

# Turntable Music

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## **Introduction**

Sometimes sounds pass by without us hardly noticing. A band may use a vintage synthesizer with this most extraordinary sound that we do not even know how to describe – so we refrain from it. We accept it is there, but we seldom mention it. Some of these sounds are more impressive than others, in that they stir our listening more deeply (still we cannot decipher the source clearly). A certain sound that has re-emerged lately, and spread across all potential top-of-the-pops recordings, is the voice vocoder, remade popular by Cher in 1999 with the hit single "Believe". Another sound is the mouth organ: Once intended as an educational tool, the *melodica* is now in use from new progressive rock to trip-hoppy jazz. But still, one sound, or a set of sounds, by far overshadows most instrumental innovations since the synthesizer. In its most distinguished state, this new sound often is referred to as *scratching*. Scratching is just one of many colorings the manipulation of vinyl on a gramophone player provide.

This essay will try to point out different sounds we should look for when music is made by re-using vinyl on a turntable. I further hope I can give an overview on the conditions the turntable-made music meet in

different kinds of music, and where we may expect to find the instrument. To begin the introduction, I recapitulate the short history of the phonograph and the early attempts of using it as means for composing and playing music. The essay is an abstract of my major studies at the Musical Institute at the University of Technology and Science in Trondheim (NTNU) in the fall of 1999, written in Norwegian. Entitled "Turntablisme – His Master's voice: The art of the record player", it tried to delve into the many aspects of this new instrument. One chapter, concerning royalties, sampling and legal issues, and two chapters concerning notation and specific techniques are for the most part omitted here. As the far larger essay stresses, this research is dealing with a musical development deeply concerned with its own evolution, and it is not necessarily exact nor rightly predicted, but it is a movement too significant to bypass. The movement is now widely accepted as *turntablism* – playing (with) the turntable, and the actors in the movement may rightly address themselves as *turntablist*.

[These are terms coined by the American DJ Babu, but there are other interpretations than his. Some think that a *turntablist* is a hip-hop DJ, some think a *turntablist* must scratch, while others have a more

*open definition of the concept. More can be read on the Internet turntablism-devoted sites listed at the end of this essay.]*

Where do the story begin? Normally this is rather easy to historically pinpoint; Cristofori invented the piano, Schoenberg the twelve-tone-technique and Cab Calloway the rap. Of course we must object and rise questions to such statements (in fact, those three names may be replaced by respectively Schroeter, Charles Ives and Sugarhill Gang), but they more or less mark a beginning. This is not the case with using the turntable as a musical instrument. The record player has passed its hundredth birthday. In 1894, Emile Berliner formed the story of recorded music as flat, 7-inch plates. The gramophone was twenty-five years old when musicians first tried it out for its instrumental qualities, and it was in its forties an important part of the *musique concrète*. Then it was used for what it was meant for in private homes and radio until it turned eighty. After discovering its values as instrument, the hip-hop culture used ten years to popularize it, and a hundred years after Berliners 7-inch, the 10- and 12-inches has regained the territory, which the Compact Disc tried to undertake. Without the DJs, and the hip-hop DJs in particular, the vinyl playing-device would only be cherished by those extolling the

warm, analogue (non-digital) sound. So the story can be said to begin with Berliner in 1894, or Edison in 1877, or even John Cage in 1939. But what really makes this history worthwhile is what happened in the Bronx in the mid-seventies.

## ***The early hip-hop***

Three men usually get the credit for developing DJ technique into naturally employing two turntables, an audio mixer and pairs of identical records playing the same segments over and over. This technique is known as *mixing*, and is the foundation for understanding what a DJ of today does. DJ Kool Herc, Grandmaster Flash and Afrika Bambaataa all did this in their own fashion at the same time. In the seventies, Grandmaster Flash brought the new style of DJing further than the rest, but they share the early development. Flash also made some changes on the audio mixer that thoroughly revolutionized the new art form: He made a crossfader that could easily switch between the two turntables. Instead of having to use two separate volume controls, the crossfader liberated one hand. If the knob is positioned far left on the fader, the crossfader isolates the sound from the left turntable, and if positioned right it isolates the right turntable. When the knob is in middle position, both sources are played equally loud.

