus had only recently received tapes from Gang Starr, one of which, 'So What', had already made number one on the show's monthly list). With the studio phone ringing in the background, Keithy E and Mikey Dee ask Johnstone to check out their new tape.

KE: Okay. What I'd like you to do is next just we were at home in our little studio at Radio One. We hooked up a little thing with Damo D on the beatbox, and we got it fresh. So if you would like to insert that into the tape, and just bust it out.

JOHNSTONE: Okay. I'm going to see what I can do right here.

MD: Alright. I'd like to say hi to everybody out there in the place to be; cold-Tchilly Roxbury. Lady Lisa Lee, Jamiel Alexis, the Gang Starr Crew, and everybody that's...

KE: And my baby Leanna, Leanna, my honey. I love you.

MD: Word.

JOHNSTONE: Okay, let's see what it sounds like.



Figure 2. MC Keithy E's tape (Courtesy of Lecco's Lemma collection, University of Massachusetts-Boston).

After a small pause and click, a bass-heavy beatbox-and-scratch track called 'Epitome Spree' begins, followed by several other demo songs. What is most striking about this tape is not what it contains, but what it omits: in the actual broadcast recording, there was a technical problem and the interview was followed instead by some awkward (but not uncommon) dead air as they waited for the tape to start. After a brief attempt to trouble-shoot, Johnstone apologized and moved on to the next selection. Elam never got to play his new demo that day. The tape from Johnstone's collection in which 'Epitome Spree' actually appears was subsequently sent to Johnstone by Elam (Figure 2). Because Lecco's Lemma had become such an important public document of the local rap scene, Elam sought to correct the 'error' in the historical record by splicing a recording of the interview (which must have been taped by a friend or family member) onto the start of his demo.

Tales of the tape 3: make a tape and get through the gate

Johnstone was not only a recipient of tapes from local artists, he actively solicited (and likely inspired) their creations. A spring 1986 interview with a group called the Boss MCs provides interesting details about the mechanics of sending in a tape and getting on the air. After asking the group to introduce themselves, and before interviewing them, Johnstone thanks the group for bringing a tape deck to the studio.

JOHNSTONE: First of all, I'd like to thank you guys for bringing down a tape deck this week. That's the first tape we have been able to play. Our tape deck is on the fritz. Where you guys from?

BMC: Cambridge.

JOHNSTONE: Cambridge. Excellent! We're sort of looking to get some more Cambridge groups on the show, and on the list, because most of the groups are from the Pan or the Berry

[nicknames for Boston neighborhoods Mattapan and Roxbury]. You know? Do you guys know of any other Cambridge groups?

BMC: Yeah, Houserockers.

JOHNSTONE: The Houserockers.

BMC: And the Grand Jury.

JOHNSTONE: Are they any good. BMC: Yeah, yeah they're good.

JOHNSTONE: What do they go to the same school you do or what?

BMC: Yeah.

JOHNSTONE: And what school is that?

BMC: Cambridge Rindge and Latin.

JOHNSTONE: Do they know about the show?

BMC: Yeah, yeah!

JOHNSTONE: Well you should tell them to send us in a tape.

BMC: Sure.

JOHNSTONE: Do you know whether they have made any tapes?

BMC: Nah.

JOHNSTONE: Well, again. I want to sort of clear this up. Because we have a whole lot of crews coming down. You have to send in a tape, or you can bring it down. Include your phone number on it and we will get back to you and invite you down to the show, because everything is done by schedule now.

This interview took place a few months after Johnstone started allowing artists into the studio. Clearing up his new policy due to 'a whole lot of crews coming down' suggests a glut of new submissions. This is consistent with interviews suggesting that the first year of the show often featured large groups of teens roaming the halls and packing into the studio hoping to get on the show (Figure 3).

