

Where Did the Groove Go?

How Technology Changed the Way Metal Drummers
Play and Sound

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When this master's thesis has been released, I hope to get some of my research and interviews further published. This thesis is not the end of my research and I hope to make a short documentary of my findings at some point.

The research project "Four Drummers vs. a Machine" will be released sometime in 2020 on YouTube. Search for "Can You Hear the Difference Between Real and Fake Drums?" That way, anyone who wants can see and hear if they can spot the difference and discuss openly which versions they prefer.

Simen Sandnes (August 2020)

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We were talking about the Beatles and how you listen to new music and the perfection of it, then you go back and listen to the Beatles and it can really mess you up because you can hear how loose it is. The pitch is wavering—some wacky stuff. But the younger generation is still going to be listening to that stuff because it's got a heart and soul and an immediacy. It's not as disposable. That's the thing. The computer stuff can get disposable because there's not as much invested in it. (Rich Mouser, interview with Simen Sandnes, 2019)

1. Introduction

This master thesis will thematise some important parts of the history of metal drumming. Specifically, my aim is to study the development of metal drumming from the perspective of drummers, but also from the perspective of studio engineers. A key goal is to capture changes in metal drumming from the 1970s and 1980s to the present day.

From 1980 to 1990, there was a major leap in music technology, as MIDI¹ was introduced in 1985. From then on, producers could perfectly program drums instead of having “sloppy” rock ‘n’ roll drummers playing, saving them both time and money. If one compares metal records from the early 1980s to metal records from the early 1990s, there is a vast difference in precision, production, and sound. The open, “groovy” rock drumming that we know from drummers such as John Bonham (Led Zeppelin) and Bill Ward (Black Sabbath) ceased to exist. Instead, we were left with a precise, technically demanding, machine-like drum sound and playing.

The guitarist and producer of Grammy-nominated modern progressive metal band Periphery, Misha Mansoor, states the following in an Ask.fm online question:

Programmed drums can be extremely effective if you give it the attention to detail it requires and do the work to make your sound unique. Real drums can be a lot more work, and if they aren't mic'ed or tuned or mixed well in a good room, might sound inferior to the programmed ones. Well-handled real drums, however, can sound a lot better than programmed ones. But obviously that is a risk and an expense. (Mansoor 2014)

¹ Musical Instrument Digital Interface (MIDI) is a technical standard communication protocol that connects a variety of electronic musical instruments and computers.

As a metal drummer, I, growing up, was always amazed by the incredible skills of metal drummers. It was the reason I wanted to play music. The extreme precision and “perfection” seemed inhuman, and I could not understand how anyone could play that well. As I’ve gotten better at drums and learned more about production, I have come to realise that many of these performances *were* indeed inhuman. The performances had been edited to perfection by a machine and heavily sound-replaced, and some of the performances had even been programmed.

When I first learned this, it was kind of a relief. My idols were not perfect and superhuman; they had flaws just like me. It gave me confidence to know that I, too, could reach that level of playing. Now, I feel that I am at a level where I sound just as good as any of my influences after being edited (and sound-replaced)—and I am getting tired of it. I am tired of having my identity taken away when my recordings are edited to perfection, of observing my snare hits replaced with perfectly sampled snare drum hits by a different drummer. The reason I accept it, and do it, is because it has become a genre norm. Everyone does it. If you are not 100% perfect on the grid, or if your snare drum does not sound like a machine gun, listeners will probably think that you are not as “serious” or good as the other drummers in bands they listen to.

But why has this inhuman perfection been accepted, and why do so few people talk about it openly? Is there shame in admitting that you have been edited and sample-replaced? I asked Jakob Herrmann, a world-renowned studio engineer from Gothenburg, Sweden, who is especially well-known for his drum sound. In an interview, he shared his thoughts on this ongoing trend, of music being artificially enhanced using computers.

If the fans knew how much was faked in the studio, they would revolt. Show me one studio documentary where they actually show the engineer pitching it up in Melodyne² or gridding the drums or something like that. Of course it doesn't happen... You try to tell a jazz band about this and they won't even understand what you're talking about. (Jakob Herrmann, interview with Simen Sandnes, 2019)

1.1 Background and Interest

I have always had a great interest in recording drums and how drums sound. When I first began to play drums, I started to record myself immediately, and expanded my setup every time I had

² Melodyne is a digital audio pitch modification tool by Celemony.

money. The inspiration for this thesis originated in 2016, when I was hired to record drums for an album collaborated on over the Internet—meaning that my only communication with my fellow musicians would be through phone calls and emails. The person who hired me was not going to be present when I recorded, so I was sent the programmed drums via Dropbox, and I imported them into a Pro Tools³ project. Upon listening, I felt that the programmed drums were too perfect and were something that I could not replicate with the drumming skills I possessed at the time. But as soon as I started to record, I immediately felt that I gave the music something the programmed drums did not. There was a sense of human touch, feeling, power, and groove that gave me something more. It became clear to me why the producer had hired me and did not want to keep the programmed drums for the finished product.