The characteristic sound of scratching was 'innovated' by Grandwizard Theodore in 1977. Scratching is basically rubbing the vinyl back and forth against the stylus in

different patterns and rhythms, and it was this discovery Theodore did when he wanted to keep the record on a particular spot whilst talking to his mother. Because of the strong motor in the preferred turntables (Technics SL1200), the spinning speed is quickly picked up after being stopped, which again makes it easier to move the vinyl in both directions. The first scratch, normally done in eight-notes or triplets in time with the music, is called the *baby-scratch*. It is the fundamental turntable-technique, even though it doesn't involve the crossfader on the audio mixer.

A big part of scratching takes advantage of the fruit of Grandmaster Flash's engineering abilities; the crossfader. Instead of using it in his fashion to smoothly move between the sources, it is normally used to abruptly cut the sound on and off. There are two ways of cutting the sound on/off or in/out: You either start with sound or you start with silence. The crossfader allows the turntablist to have one record playing while cutting the sound on the other. With the left turntable playing backing rhythm and the crossfader placed to the left, all that can be heard is the rhythm. By moving the crossfader to the middle, sounds from the right turntable will be cut

in, and this is the method used for scratching.

Since 1977 there has always surfaced new scratches and new ways to manipulate records, most of them increasing the speed. Today a turntablist needs to master these techniques just as a violinist needs to master scales. To a trained ear, the different techniques and patterns degenerates almost as tones from a traditional instrument, but for those inexperienced with turntablism it might well all sound the same. The extreme speed of the scratches makes it hard to distinguish one scratch from another when they appear in continuity. It may not be significant to know techniques as listeners, but it will make the listening a bit easier. Most important Internet sites devoted to turntablism offers an array of techniques explained and demonstrated with aid of streaming media; sound and video.

## ***More than hip-hop***

So far I have concerned with hip-hop DJing. This is done because of several reasons: It was hip-hop that made turntablism possible, it is hip-hop that has procreated all the various techniques, in hip-hop all the techniques have been so entwined that they form a language, and most of all; hip-hop DJing is the only kind of turntablism that is discussed and reflected upon at all. Hip-hop, though, should be understood as more than rapping, breakdancing and graffiti. It is also a way of thinking music, an aesthetic in its own right. Further do many turntablists have their background in hip-hop, without really living or practicing hip-hop when we think of baggy pants, skateboards and a fetish for gold necklaces. New turntable-bands are born every day, and more people involve themselves in theorizing (both consciously and accidentally) the concept of manipulating and re-using old recordings. But there can be found turntablism outside the hip-hop tradition. As mentioned earlier, the turntable is about to manifest itself as the most influential new instrument, and it spreads to all kinds of music. To name one example of that, synthesizers are now shipped with readymade "scratch sounds".

Almost every new dance hit or hit single has the *wicka-wicka* sound.

Turntablism not rooted in hip-hop DJing doesn't follow the rather strict rules of mastering and employing certain techniques and canonized samples. The history of using the turntables for making new music dates back to Paul Hindemith, Ernest Toch, Percy Grainger, Edgar Varèse and Darius Milhaud in the twenties, but the first important attempt was John Cage's *Imaginary Landscapes #1* from 1939. His means of manipulating was adjusting the rotation speed when playing monophonic tones (RCA test tones). The next step, *musique concrète*, introduced the 'father' of vinyl manipulation, Pierre Schaeffer. He claimed to have found the music of the future and foresaw an ensemble of turntables. Because the record player is able to produce any desired sound, the turntable represented the ultimate musician. After the first few pieces made on turntables – most known is his *Etude aux Chemins de Fer* from 1948 – the recording studio itself became the most interesting instrument. Pierre Henry, Schaeffer's associate and student, sums up the idea of *musique concrète*:

*There are two stages to musique concrète: first, isolating sounds, giving a new*

*beginning and a new end to something that already exists; and secondly, expanding, transforming and transposing them in the recording studio. (Khazam: The Wire Magazine #160, 1997, page 38.)*

After believing the studio could realize their musical and compositional ambitions to a higher degree, Henry and Schaeffer did not pay the turntable as much attention as before, and as it turned out; no one did. Until Christian Marclay, Schaeffer's endeavors went unnoticed. Christian Marclay is the most influential figure outside hip-hop, but his background is not music, he was a sculptor and a performance artist, with clear references to the Fluxus movement. His turntablistic career began in 1979 in a duo with guitarist Kurt Henry. This is probably also the first time a turntable interacts with other instruments. Marclay grounded upon Cage and Schaeffer, but focused even stronger on the concept of noise. As sculptor, the wearing (both natural and arranged) of vinyl still remains a basis for presenting and representing music. He cuts up records and glues them back together, and he lets people walk on the records before he uses them. *Footsteps* is a 'record' of his, but not in the normal sense: 3500 vinyl records were used as flooring at an art-exhibition for six weeks, packed in covers

and then sold. Thus Marclay reminds us of the tertiary quality of a secondary representation of music.