Conclusion

Today's stories of DIY, digitally enabled, creative industry are inspiring, but are often decontextualized from longer histories of such amateur efforts. We have used the case of the Lecco's Lemma show to provide points of continuity and contrast with contemporary collaborative cultural production. Many of the defining features of DIY digital culture emerge in these tales of the tape. The show offered access to and validation from a community of peers who served as listeners, supporters, judges, critics, co-producers and competitors. Lower barriers to entry afforded by cassette recording technology and access to the airwaves enabled a rapid cycle between production, distribution and reception. Taped broadcasts of the shows serve as cherished documents, public record and raw material for future productions.

Lecco's Lemma also gives us a window into a moment when radio could still serve as a primary medium for social connection. Comparing radio to telephony, television and the Internet, legal scholar Tim Wu describes radio as 'the clearest example of a technology that has grown into a feebler, rather than a stronger, facilitator of public discourse'



Figure 3. Visitors to the Lecco's Lemma show gathered around host Magnus Johnstone, Spring 1986.

(2010, 39). While this may be true in the long view, community-oriented college radio stands as a shining exception, especially during the cassette era. Thanks to cassettes and local radio, and undergirded by a remarkable degree of local industry and drive, it was possible to reach across rarely traversed cultural and physical boundaries in Boston. The Lecco's Lemma tapes document an intimate yet public conversation among urban youth through the cultural force of rap music. In some ways, this resembles the public nature of our networked private lives today (Baym and Boyd 2012), though importantly these tapeand-radio networks remained anchored in specific neighborhoods. Artists, fans, friends and rivals from the local area engaged in ongoing conversations, on air and off, about the show itself as mouthpiece, gong show, clearinghouse and (in its early days) clubhouse.

Lecco's Lemma provided a forum for an emergent youth culture confined to the margins in a segregated, polarized 'rock city' still simmering over the forced busing of the 1970s and struggling to negotiate its actually existing diversity. 'Radio has worked most powerfully inside our heads', writes Susan Douglas, 'helping us create internal maps of the world and our place in it, urging us to construct imagined communities to which we do, or do not, belong (2004, 5). Lecco's Lemma facilitated the co-construction and realization of a particular imagined community in Greater Boston. The tapes not only stand testament to this phenomenon, they constitute a rich part of Boston's aural history that compels us to listen, rewind and listen again.

In a story filled with tape loops, the preservation of the Lecco's Lemma archive continues this generative feedback. While Johnstone was busy producing the show and collecting demo tapes, his friend Willie Alexander was home taping the program almost every week. Both Johnstone and Alexander independently recognized the importance of community curation, with each carefully preserving their collections unaware of the other's work. Bringing together these two sides of a local rap story, the Lecco's Lemma

archive demands our attention thirty years later and continues to stimulate cultural production, from an annotated, academic archive of the tapes to a community-consulted oral history being built around it.³ Not only do cassette archives like Lecco's Lemma's complement other oral histories of hip-hop (Cross 1993; Fricke and Ahearn 2002; Coleman 2007), the special qualities of tape richly inflect this enterprise, ensuring an audible heteroglossia. In the spirit of feedback loops, we hope this article will spur more research into the relationship between DIY media convergence and the growth of local scenes.

Disclosure statement

No potential conflict of interest was reported by the authors.

Notes

- 1. The Mixtape Museum is 'devoted to advancing public understanding and appreciation of the art, history, technique and impact mixtapes have made around the world'. http://mixtapemuseum.org/about/.
- 2. From 8 April 2006, comment on a now deleted MySpace page discussing the Lecco's Lemma show.
- 3. http://openarchives.umb.edu/cdm/landingpage/collection/p15774coll30.

References

Armstrong, Stretch. 2014. "Cassette Culture." Accessed 5 March 2015. https://medium.com/cuepoint/cassette-culture-with-stretch-armstrong-73e1a14652ea.

Baym, Nancy, and Boyd Danah. 2012. "Socially Mediated Publicness: An Introduction." *Journal of Broadcasting & Electronic Media* 56 (3): 320–329.

Benkler, Yochai. 2006. The Wealth of Networks: How Social Production Transforms Markets and Freedom. New Haven. CT: Yale University Press.

