

A NEW HIGH IN LOW:

ADVENTURES IN LOW-BITRATE AUDIO

THOMAS BEY WILLIAM BAILEY

In a recent lecture given at Coventry University, entitled "Zombie Media: Media Archaeology As Circuit Bending," media theorist Jussi Parikka provides us with a colorful new metaphor for outmoded and subsequently re-purposed technologies: like the titular horror / sci-fi characters of his essay, these devices have "come back from the dead" or been re-animated courtesy of simple contingency-driven ingenuity, and also thanks to an all-hands-on-deck fear of pending ecological catastrophe. The latter point cannot be overstated enough: Parikka reminds us that "in the United States alone, about 400,000,000 units of consumer electronics [are] discarded each year" and, more interestingly, E.P.A. research has revealed that "...two thirds of all discarded consumer electronics still work."¹ The number of capable re-animators is on the rise, and not just because of a need for melioration of looming disasters, but also because of the considerable fun factor involved in such activities. One specific example of "zombification" cited by Parikka – the "circuit-bent" electronic toys and educational aids that have provided DIY musicians with a new source of aleatory sound output – is still gaining increasing currency as knowledge of bending techniques becomes more widespread. When not reconfiguring would-be obsolete hardware into a mutant form that surpasses its factory preset limitations, some types of otherwise obsolete software are also salvaged to meet this same end: artists such as The User and the duo of Pablo Reche / Anla Courtis have both found that the old 5" floppy disc housing makes a handsome jacket for a compact disc of similar size.

Then there are the digital net-labels 4m@ and Floppyswop (the former is claimed by its founders as the "conservative aspect" of the Proc Records netlabel.) Both require that their artists follow one simple criterion: the pieces they release must be no larger than the 1.44-megabyte storage space of the 3.5" floppy disk (the latter label's home pages also host an archive of mercilessly bit-compressed, floppy-ready video projects, by the way.) Album artwork, to be submitted at a suggested resolution of 198 x 153 pixels, is also tailored to fit the floppy's on-disk label space. When faced with this kind of challenging limitation, the artist has only a couple of choices: maintain the "CD quality" standard of audio fidelity and release an audio work of disappointing brevity, or drastically downgrade the fidelity in order to buy oneself more minutes' worth of playback time. The fidelity downgrade is the choice of most participants in these projects, and an entire subculture of "lo-bit" artists now exists

with works available for free download (whether you have the ability to house their work on a floppy disk or not.)

The MP3 audio codec, conceived in 1987 at the Fraunhofer Institut Integrierte Schaltungen [Fraunhofer Institute For Integrated Circuits] and code-named "EUREKA Project EU147," has already had quite a storied existence: where it was once a radical and risky move for a record label to offer digital sales of their product in MP3 form, now journalist Evgeny Morozov reports that even the website of the Chinese Defense Ministry boasts an MP3 download section² (I haven't been able to personally corroborate this, although the same august body now has its own iPhone app, so this isn't much of a stretch.) As with other technologies that mature to this point of market saturation, it has become ripe for use in a number of meta-music projects that subject it to a series of "stress tests," questioning its fallibility and longevity in the process - "lo-bit" releasing seems to be one of the most extreme tests now taking place. The audio file boom, as initialized by MP3 and sustained by more luxurious formats (e.g. OGG Vorbis, uncompressed .aiff and .wav files) has gone on long enough now that its own subculture of self-critical artists, generally overlapping with self-releasing culture, has sprung up to test these formats' technical and aesthetic limitations. As exemplified by the 4m@ and Floppyswop projects, the "low-bitrate" MP3 album can be harnessed to Parikka's concept of "zombie media" while also contributing to the expansion of the so-called "freeconomy," of which much of the MP3-releasing culture is a subset.

So what kind of audio finds its way onto a lo-bit release? The answer may be surprising to those who expect all such products to be an undifferentiated and unremarkable mess of noise, with the already murky signals being drowned in a secondary wave of noise, i.e. the tinny artifacts that result from heavy file compression. The Swiss label 20kbps (which releases recordings in other bitrates, contrary to what the moniker suggests) has laid claim to being the first label with "lo-bit" as its modus operandi, and features disassembled dance music courtesy of artists like HertzCanary. The Russian net-label Microbit Records, formed in 2008, provides another one of the more well rounded catalogs, specializing in releases "devoted to low-bit music of all genres", with "releases [...] available as free download in MP3 and Ogg Vorbis format," and "...encoded in low bitrate (from 1 kbps to 64 kbps)."³ Some of the releases also up (?) the ante by being available in monaural sound. Despite the apparent limitations of this concept, the label's roster boasts nearly 70 artists at the time of

writing. As could be expected, much of this is post-industrial electronica, but there are surprises in store as well: the Microbit group Hobo (the only group listed without a presence on networking sites like MySpace or LastFM) play a punk-inflected Russian-language blues, and the enigmatic Evgenij Kharitonov offers up a distressed form of concrete poetry made more unsettling by the unique sonic artifacts unique to low bitrate recording. Neizvestnost, a competent and fluid trance-rock unit, also turns in a rewarding release capable of overcoming the challenges provided by the label's modus operandi, perhaps even benefiting from the unnatural thinness of that particular sound (the group also features on the *Extreme Music From Russia* omnibus on the intensely selective Susan Lawly label.)