Christian Marclay is no virtuoso compared to the turntablist standard, but he has definitely developed skills in cutting and pasting music, making it a real-time, audible collage. Many have been influenced by this experimentalist, and today numerous turntablists not playing in the hip-hop kind of way also gains recognition. Alongside Marclay in the eighties were Japanese Otomo Yoshihide, Canadian Martin Tétreault and American David Shea. These four had not much in common except for getting the attention from John Zorn. On several occasions, Zorn has collaborated with them all, and he has arranged musical meetings between hip-hop DJs and these non-hip-hop ones. Roughly said, there were two directions of turntablism during the eighties and early nineties, one rooted in hip-hop and one rooted in performance-electroacoustic-avantgardistic-improvisation-based art.

*[Disco-DJs, remixers and dance-DJs are not taken account for here, they have a totally different approach to the turntables.]*

The hip-hop branch can be said to evolve without interference from the other branch, while the other must have been inflected strongly by the hip-hop DJs in that hip-hop earned massive public attention through media. In the last few years, the struggle for promoting the hip-hop turntablism has made the paths cross, and it is no longer a sensation when a hip-hop turntablist play with a rock band or at an art exhibition. Furthermore newcomers dive right into the former gray-zone between hip-hop and the experimental music. This is a new phenomenon, and the trend is still in its first phase.

## ***Turntablism after the Recognition***

We may say that turntablism was born with Grandwizard Theodore in 1977 or the 1982 single *The Adventures of Grandmaster Flash on the Wheels of Steel*. However it is more often thought of as a term of the nineties. The first sign of musical interest from ‘outside’ was Herbie Hancock’s collaboration with Grandmixer D.ST. on the single *Rockit* from 1983. After that, turntablism has been a musical secret loved by few; even the rappers abandoned the DJs in the mid-eighties. The last five or maybe ten years have made all the difference, and it is readily seen in the variety of contexts where the turntable can be found, and in the advanced arsenal of techniques. The new generation of turntablists had all the way a scene on which they grew, and that stage is called *battling*. To battle means to compete man-to-man in mixing skills; who makes the best music using the two turntables and the mixer. The ‘best music’ has at some point in time been translated as ‘the fastest techniques’, but the result from competing for world titles in many competitions for 15 years are priceless. In these 15 years turntablists have obtained instrumental mastery comparative to any traditional instrumentalist. At some point (the fast-is-the-answer-point) the

battling jeopardized the seriousness of turntablism. When the instrumentalists were able to compose and play music never before imagined, the situation improved.

The status concerning instrumental abilities before the new millennium can be said to be excellent. Both those DJs derived from hip-hop and those not involved in the proclaimed standard-techniques have made themselves a firm grounding as musicians. The hip-hop techniques are the plainest ones to describe, although maybe hardest to put into practice. They can be divided into two groups: Scratching and beatjuggling. In addition, odd techniques that cannot be categorized are to be found, and these often bear the most explicit resemblance to the techniques preferred by non-hip-hop turntablists. In discussions among turntablists, or on Internet sites devoted to turntablism, the subject tends to be the scratching part. This is the group of techniques that is easiest to abstract; both beatjuggling and most of the odd techniques are difficult to grasp without sound examples and visualizations. Therefore the scratches are far better mapped theoretically. In the following I will look at the three groups and try to explain which qualities they have gained after the recognition in the early nineties.

Scratching is, as told, the widely known sound to connect turntablism to. Basically it is divided into three kinds of movements: One movement is the hand on the vinyl, which can spin the record back and forth in different tempos, lengths and rhythms. The second movement is the hand controlling the crossfader [*or other volume controls such as the upfader – a normal volume control – or the line/phono switch.*] to turn the sound on or off in different rhythms and tempos as well. The last movement is not controllable to the same degree; the motor in the turntable. The platter spins at either 33 1/3 or 45 RPM [revolutions per minute] and those numbers can be adjusted up to eight percent in each direction. On the modern direct drive turntables, the speed is picked up in one quarter of a revolution after the platter has been stopped. Scratching involves all these three movements simultaneously, and is classified from the interaction between the hand on the record (scratch-hand) and the one on the crossfader (fader-hand). A large number of scratches have been described – I explained almost twenty, all of which also have variations and inversions – and still new scratches appear in the discussion forums. The scratching can be done on any musical or non-musical sample; normally the samples are approximately one second long.