Bickelhaupt, Susan. 1993. "Boston Stations Accept the Rap." The Boston Globe, December 10.

Chang, Jeff. 2005. Can't Stop Won't Stop: A History of the Hip-Hop Generation. New York: St. Martin's Press.

Charnas, Dan. 2010. *The Big Payback: The History of the Business of Hip Hop*. New York: Penguin. Coleman, Brian. 2007. *Check the Technique: Liner Notes for Hip-Hop Junkies*. New York: Villard. Cross, Brian. 1993. *It's Not About a Salary: Rap, Race, and Resistance in Los Angeles*. New York: Verso

Douglas, Susan. 2004. *Listening In: Radio and the American Imagination*. Minneapolis, MN: University of Minnesota Press.

Foster, Pacey. 2009. "Hip-Hop in the Hub: How Boston Rap Remained Underground." In *Hip-Hop in America: A Regional Guide*, edited by Mickey Hess, 195–224. Westport, CT: Greenwood Press.

Fricke, Jim, and Charlie Ahearn. 2002. Yes Yes Y'all: Oral History of Hip-Hop's First Decade. Cambridge: Da Capo/Perseus.

Gould, Glenn. 2004. "The Prospects of Recording." In *Audio Culture*, edited by Christoph Cox and Daniel Warner, 115–126. London: Continuum.

Grow, Kyle. 2015. "Metallica Kick Off Reissue Project With 'No Life 'Til Leather' Cassette." *Rolling Stone*. Accessed 5 March 2015. http://www.rollingstone.com/music/news/metallica-kick-off-reissue-project-with-no-life-til-leather-cassette-20150303

Haire, Meaghan. 2009. "A Brief History of the Walkman." *Time*. Accessed 5 March 2015. http://content.time.com/time/nation/article/0,8599,1907884,00.html

Harper, Adam. 2014. "The Online Underground: A New Kind of Punk?." *Resident Advisor* 22. Accessed 5 March 2015. http://www.residentadvisor.net/feature.aspx?2137

Harrison, Anthony Kwame. 2006. "Cheaper than a CD, Plus We Really Mean it: Bay Area Underground Hip Hop Tapes as Subcultural Artefacts." *Popular Music* 25 (2): 283–301.

- Jenkins, Henry. 2009. "What Happened Before YouTube?" In *YouTube: Online Video and Participatory Culture*, edited by Jean Burgess and Joshua Green, 109–125. Malden, MA: Polity.
- Jones, Steve. 1992. "The Cassette Underground." In *Cassette Mythos*, edited by Robin James. Brooklyn, NY: Autonomedia.
- Lessig, Lawrence. 2008. Remix: Making Art and Commerce Thrive in the Hybrid Economy. New York: Penguin.
- Manuel, Peter. 1993. Cassette Culture: Popular Music and Technology in North India. Chicago, IL: University of Chicago Press.
- Marshall, Lee. 2003. "For and Against the Record Industry: An Introduction to Bootleg Collectors and Tape Traders." *Popular Music* 22 (1): 57–72.
- Oatman-Stanford, Hunter. 2013. "How Boomboxes Got So Badass." *Collector's Weekly* 16. Accessed 5 March 2015. http://www.collectorsweekly.com/articles/how-boomboxes-got-so-badass/
- Shirky, Clay. 2008. Here Comes Everybody: The Power of Organizing Without Organizations. New York: Penguin.
- Sterne, Jonathan. 2003. *The Audible Past: Cultural Origins of Sound Reproduction*. Durham, NC: Duke University Press.
- Sutton, R. Anderson. 1985. "Commercial Cassette Recordings of Traditional Music in Java." World of Music 27 (3): 23–43.
- Szok, Peter. 2010. "Renato Sets it Straight: An Interview on the Diffuse Roots of Reggaeton." Revisa Istmo 21. Accessed 5 March 2015. http://istmo.denison.edu/n21/articulos/10.html
- Wu, Tim. 2010. *The Master Switch: The Rise and Fall of Information Empires*. New York: Alfred A. Knopf.