These netlabels' countries of origin are not at all irrelevant to this discussion, and may indeed help to make a case for their being more than "cute" novelties or knowing statements about the transience of technology (e.g. today's cutting-edge hardware is tomorrow's punch line.) The name of one Bangkok-based netlabel, Top Of The Flops, broadcasts this comical self-effacement, upping the comedy factor by inviting artists to submit material "if you think you are good enough for Top Of The Flops."⁴ However, it is useful to not be overwhelmed by patent quirkiness and to find other approaches to this aesthetic: both Microbit and labels from former Soviet territories, like the Ukraine and Latvia, have added significant support to this project (see the 8 Ravens and Dex And The City labels, respectively), and with motives that stray outside the bounds of ironic humor. Elsewhere, the Russian e-zine / LiveJournal community "lobit.ru" - an offshoot of Microbit Records - remains one of the most reliable sources for aggregating the output of the various other lo-bit netlabels.

In light of all this, *Foreign Policy* magazine's recent comprehensive survey of Internet trends poses the question of what nation is currently the most fertile ground for future online innovations. The polling results award the U.S. a whopping 74% share in response to this question (survey results such as "everywhere" and "nowhere" are included as write-in responses in lieu of naming a particular geographic region), and includes some curious omissions as well- nowhere in South America or Australia is cited as having a single percentage point in this poll. Microbit's Russia is also absent from the winner's circle here, unless you count the dubious consolation prize of coming in 3rd place for the poll question "which country has the most powerful offensive cyberwarfare capacity?"⁵ So, is it possible

that some of the lo-bit releases from this region are the result of a technological asymmetry with other nations?

To be sure, the standards of speed and reliability for Internet connectivity are still hardly uniform throughout the globe: in Microbit's Russia, the percentage of computer users in the total population hovers around a maximum value of 50% (one source suggests 59,700,000 Russian Internet users out of a potential 140,000,000)⁶ which is also the lowest estimated percentage of users for much of Western Europe and Scandinavia. Naturally, these numbers take into account a sizable rural population, although urban Russia does not boast total connectivity either: among users in the cities, household Internet access is not a given, and the chosen environment for Web surfing may be an Internet café. Given the hourly prices charged at these cafes, and the fact that "in some cities [...] the highest speed people can count on is 256 kbps"⁷ the ability to download music fairly quickly makes a little more sense. Put another way, urban Russia "might have passed the digital divide, but still live[s] in the 'pre-broadband world with little or no access to YouTube and other traffic-sensitive online services."⁸ Given such factors, it is a little more difficult to dismiss low bitrate releasing as a purely contrarian exercise meant to alienate audiophiles and 'scene' jumpers. Doing so puts the critic at risk of seeming chauvinistically unaware of other nations' infrastructural problems, and also of state restrictions on media. Even if one has the broadband capability to enjoy, say, the Russian YouTube equivalent RuTube, there is still the matter of its ownership by state-controlled energy titan Gazprom, and the possibility that not just any content will pass through its ideological filter.

Digital dystopians like Andrew Keen and Cass Sunstein have made a name for themselves by bemoaning the "monkeys" running the asylum of Web 2.0 and the so-called "Daily Me" method of online group polarization (i.e. ideological reinforcement coming about by customizing information feeds to match only one's particular interests.) The novelty aspect of the lo-bit releasing method has been an irresistible low-hanging fruit for a battalion of pranksters and "griefers," and has emboldened many who are inclined towards mocking the sanctity of music making, or just societal mores in general. So, while Sunstein and Keen are likely unaware of the activities of these ironic anti-artists, both pundits would heartily claim them as further proof of the Internet's infantilizing tendencies (and in this instance I have to actually agree with my sparring partners.) A sort of trans-national clique of juvenile suburbantites has taken up residence in the lo-bit scene since its inception, merrily

grinding out releases whose staggering number is disproportionate to their negligible cultural influence. These releases are larded with all-too-predictable approximations of "ghetto" attitude, failed attempts at generating "lulz" with pop culture detritus, and the geeky concupiscence of 12 year olds who have just discovered hardcore porn and *need* to share this triumphal discovery with anyone and everyone.

Being that many of the culprits often work in the "chiptune" style (i.e. the remixing of classic videogame soundtracks, or the attempt at emulating the timbral qualities of the same) we're also never too far from a fresh round of jokes on that most stale of punchlines; the awkward English grammar deployed in translations of Japanese console games. All in all, it seems like the more puerile members of the lo-bit community are obsessed with demonstrating that ethics and aesthetics (or the lack thereof) have to proceed in lockstep: *ergo* poor sonic quality must be caught up in an ever-intensifying, reciprocal dialogue with junk subject matter. While I realize it's not good journalistic form, I refuse to mention any of these individuals by name or to link to them - discerning readers will know what I'm talking about when encountering these acts on the netlabels' rosters, otherwise I am content to leave them comfortably alone in the confines of their echo chamber.

