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Dancing to the Loop: Repetition in Contemporary Music. An Interview with Tilman Baumgärtel by Geert Lovink

Since the late 1980s, the German media critic Tilman Baumgärtel has developed an interest in sound loops, recently deciding to write the analogue part of its history. In his 2015 monograph *Scheifen* (Loops) Tilman describes early tape recorder experiments and their evolution over the past decades into a basic cultural technique. Arguably, *Schleifen* is the first book on the history of electronic music that is solely dedicated to loops. Besides detailed stories on how individual artists and producers technically defined the language of loops over a period of thirty years, *Schleifen* also touches on the philosophical and strategic question of why repetition has become so prominent in today's culture. Due to my own involvement in radio and my passion for German media theory, I asked Tilman to do an email interview.

As a German journalist and (new) media critic, Baumgärtel is known for his work on net.art and his film writings, such as his PhD on Harun Farocki and publications on South-East Asian cinema. Baumgärtel's latest anthology, *A Reader on International Media Piracy: Pirate Essays* (2015), was put together on media piracy with comparative case studies. After having lived in South-East Asia for a long time, he and his family returned to Germany where he became a media theory professor at the Polytech in Mainz.

Despite several philosophical remarks and numerous references to Adorno, who's known for his devastating critique of numbing repetition, *Schleifen* is not German hermetic theory. Tilman is a gifted writer and journalist who chose to tell stories. The book starts off with the experiments in the 1940s of the French *musique concrète* composer Pierre Schaeffer. Tape recorders were not just capturing musical performances, they were used to alter and enrich music as such and create tape-based compositions. For this he developed special hardware, the phonogène, a forerunner of digital sampling software. We then move on to Karlheinz Stockhausen, who studied with Schaeffer in Paris and created tape experiences in 1953 in the West-German WDR radio studio in Cologne. However, all his life Stockhausen would remain skeptical about the artistic potential of an endless repetition of the same.

In that same year, Sam Phillips reached a historical breakthrough with his Sun Studio recordings of the young Elvis Presley. The delays, echo effects

caused by tweaked recording and display heads, produced a revolutionary sound in which the “original” was treated as raw material that could be manipulated, delayed and distorted. No longer was the aim of recording to catch a clean and pure version of the “real” sound.

It is only during the 1960s that an explicit Will to Repetition was being celebrated in the works of Steve Reich. A relative unknown early chapter has been dug up by Tilman about the Frankfurt am Main artist Peter Roehr, who died young at the age of 23 in 1968. Roehr produced film tape-loops and other “serial formations” that became so familiar a few years later in conceptual arts. We then encounter the rise of minimal music of La Monte Young and the classics of Terry Riley and Steve Reich, who all get special attention in the book. Wikipedia describes minimal music as a style “marked by a non-narrative, non-teleological, and non-representational conception of a work in progress, representing a new approach to the activity of listening to music by focusing on the internal processes of the music, which lack goals or motion toward those goals.” Tilman takes us from artist to artist, through Andy Warhol’s films, into Ken Kesey’s magic bus, to the well-known experiments of The Beatles, ending with a dedicated chapter on Donna Summer’s 1977 disco hit “I Feel Love”, assembled by the Munich producer Giorgio Moroder.

It’s not hard to see how repeating patterns can invite one to go on a spiritual journey and is utilized as a technique to open up one’s “doors of perception”. Whereas modernists are supposed to be critical of repetitive motives, it is seen as a post-modern feature to quote and repeat. As Tilman writes, minimal music and techno refuse to follow “the unfolding of the motif” and other narrative forms of development in composition. Instead of a linear timeline there are cyclical forms, which have been looked at with suspicion in the West. Moving away from the arrow, the goal-oriented approach of progression, we experience a periodical return of elements that slowly mutate and assist us to transform into otherness.

I encountered the magic of the loop in the second part of the ‘80s when I participated in the Amsterdam pirate radio scene (Radio Patapoe and Radio 100) with groups such as Rabotnik and DFM and theorized their William Burroughs-style cut-ups and loop techniques (Lovink n.d.). At the time, loops were already so self-evident that they needed no special attention and melted into a general theory of (re-)mixing, in which loops were seen like one of many ingredients. My radio chapter was followed by the collaboration

with the graphic aesthetics of [Mieke Gerritzen](#), who's still using the Warhol copy-paste style, showing how bold and seductive the repetitive elements in visual culture can be, for instance in her 2004 video *Beautiful World*.