Since the needle moves along the groove on the record, each scratch is by definition just a playback of the original sound in any desired tempo. This fact opens up a wasp nest of legal issues – luckily so far no turntablists have been convicted of stealing because of scratching. To ease this potential problem, and also to ease the hunt for good samples to use, special designed sample collections are being manufactured. These collections, made by the DJs themselves, consist of hundreds of samples lasting up to a few seconds each, gathered from old (soul) records, films of any genre and TV-commercials. One concept, arguably related to scratching, aims at throwing words from different sources into a coherence, re-shaping sounds and scatter sentences into new meanings. It is hard to determine whether to classify "m-m-make m-making me itch-tch-tch" as scratching or word-play (that example is perhaps the most commonly used phrase, and the way it is written represents the actual sounds properly).

Beatjuggling is far more difficult to describe and discuss than scratching. Morphologically 'beatjuggling' is the appropriate word for this set of techniques; the DJ juggles beats, which he (or she) has isolated from a bigger context. The juggling

can be done with only one turntable (all scratching is done with one turntable), but in most cases both turntables are in activity at the same time. To be able to juggle between two sound-sources the DJ may either subsequently stop one record and let the other go, or he takes advantage of the crossfader. Both concepts are used extensively. To isolate sounds and fragments of rhythm, developed skills are a necessity. The DJ must see the music on the record and he has to know just how long one beat and one measure is on the record in proportion to one revolution. To aid him in that, he applies tape and color markings on the record and read the vinyl like a watch. Once able to isolate and manipulate rhythm, there are many ways to mix new rhythms – which is also the goal of beatjuggling. By using two records (they may be identical copies or have the same BPM [beats per minute] and time signature, but that is not absolute necessary) and letting them go off with a slight displacement in time, i.e. one sixteenth-note, the DJ can add elements of one record into the other by shifting quickly between the sources with the crossfader. When two beats are set off in time, the turntablist can easily build a new rhythm from both sources, making the ones and threes come from James Brown and the twos

and fours come from Slayer. Just like scratching, the tempo of the techniques has risen enormously, and beatjuggling has gone so fast that it is hard to grasp the details in the samples. As a whole, beatjuggling is more demanding than scratching, and it is a lot easier for everyone to hear when someone lacks the ability to provide requisite rhythmical flow. The building of sentences, earlier described as a scratching technique, also involves beatjuggling to some extent. Running parallel to beats and words, new melodies can be assembled from two different recordings using beatjuggling.

Odd techniques incorporate everything possible with the equipment used. The vinyl can be altered to make the needle skip, the vinyl can be cut to pieces and re-glued, it can be bent and played, or the vinyl can be totally excluded. Some drag objects across the vinyl and the stylus, amplified thorough wah and fuzz pedals, and some replace the vinyl with Swedish crispbread. A tendency among non-hip-hop turntablists was once to go for the extremes, today they seem to settle for making sensible sounds (not meaning ‘gone soft’). Odd techniques includes manipulating tone-color (called equalizing or EQ-ing) as well as playing rusty plates of steel, and making simple

melodies with the pitch-control as well as fiercely rubbing the needle with a coin.

The most interesting aspect of all manipulation is of course the interaction and combinations of these techniques, made into music. Control of the multitude of methods to reshape recorded music – mostly acquired in the nineties – made the turntablist an attractive musician, and now the pioneering work has been done. Every day shows a new way of employing the turntable.

### **Conditions for turntable music**

First, in the twenties, and especially in the late forties, the turntable resembled a synthesizer in usage. Then later, in the seventies and eighties, hip-hop DJs laid backing tracks for dancers and rappers, while at the same time experimental artists explored the 'physical' qualities of the tangible vinyl and the 'secondaryism' of re-using art. Towards the nineties, very few recordings were made which included someone credited playing the turntable. John Zorn had on many occasions turntable, but especially his 1983 live recording *Locus Solus* made use of the newborn instrument (played by Christian Marclay and The Whiz Kid). Scratching popularized it the same year in the electro-hip-hop-jazz of Herbie Hancock and Grandmixer D.ST. The bands Public Enemy, Beastie Boys, Run DMC, Aerosmith and Anthrax all let the paths of rock and hip-hop cross, and so they also contributed for the fiery openness the turntable met the next ten years.