The low-bitrate MP3's multiple uses, if nothing else, do set it apart from many other cultural products that have appeared in the post-digital flood of tools for "authenticity enhancement": so far we've seen that it is both (for better or worse) the carrier of an aesthetic, and a practical means of delivering new creative expressions to areas where the available computer hardware has less than optimum processor performance, online connectivity, and storage capabilities. More interestingly, though, is that no clever scripting, hacking, bending, or esoteric software was required to kickstart this audio micro-revolution: the ability to encode an MP3 at sub-'CD quality' bitrates is a feature built into the iTunes application (customizing import settings allows one to lower the fidelity to 16kbps), while the open-source audio editor Audacity allows for audio projects to be exported as 8kbps MP3 files. Though the floppy disk-related campaigns of 4m@ and Floppyswop steer them into the realm of "zombie media," the majority of lo-bit releases are merely experiments with media features that, though not "dead," exist at least in a suspended animation of un-use.

The lo-fi recording aesthetic was once one where "*take me as I am*" authenticity was concomitant with jarring intimacy: the poster children for such an aesthetic were singer-songwriters like Low Barlow, whose heartbroken confessional style practically necessitated

"one-take" recording done at home, with no discernible editing, and with the technical flaws (e.g. vocals being placed far too 'high' in the mix) also being its signature elements. What the releases from Microbit and 4m@ point to, though, is nothing less than a kind of "neo lo-fi" for the digital age, a recognition of the fact that much of the vaunted "analog" lifestyle is well out of the price range of the average citizen: vintage analog keyboards, tube amplifiers and other workhorses of pre-digital studio recording cost in the thousands of dollars, while the bill for their upkeep and repair can itself become a burdensome expense. Given such expenses, it is something of a conceit when a completely analog-driven "indie" recording act uses this equipment as a proof of its frugality and rootsy authenticity (rather than because it sounds better, which itself is only true some of the time.) So, digital outfits like Microbit are representative of a new tactical shift in the "authenticity wars," whose objective has been to show how positive public recognition can be attained irrespective of technical mastery.

Their radically bit-reduced sound arrives at the ears like a lost transmission from some parallel reality, something that would normally be quite alienating and disorienting. However, this sense of distancing paradoxically works to provide the listener with a more authentic experience: the limited frequency range and watery audio quality of low bitrate MP3s may wholeheartedly trade out sonic presence for distance, but doesn't this really provide the most honest portrait of the releasing artists? They largely inhabit a cultural milieu where physical distance from kindred spirits is the rule rather than the exception, and where the expressive vocabulary has evolved as a result of taking technology beyond its intended uses (most digital audio software recommends that the low bitrates be used only for transmission of "human speech.")

As long as authenticity remains a mandatory selling point for culture consumers, it has to be noted that "lo-bit" is now closer to manifesting that elusive quality than what earlier qualified as "lo-fi" music. A bored Ann Arbor teen who has spent the majority of his free time consuming 4chan postings and console video games will naturally gravitate towards deliberately downgraded chiptune tracks, while a struggling blues band in an ex-Soviet company town may embrace software features reflecting their less-than-symmetrical relationship to the technological advancement of the affluent West. Like other 21st century aesthetic imperfections - e.g. the shaky camera movements in the nascent "mumblecore" film genre - the technique's communicative substance varies from one user to the next, being used out of necessity as much as it is used as an optional, voluntary attempt to mark stylistic

boundaries. The common goal here is still recognition for one's work, and the desire for this remains one of the most indisputably "authentic" (even biologically driven) human traits. Some would consider lo-bit recording a desperate way to go about it, but it's hardly an illegitimate addition to a modern aesthetic lexicon already brimful of glitches, oversaturation, and "zombification" techniques.



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¹ Jussi Parikka quoted at "Zombie Media: Media Archaeology As Circuit Bending" lecture, Coventry University, February 14 2011. Available online at <http://deimos3.apple.com/WebObjects/Core.woa/Feed/coventry.ac.uk-dz.5486060354.05486060356>

² See Evgeny Morozov, *The Net Delusion: The Dark Side Of Internet Freedom*, p. 138. Public Affairs Books, New York, 2011.

³ <http://www.discogs.com/label/Microbit+Records>. Retrieved March 22, 2011.

⁴ <http://topoftheflopsrecords.blogspot.com>. Retrieved August 24, 2011.

⁵ "The FP Survey: The Internet," author uncredited. *Foreign Policy* Sept.-Oct. 2011, p. 91.

⁶ <http://www.internetworldstats.com/euro/ru.htm>. Retrieved March 24, 2011.

⁷ <http://globalvoicesonline.org/2010/03/14/russia-mapping-broadband-internet-prices>. Retrieved March 24, 2011.

⁸ *Ibid.*