Needless to say that Gilles Deleuze's "repetition as difference without a concept" has had a profound influence on the generations, even though in this case theory did not anticipate events but more reflected—and embodied—the contemporary culture of its time. For DJ and techno producer Richie Hawtin, loops assist in finding an internal balance, as a response to information overload and all the crazy events.

Repetition can also make the viewer or listener aware of issues and bring aspects of the daily technological existence to the surface. In that sense, loops can function as an awareness machine and should not just be condemned as a symbol of silly numbness (these days projected onto hardcore rave parties). However, as Steve Reich warns us, loops as such are meaningless. "They are not cool, they are simply silly, complete uninteresting. If you just let them run, one is either mad or stoned. It really depends what you do with it".

GL: The motivation to write this book was your astonishment about the mass popularity of techno and similar loop-based music. Could you say more about what exactly keeps on surprising you?

TB: I learned to play the guitar, when I was a kid. And of course, we had music lessons in school. But apart from canons like "Frère Jacques", this repetitive type of music was not part of the musical education I received. This type of music does have a rich tradition, of course, if you think about African and Latin-American percussion music, or Southeast Asian Gamelan, or Indian Ragas. But it's not really part of the Western canon, or at least it wasn't part of it, when I got my musical education.

Western music might contain repetitive elements like the rhythm, but it typically has a teleological harmonic structure, that leads to an end, the harmonic resolution. Loop-based music, on the other hand just goes on and on and on, and it is easy to mistake that for a lack of structure, if you are not clued in to the workings of this kind of music. The listener does not have to follow a harmonic progression, but is confronted with these cyclic, repetitive patterns. (By the way, it was the book *American Minimal Music* by the Flemish Belgian composer and musicologist Wim Mertens, that first made me understand these musical structures as a serious alternative to Western

music.)

When I first encountered techno and house, I was quite stunned, because this type of music was so different from the music I had grown up with. In fact, at first I hated it. I thought it was some kind of marching music. When you grew up in an intellectual milieu in Post-War Germany, strongly rhythmical music was always tainted by the Nazi past. It wasn't just me. Stockhausen's music has no simple meters for the same reason: He heard military music as a child during the Third Reich, so he later vowed to never make use of this method to organize his music. Unfortunately that kept him from appreciating the popular music that he partly inspired, like krautrock or techno. Whenever he was asked about this type of music, he cruelly slammed it as music for drug heads, precisely because of its repetitive nature.

GL: In the book you map a debate, that always pops up but never quite became a debate, on pros and cons of repetition in music and visual arts. You are quoting Steve Reich saying that they are a silly effect. He says loops in themselves are not cool, they are simply stupid and completely uninteresting. It maybe be nice when you're stoned but its not art. It all depends what you do with it. We're still in debate with Adorno, nearly fifty years after his death. Ever since Minimal Music there are producers who resist the development of motives and narrative development, delving into the depths of rhythmic sounds that refuse to come up with a memorable melody line. The rational Western subject, you write, is afraid of repetition and circular time. It is not done to repeat one's self.

TB: Steve Reich talks about the loops that other people are doing. *These* are stupid. *His* loops are genius, because he is a conservatory-trained composer, and he eventually turned tape loops into orchestral works. □ But seriously—what I learned to appreciate about loop-based music was how it can create complexity out of something deceptively simple. Steve Reich's early tape compositions—like "It's Gonna Rain" or "Come Out"—are perfect examples of that: very short loops that slowly run out of sync, that will mess with your mind. In the book I have this great quote from techno-DJ Ricardo Villalobos. He says that techno "is ideal for a totally strung-out state of mind in which you do not know anymore who you are or who your father is". I think it can be very healthy to pulverize your ideas about who you are occasionally, about how identity comes about from time to time. Freud's Thanatos, the law of the father, the Ego—techno can turn all these concepts

into a source of joy.

GL: In the Sixties, minimal music that used a lot of loops was criticized as outlaw culture, crypto-fascist and empty, lacking any passion, as soundtracks of the machine age that merely reflects the boring perfection of consumer society. We're no longer provoked in such a way. For us, the subversive elements of rave culture are always, potentially, there. Are techno and dance, in essence, anti-authoritarian, or is this an outdated approach all together? Many of my friends are still searching for even the most miniscule signs of dissent at festivals. Why is this so important?