There seem to be no limitations to where to embrace the turntable in the orchestration. Lately DJ Olive participated on a klezmer recording of a Mahler symphony, and Norwegian radio-channel P1 used scratching as a vignette to a classical music series.

Software and hardware emulating turntables and a mixer is sold for less than a tenth of what the real equipment cost, and hi-fi manufacturer Pioneer do whatever they can to make their *CDJ*-line of compact disc players sound like and operate as turntables and vinyl. The width of artists that wants to take advantage of the popularity of the new sounds is amazing. There might be several reasons for this interest, many of which indulges the dollar sign, but overall musicians and producers seem intrigued by the possibilities. Besides, it is too obvious what the motives are behind hiring a turntablist if the result is one lousy *wicky-wicky-di-wick* in the last chorus.

Who manages to represent the turntable in a good fashion, and who manages to provide sufficient musical space for the manipulator? By asking those questions I imply that some names must be mentioned. These names represent both sides of the development of a new musical instrument and way of thinking music, but they share their success with others, of course. Accountable for both the greater numbers of techniques as well as starting a discussion around the issues of turntablism, the turntable band Invisibl Skratch Piklz is the most important compound of artists. In that band we find Q-

Bert, Mix Master Mike, Shortcut, DJ Disk and Apollo, all situated among the most prolific and admired turntablists. Each of these turntablists have collaborated with other artists; Mix Master Mike with Beastie Boys, Q-Bert with Buckethead, DJ Disk with Primus and Jack DeJohnette, and Apollo with Branford Marsalis. Bill Laswell on one occasion engaged the whole band (Invisibl Skratch Piklz then counted four members) for a concert with his band Praxis – even though Praxis already had Grandmixer D.ST. as permanent scratcher. Other all-turntable bands with large followings are The Beat Junkies and X-ecutioners, both having members playing in different projects. DJ Olive, already mentioned, has come from a more techno-kind of thinking, but has surpassed Otomo Yoshihide in making the most interesting work alongside improvisers and experimental musicians. Christian Marclay has not done much lately, but still he and Martin Tétreault appear as imaginative representatives for the new instrument. These are but a few names, and each day the world is introduced to another. The level of musical proficiency and technical mastery newcomers must accommodate to grow with the same impressive speed.

A few well known artists who have thought the turntable fit for their recordings include Tom Waits, David Byrne, Beck, Bill Laswell, Portishead, Limp Bizkit, Korn, Primus, William Hooker, The Jon Spencer Blues Explosion, Mr. Bungle and already mentioned Branford Marsalis, John Zorn and Herbie Hancock. Some of these use the turntablist for adding a hip-hop flavor to the sound, but more often these days, the turntablist seem to be more liberated. Tom Waits and Mark 'Ill Media' Reitman only vaguely let us hear the scratchy, squeaky sound of old vinyl being played. In Limp Bizkit, turntablist DJ Lethal aggressively wears down records in alternately metal rock guitar-bass-drum manner. Jamming with William Hooker and Glen Spearman, DJ Olive shrieks with the tenor saxophone, making strange electronic-sounding noises and bleeps.

So far, four different roles have been manifested, regardless of musical genre. The turntable may either act as another instrument or the turntable may be played in its own fashion, as an independent instrument. Acting as another instrument it can either be playing the drums and making rhythm, or imitate and parody another traditional instrument. On a stage, the

turntablist meet the ever present choice performing musicians must take into consideration, whether to 'show feelings' or play cool. Two turntables and a mixer requires fast and extensive body movements, much like a percussionist operating a dozen items at once. On top of the necessary movements, many turntablists exercises acrobatic moves, throwing arms around their necks and controlling the vinyl with their feet. These *body tricks* can also be found also outside hip-hop, but in general it is a thing that belongs to the competitions. The physical work understates the likeness of any imitated instrument; playing solo-guitar parts on turntables makes some use guitar effect-pedals and so on. On a tour with Primus, DJ Disk of Invisibl Skratch Piklz amazed the audience by copying Les Claypools bass riffs – almost unimaginable on turntables.