TB: I don't think any style of popular music is inherently anti-authoritarian or liberating. Today, I cannot imagine a more narrow-minded and reductive music as punk rock. Yet this was considered to be the most revolutionary type of music by many in the late 1970s—and at that time for good reasons. On the other hand, not everybody in the Sixties thought that loops were "crypto-fascist": the music that Terry Riley developed out of tape loops was popular among hippies and "heads".

A certain kind of music and more particularly certain songs—like "Street Fighting Men" by the Rolling Stones, "Keine Macht für Niemand" by Ton Steine Scherben, or even that old chestnut "I Will Survive" by Gloria Gaynor—might provide the soundtrack for individual self-liberation because of their message, or even for concrete action like occupying an abandoned apartment building or finally kicking out that useless boyfriend of yours. Music with no explicit message like techno might have served similar purposes for the Reclaim the Streets initiative, or even the Love Parade, the Fuck Parade etc.

But I think what these unstructured, anti-narrative and "aimless" types of music can do when played in clubs, at parties or festivals, is to create these void spaces that leave room for the self-expression of the audience. That goes for psychedelic rock as well as for techno and other styles that came after. If the point of the music you enjoy is to yell "We will rock you", it forces you to decide who you are and who these other people are that you want to rock/dominate. If the music is just a repetitive, never-ending pattern of electronic farts, on the other hand, it leaves you with this wide-open space that you can use to understand yourself or to express yourself.

Not so long ago, as a male person in Germany you could not wear a skirt on the streets. But you could do that in a techno club. Now you can do it on the

street (even though you might still run into trouble in certain places...) But generally, techno clubs were laboratories of the self, where you could try out new identities, and it helped that the music did not impose a narrative or an identity on you.

GL: Coming from Amsterdam I can't really see that marijuana, cocaine and ecstasy produce an avalanche of interesting art works, or even a creative environment, for that matter. They open doors of perception that provide a different view but lead nowhere. You write about the link between Warhol and his Factory, and the use of amphetamine, in a period when he was very productive and produced famous art work. What's your position of repetition and drugs? For instance, you do not mention the spiritual direction in which the movement also took off, for instance with Goa Trance.

TB: I am not against drugs. I think without Ecstasy techno would not have taken off the way it did. Again, this type of repetitive music was very alien to Western sensibility at that time, and many "got it" after somebody put a pill on their tongue and dragged them into a club, a fact immortalized in many early rave tracks like "Everything Starts With An 'E'" by E-Zee Possee & MC Kinky or "Ebenezer Goode" by The Shamen.

The early Ecstasy apostle psycho-pharmacologist Alexander Shulgin advocated the use of the drug in the 1970s in a Timothy-Leary-type "set and setting" situation with soft music and in a comfortable environment for psychological sessions. But as soon as the drug made its way on the black market, you have these blissed-out dance parties, for instance in Texas around 1980, where an outfit called the Texas Groups started to sell it in large quantities. This is described in great detail in Matthew Collins' *Altered State*. From there, it made its way to the East Coast, New York and eventually to Europe, and was accompanied by a new kind of club culture and dance music.

You can actually hear that for instance on *Non Stop Ecstatic Dancing*, a remix album by Soft Cell that was produced after the band encountered Ecstasy in New York. The new versions of their songs, especially "Memorabilia", have this fluid, pulsating and techno-like quality that is notably different from their earlier, robotic electronic music, and there is even a rap by a "Cindy Ecstasy". At that time, Ecstasy was hard to get in Europe and very expensive, so it did not lead to a new kind of club culture yet. But when it became easier available around 1990, it did its part to launch rave and techno.

However, I do not advocate drugs. I know that many people from Amsterdam have an extremely negative view of drugs, probably because they have seen the damage they can do. Ecstasy seems to be a drug that can be used recreationally, since it does not create addiction, and simply stops working if you used it too often. But I do not want to diminish the danger of drugs, especially meth, which is also popular in the techno scene.

These drugs help to open your mind to the simple patterns and these minuscule deviations from these patterns that lead to complexity. But many people got into that without any chemical help. Deleuze in his book on repetition and difference quotes David Hume over and over again: "Repetition does not change the subject of repetition, but the mind of the observer". And that's what I like to think was the greatest accomplishment of techno. It might take drugs to open you up to this experience, but it is not a prerequisite and in the long run it might lead to a lowering of standards. Goa is horrible and seems to be an example for just that...

As for Andy Warhol and his diet pills: There is a very long chapter on him in the book, which in my opinion is the best, but also the most challenging chapter in the book. I cannot summarize it here, but the detachment and the "coldness" that is characteristic of his art, his films and his persona certainly had to do with his use of amphetamine. So I do not agree that drugs lead nowhere. Artists have always used drugs to come with new ways of expression. I guess the important thing is to know when you do not need them anymore. In any case, alcohol is the worst drug of all of them.

Interestingly, despite the easy availability of drugs in the techno scene and the generally very taxing lifestyle of DJs and producers, you have almost no techno-versions of Jim Morrison, Keith Moon, Janis Joplin or Syd Barrett, who ruined themselves with drugs in the Sixties. There might be the occasional Ron Hardy or Mark Spoon, but DJs like Robert Hood, Jeff Mills, Westbam, DJ Hell or Sven Väth have been at it for over three decades. They are all well into their 50ies, and they are still going strong, produce music, run companies and tour internationally. Alexander Shulgin died aged 88.

GL: The last, brilliant case study in the book deals with Donna Summer's disco hit from 1977, "I Feel Love", produced by Giorgio Moroder, with its orgasmic loops, which echoed through our squats in Amsterdam in the late seventies. Why did you stop there? Would this require a Part II of your studies? What defines electronic dance music these days? Is it still the loop?

TB: Wait a minute—"I Feel Love" was a hit in the squats of Amsterdam? That would have been such a triumph over "Es geht voran" by Fehlfarben, which was the German squatter's favorite! Anyway, there will never be a second part of this book. It is about how loops became an accepted part of the aesthetics of Western music and of contemporary art. Around 1980, all the elements are in place, and if you would want to trace the further development of loops after that date, you would have to write an encyclopedia, that might contain the names of countless new artists, but not a lot of additional insight into the subject.

I think the strengths of the book are these select "case studies" of individual works and oeuvres that range from the late '40s to the late '70s. Deep readings of these pieces were more important for me than trying for completeness. There are a lot of excellent studies of electronic dance music from the '80s onward, many of which came out in the last couple of years, and I felt I could not add anything new to this body of research. If I should ever have the time to research and write another work of that scope, I think it would be about feedback, which is a similar topic as loops in terms of socio-cultural relevance.

Repetition of course is still the most important element of contemporary techno, but I should leave it to younger people to come up with more nuanced opinions on the contemporary situation of techno...

GL: In a short concluding chapter you note that techno's aim today is "to stay in the rhythm". You emphasize the collective experience of the dance floor. The perspective is not the one from the composer or the attentive but passive recipient. Maybe this was Adorno's failure after all: the lack of embodiment that made this type of critique insusceptible to the "small differences" that Deleuze recognizes in the seemingly monotonous repetition of the beat. You also mention that techno is used to find an "inner balance".

TB: My intellectual upbringing was shaped by the concept of the "media apriori" that Friedrich Kittler drummed into our heads in Germany in the '80s and '90s: the idea that media basically have a hard-wired logic of their own, and that culture was a result of these technological apparatus and givens (I did not read a lot of Adorno during my time at the university, because I was turned off by his arrogance vis-à-vis Jazz and mass culture in general. Walter Benjamin was what I read from the Frankfurter Schule; I only really started to appreciate Adorno much later).

For techno, the idea of the “media apriori” seemed to make perfect sense at first: Repetition was native (or, as Kittler might have said, “built into”) the analog and digital instruments that were used to produce this type of music. In techno, the medium—the sequencer, the sampler—seemed to become the message. And the first rave parties I went to seemed like this total “rise of the machines”, where the repetitive logic of the machine, the assembly line, took control of a defenseless audience. But at the same time it created a social context and a culture in its own right—with its own language, fashion, graphic and interior design. Journalism, later even literature, and Kittler’s teachings did not help much in understanding these processes.

In a way, the book is my attempt to find a balance between the media materialism of Kittler and the analysis of the cultural and social results that media technology can trigger. Here the Birmingham school and those who applied that type of thinking to understand the agency of the audience (like John Fiske and Henry Jenkins) were very important, even though I hardly refer to them in the book. Media technology is important, yes, and was often unfairly ignored by the sociological writing that dominated German media theory in the ’70s. But the machines aren’t everything, it’s what people end up doing with them. This kind of research interest also got me to work on net.art. With the net, you also had a technology with seemingly self-evident “rules”, and then the use, abuse or contradiction of these rules by artists and hackers.