As independent instrument, the hip-hop playing style is the most sensational, having made for itself intricate rules without limiting the creative possibilities. Apart from hip-hop, the turntable functions much after the principals of *musique concrète*. There is no actual connective notion making us able to interpret how different turntablists are playing, after the same sets of pre-

knowledge or suppositions. That means listening to three turntablists with resembling approaches, take Otomo Yoshihide, Christian Marclay and Martin Tétreault, not necessarily will give any insight in how the turntables actually works as musical instruments. One of the reasons why this is so, I think best can be explained by looking at the source material and equipment at hand. Hip-hop turntablism, the formal turntablism, find new ways of manipulating samples of the same nature; well defined sounds lasting no more than a few seconds. This is done on the same two decks and more or less the same mixer that everybody uses. Again, the turntablists not obliged to follow the tendencies of hip-hop seem to choose a different approach to the art form, and they customize old phonographs, uses vinyl with objects glued to it, and obscure samples for longer periods of time. It is easy to see that Marclay, Tétreault and Yoshihide uses the same technique on several pieces; all three mixes two or more recordings, letting them play for maybe a minute while slightly holding their hands on the platter, making it all shake and wave. Yoshihide might do this with electronic bleeps pressed on vinyl, Tétreault plays two identical copies of Maria Callas albums, extending her long notes into

infinity, Marclay more likely pulls out an old Strauss-waltz, combining it with a sampled segment from a porn movie. So even though the techniques are similar, it is difficult to compare the musical core of such pieces.

The turntable represent matchless possibilities in making music, both because the techniques imaginable far exceeds any traditional instrument, synthesizer included, and because the turntablist always has at hand every sound produced and pressed on vinyl. Returning to Pierre Henry, it is all a matter of making new beginnings and ends to existing sounds, and manipulate what is left. Nevertheless, it is a mechanical instrument, and history normally does not give them too long lifetime. All kinds of efforts are being made to emulate, simulate and reanimate the turntables on computers and CD or MD players. One very recent Swedish thesis for the doctorate in physics in Luleå use intricate mathematical calculations based on platter-movement in proportion to vinyl-movement and the needle's position in the grooves. Thus a theoretical model of the actual scratch in real-time is created, making it possible to replace to most unpredictable element of turntablism – the vinyl and the easily skipping stylus – with digitized sound on a computer. This is a project not yet

finished (writing January 2000), but it may well revolutionize and shape the whole future for this instrument since it still requires and benefits from the established equipment.

### ***Shaking the unshakable?***

Since the beginning of this century, popular music has followed the standard instrumentation – with alterations along the way – of drum kit, bass guitar, lead guitar and keyboard. This is a solid institution, and as Pierre Schaeffer predicted, turntable bands emerged in the form of role-players. One person plays rhythm, another bass lines and chords, one does words, and then another plays the solos. The number of turntablists in each band of course varies, but several have four members. It lies in the nature of the instrument that every musician can play any role or instrument. That way, the whole concept of ‘band’ or ‘ensemble’ should be re-valued. Of course some will still concentrate on solo playing – mostly solos are scratchbased – or one can focus on laying good drums, but all in all I think the average band member ends up with a broader approach to music and ensemble playing. The ability to switch between drumming, ‘vocalling’ and soloing was made possible with the synthesizer, but was never fully utilized until the turntable bands came. Still the possibilities may be said to go even further than playing roles.

If four turntablists can take on any instrumental part, and even switch

effortlessly during a performance, why can't they as well revolutionize the whole system of drums-bass-guitar-song that infiltrates and, arguably, limits the whole popular music industry? In music outside the skirts of popular music it is pointless to speak of the same kind of rules and conventions. But so far, it really seems that the hegemony of the band remains. Perhaps it is as simple as that the turntablist *wants* to play like a traditional instrument, perhaps it is rearranging the band not even an issue. Anyway, compared to the synthesizer, the turntable is more likely to make us rethink music and performing. The synthesizer never was much more than a trumpet occupying black and white keys or a sampled dog barking in chords. With the aid of vinyl, one twitch of the arm moves two seconds of recorded music in a moment. Even easier than on a synthesizer, the boundaries of tonality is broken, opening up for endless possibilities.