As far as the embodiment is concerned: both humans and machines are repeating creatures. The difference is that humans repeat with slight variations (in the heartbeat, breathing etc), whereas machines repeat with machinic precision. Works like the early minimalist tape loop compositions by Reich or Riley or even “I Feel Love” show that you can get machines to produce this kind of organic, not completely regular, slightly off repetition too. I like the term “Electronic Body Music” from the ’80s much better than “techno”, because it is a more fitting description of the merging of the machinic and the organic that this type of music is ideally capable of.

John Miller Chernoff, in his seminal study *African Rhythm and African Sensibility*, explains how minuscule variations in West-African percussion music produce the aesthetic phenomena of the “funk” or “groove”. Mark Butler, in *Unlocking the Groove*, adds to that research to show how techno uses beat boxes, samplers and sequencers to create the same type of slight irregularities, that make something, that at first seems totally rigid and in-

sync, quite flexible and “funky”. He has tons of examples of how producers manage to have their technology run slightly out of sync and produce metric dissonances, despite being MIDI-connected machines, that should function in perfect unison, for example Carl Craig’s “Televised Green Smoke” or James Ruskin’s “Connected” (He could have referred to a lot of krautrock, especially Tangerine Dream, who became experts in having sequencers run slightly out of sync in the 1970s). So that shows that “I Feel Love” is not a singular example of how two types of machinic repetitions are used to create precisely a non-machinic type of repetition that is so complex that it probably could not be notated and that even confused Donna Summer herself.

So machines can come up with their own type of “différence”. You just have to use them differently. Making machines repeat in a slightly irregular way as part of an art work invokes another type of technology, one that does not exist, but should exist, one that does not have these oppressive features such as robot-like precision—“soft machines”, if you will.

GL: A cultural technique that is not so often used these days is the delay. We know the echo effect. The Merry Pranksters built a Delay Machine inside their bus using tape recorders that produced real delays of several seconds or more. The philosophical dimensions of delay are different from mere repetition: it points at the possibility of slowing down, it invites us to reflect on what we just expressed.

TB: In the end, it is all about perception, isn’t it? But you are right: the tape echoes that Kesey or Terry Riley produced with the help of loops are aesthetically very different from the metric patterns, that Steve Reich and—again, in other works—Riley used tape loops for. That is what I wanted to demonstrate: how working with loops can lead to very different aesthetic results. They can produce new types of sound, as in the early work of Pierre Schaeffer, Stockhausen, even Elvis, which is what the first part of the book is about. Only the second part is about metric, pattern-based types of music. I wanted to show how flexible loops are as an artistic tool. But as far as echoes in pop music are concerned, there is no way of beating “Echo and Reverb” by Peter Doyle, so I did not even try.

GL: In the acknowledgments you come up with an impressive list of all the clubs and festivals you frequented over the years. How does the history of the loop play out into these party environments?

TB: My understanding of loops was shaped by going to clubs regularly. Or rather: I only discovered that subject, because I found myself on the dance floor and all these ideas came to my mind that were the starting point of the book. I think it is important to expose yourself to what you study, but of course I did not go clubbing just “for science’s sake”. It was great fun, too. Again, it is “Electronic Body Music” and to do anything to your body that music has to be loud, the bass has to be kicking and you have to be ready to give yourself up to it.

I don’t think that techno has changed fundamentally since the advent of this style, even though the fact that most electronic music is produced with computers these days has led to more nuanced music. And of course, there are all these sub-styles that developed out of the basic parameter. But only a couple of weeks ago I went to the Berlin techno club Tresor when it had its 25<sup>th</sup> anniversary, and it felt like nothing had changed in a quarter of a century. In a way, loops have created this “time-less time” in club life. They have produced a very stable aesthetic, with only minute changes to the basic modus operandi, even though the club fashion might have changed.

My kids find rock old-fashioned, probably because of the suffering singers, the narcissistic guitar-violators, the general pathos and the self-serving aura of authenticity. But they are still shocked by techno, which has seeped only via EDM-type of breaks and sound effects into the pop music they listen to. So, in a way, techno is still the music of the future.

It might seem vain to mention all the parties and clubs I have been to. (I actually just noticed that I completely forgot the ones in Amsterdam and Rotterdam that I visited in the 1990s. □ I mentioned it to show where proto-raves took place in the 1980s, before techno became this stable aesthetic—the Italians were always ahead at that time and if you listen to the mixes by Cosmic-DJs from that period, you will find most of what contemporary DJs do rather simplistic and lacking! And I wanted to pay tribute to all the people who made these places possible, and that includes the barkeepers, the bouncers, the cloak lady—I love these people, and I wanted to express my gratitude to them.

Club life is such an ephemeral thing, that has rarely been described well. I did not spend a lot of time in my book trying it myself, but I wanted to acknowledge the fact that electronic dance music would be unthinkable without that context.

GL: Readers can easily notice that most of the research for this book was done around 2004. Was the work on this book suddenly disrupted because of your move to South-East Asia? Did you start to look at the material in a different way because of this break of about a decade?

TB: I finished the book around 2006 and then I didn't do anything with it for a couple of years, because I was living in Asia. I felt that if the book was published I should be back in Germany to be able to promote it. And I was worried all the time that somebody else would come up with the idea for such a book, because I thought it was such an obvious topic. But fortunately, that did not happen. □ I thoroughly revised the book before publication and took the latest literature into account. And I think that the book is absolutely up-to-date and will age rather gracefully.

GL: Imagine if Alternative für Deutschland, and Farage, Wilders and LePen would all instrumentalize electronic dance music and techno into their populist right-wing movement and would get 30-40% of the votes. Would that change your position? I know this is not the case... perhaps with the exception of some "identitarian" neo-Nazi groups in Germany that have incorporated the rave aesthetics and lifestyle into their approach. Michel Foucault countered such rhetoric with the "non-fascist" notion and proposed certain lifestyles and strategies that were neither anti-fascist nor fascist. Can we say that the current techno is non-fascist music?

TB: The current populist movements in Europe and the US that you mention thrive on being AGAINST something. Against immigration, against Muslims, against immigrants from Mexico, against the Burka, against Merkel, against Hillary etc. The loop-based music I write about seems to thrive on blurring the dialectic oppositions between "them" and "us" and ideally make them obsolete. Dance music is about celebrating the brother- and sisterhood on the dance floor, not about creating conflict between different races, identities etc. As Heaven 17 said: "We don't need this fascist groove thing". It might be naive to assume that loop-music could never be hi-jacked by populists or Nazis. But as far as I can see, it has not happened yet, and there must be reason for that.

GL: Without becoming nostalgic, do you believe in a comeback of the tape recorder? The cassette tape lasted quite long, well into the 2000s, but then also disappeared. Storing data on tape still happens. Would that be a starting point? What attracted you in the first place, the material aspect of the tape in general or the magnetic technology? To create a loop on a

computer is now damned easy. But how about reserving the sound direction, for example?

TB: Working with tape is very time-consuming and quite difficult. Most people who did it have very little nostalgia for this method. I show in my book how the sequencer was developed partly by people who were tired of splicing tape. Working with synthesizers or with digital instruments makes it much easier to work with metric, loop-type of repetition. Some might say: too easy. There is something to the claim that loops make it incredibly simple for anyone to produce music. It is very instructive to play around with a small Kaos Pad or a Korg Volca Synthesizer. They are really cheap, but after just a little bit of fumbling around with these gadgets you will get something that does not sound so different from “real” club music. And that is to a large extent due to the fact that they have these sequencers that just keep on repeating. That has led to the emergence of bedroom producers with no formal musical training who can cobble techno tracks or hip-hop beats together in no time. And that in turn has led to a flood of releases that nobody can keep track of anymore. There is nothing wrong with that. In fact, there is something very democratic and empowering about it. This type of music has a different *raison d’être* than a Schönberg symphony or a chanson by Jacques Brel. A lot of these tracks are just “tools” for the dance floor. And of course, some of the most brilliant electronic music—from Pierre Schaeffer to Phuture—has been produced by people who were not professional musicians and used very simple means. But as writers such as Jaron Lanier or Andrew Keen have reminded us in connection with the internet, this kind of technologically supported creativity can also lead to the leveling of culture with very stereotypical and conformist results. I don’t want to say that they are right as far as electronic music is concerned, but I can see where they are coming from. I am not sure if a “return to tape” would be a way out of this, though.

Tilman Baumgärtel, *Schleifen, Zur Geschichte und ästhetik des Loops*, Kulturverlag Kadmos, Berlin, 2015: <<http://www.loopsbuch.org>>.

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computer games, the documentary film director Harun Farocki and edited *A Reader on International Media Piracy: Pirate Essays*, Amsterdam University Press, 2015.

Also relevant in this context: Geert Lovink, “The Theory of Mixing: An Inventory of Amsterdam Free Radio Techniques” (1991), <<http://www.mediamatic.net/5750/en/the-theory-of-mixing>>.