The speed of the scratch movements makes the samples go extremely high-pitched, almost impossible to experience as tones. This level of tonality I called *hyper-tonality* in search for better terminology. It is probably difficult to actively adjust the scratches to chord-schemes; if an analysis were done on a recording of scratching, the

pitch could be determined to fit the chordal tones or not, but just by hearing it as listener, it is too difficult. To speak of a functional tonality would be inappropriate, at least yet. More or less the same goes for the small rhythmical particulars. In a short sample of a drum break that is being dragged back and forth whilst chopped up with the crossfader, there may be as much as ten attacks in one tenth of a second. Put together into larger units of rhythms and patterns, the richness of details in every beat offers a kind of rhythmical complexity not yet heard of. I proposed *hyper-rhythmics* as a term for this kind of hardly predictable flow of rhythmical attacks. The main thing is not whether to call it *hyper-* or *meta-* or *super-*. My point here is to stress that turntablism brings forward an overall sound that differs from the very foundations of western music. Maybe hyper-rhythmics should be compared to the polyrhythmic drumming of the Asian or African tradition, and hyper-tonality should be compared to noise music. I believe the psychoacoustic branch of knowledge could offer a proper starting point for a better understanding of the nature of manipulating vinyl. A lot of music is said to 'have to get used to', and turntablism is no exception. Not because of musical complexity, but because of the unusual tone

material. That is where psychoacoustics can guide us and place the turntable-made sounds in a comprehensible context.

So as the new instrument reaches enough acknowledge and independence to conquer the world – as the turntablists of hip-hop always have dreamt of – it already stands at a fateful crossroads: Should it adapt to the predictable, confident tradition, or should it take the one step further and adhere to its tonal and rhythmical uniqueness? Of course we will see both directions being followed, most probably one with great commercial success and one falling towards obscurity. But that again seem to be the unalterable fate of experimental attempts inside the popular music industry.

### ***Suggested reading and listening***

Since the number of books and available recordings are considerably low yet, I wish to include this list of turntablism-related work. The sound recordings have a huge overweight of hip-hop, but here both 'disciplines' are given equal attention. The Internet sites are especially interesting, both for literature, interviews, discussions, sound samples and tutorials. Among the best sites are *Turntablism dot com* ([www.turntablism.com](http://www.turntablism.com)), and the *Swedish DJ Battle* ([www.djbattle.net](http://www.djbattle.net)).

Not much literature has been published; first and foremost the magazines offer information. *The Wire*, *X-Fade*, *Bomb Hip-hop Magazine* and dance- and rap-magazines should be sought out. Some books worth mentioning are Simon Reynold's *Blissed Out* (Serpent's Tail, 1990) and *Energy Flash* (Picador, 1998), Ulf Poschardt's *DJ Culture* (Quartet Books, 1998 trans.), Rickey Vincent's *Funk* (St. Martin's Griffin, 1995) and Tricia Rose's *Black Noise* (Wesleyan University Press, 1994). Apart from these, there are several well-known writings on rap and hip-hop culture.

Some essential hip-hop turntablism-related CDs are *My Vinyl Weighs a Ton* by Peanut

Butter Wolf (Copasetik Recordings, 1999), *The Ablast* by Rob Swift (Asphodel 1999), and the compilations *Return of the DJ 1* and *2* (Bomb Hip-hop, 1995/97). Strictly non-hip-hop recordings (often 'avant-garde') are harder to find, but among the more popular are *More Encores* (ReR, 1988) and *Records* (Atavistic, 1997), both by Christian Marclay. The albums which show the turntable in a central position, either hip-hop or not, are often as hard to come by as solo-turntablism CDs, but a good place to start is in jazz with *Mindfulness* by William Hooker (Knitting Factory Works, 1997) or John Zorn's *Elegy* (Tzadik, 1995). The last category of recorded turntablism released on CD is the easiest to obtain in any shop; popular music with turntable. Most famous are Tom Waits' *Mule Variations* (Anti/Epitaph, 1999), the two Limp Bizkit records *Three Dollar Bill, Y'all\$* and *Significant Other*, both on the Interscope label, and *Acme* by the Jon Spencer Blues Explosion (Mute Records, 1998).

### ***Conclusive words***

The growing market for hip-hop culture helps clear the way for turntablism, and turntablists respond by sharing their skills with everyone in any possible context. Turntablism might soon evolve into using state-of-the-art technological instruments, but so far the old mechanics outclass simulators, be it software or hardware, digital or semi-digital. This instrument represents new ways of thinking music, hearing music and composing music. It seems therefore wrong to consider it as just a comical retro artifact from the early days of hip-hop, or nothing more than a real-time sampler. It is a sound manipulator, and it is a musical instrument in every sense.