In 2018, I completed an important session job for a well-known and respected metal band, for which I practiced intensely prior to the recording. I spent two weeks making sure I gave my very best, learning every part to perfection, and, ultimately, I was very happy to see the results. I completed the recording all by myself in my studio, and I was very confident with the final tracks that I sent to the producer. They had all been recorded in one take, with the exception of two or three minor digital clean-ups.

When I received the tracks back from the mixing engineer, they had all been edited to a grid and sample-replaced—which meant that I could have step-recorded.⁴ My overall performance had been completely removed. This incident was a blow to my pride, but it also made me realise that, in completing future session work in this genre, it did not matter if I step-recorded a track in three hours or if I spent two weeks practicing for it. Either way, the producer would take the same approach to the track: with editing and sound-replacing. This reality meant that I could take on more session work without spending as much time on each project. For my own projects, I was already step-recording, cutting between the takes and editing my recordings. There seemed to be an expectation, from both fellow band members and listeners, that everything would be perfect.

But I want the performance that I recorded to be what the listener is hearing. I want my voice, touch, feel, and groove to be what is on the record. This goes for everything I do, whether in the studio or in YouTube clips, Instagram posts, or Facebook videos. I want people to know that, when they watch the videos that I post, they are seeing exactly what they are hearing, and what I truly performed—which leads to my research question: “Where did the groove go?”

³ Pro Tools is a digital audio workstation (DAW).

⁴ Step-recording means to record one section at the time, sometimes even just a few notes or bars at a time.

As this thesis will show, many people have opinions on this topic. I am surely not the only drummer who has been affected by this industry standard. I also want to state that I am not against quantisation, samples, and programmed drums as an art form. If anyone wants to make music that sounds like this, and it is an artistic choice, I endorse it. All art should be welcomed. What I am questioning is the industry standard, that all modern metal is made and expected to continue being made this way.

I do not consider myself to be a very groove-based drummer, and I may never be able to fully work on my groove, because, in the metal genre, performances are usually quantised or edited, and groove is not seen as the most important factor. Groove, to me, is when you feel the music, when the energy in the performance is just right and makes you want to move your body. In modern metal, groove is often about accentuations and how the drums are orchestrated in relation to the other instruments. But I think it can be more than that. We will dive further into the definition of groove in Chapter 2.

To me, a musician has always been someone who cares as much about their sound as what they're playing. I will say that today players are at an insane level of technical ability, but to me it has always been about how the drum sounds and how a big part of your performance is about how you make your instrument sound. I've always liked the fact that the sound we're recording now is The Sound. That is your performance and it is you. Sure, I'll help a sound with sound replacing, but I don't like the fact that I'm expected to help the drummer in that way. (Jakob Herrmann, interview with Simen Sandnes, 2019)

In his interview, Jakob describes seeing a change over the years, that drummers care less about the way they play and more about *what* they play. It used to be a humiliating experience for the drummer if the engineer decided to edit or sample-replace—but now, the engineer is simply expected to do this.

1.3 My Performance Practice

I have utilised modern technology in my fieldwork for this master's thesis, including laptops and 4K cameras with RØDE microphone systems to capture one-on-one interviews. Facebook, Messenger, WhatsApp, and Dropbox have been the main communication platforms for communicating with and sending files to my interview subjects and other participants in my thesis. My main DAW is Pro Tools. Although I can use both Cubase and Logic, I complete most

of my recording and editing work in Pro Tools. I use Arobas Guitar Pro 7 as my notation software, which, in spite of not being very well-known, provides the same results for notating drums as more well-known programs such as Sibelius and Finale.

Drum recordings for my research project “Four Drummers vs. a Machine” were completed in my studio/practice room in Oslo, Norway, and were recorded using both multitrack audio and videotape. I use a QSC TouchMix-30 Mixer as my main interface, along with Drawmer analogue hardware, and mostly CAD microphones. I acquired the newest flagship Black Panther Design Lab drum kit from Mapex Drums⁵ right before my research started. It is a unique drumkit, and I am the only person in Scandinavia to own one.

I edited all the interviews either in Adobe Premiere Pro⁶ or Pro Tools before sending them off for transcription.

My study of how technology has changed the way metal drummers play and sound will be based on qualitative methods. First, I will conduct qualitative in-depth interviews with 5 to 10 metal drummers and studio engineers/producers who are influential within the genre. I plan to interview both studio legends, who have been active in the industry for a long time, and up-and-coming new drummers in the metal scene. Interviews will last between 30 and 60 minutes. What I hope to glean from the interviews is insight into these individuals’ views on the metal drumming presentation of the 1980s, how it is today, and where they think the drumming style is headed. I also hope to either contradict or confirm some of the myths that have surrounded the metal community for quite some time, including which drum parts are actually played, which drum parts are programmed, and which drum parts are “fixed in the studio.” I know from working with producers of some of the top metal songs that “fixed it in the mix” activity happens often.

As my research will show, music technology has had a huge influence on the way drummers play and write their drum parts. I know from my own experience as a session metal drummer that quantising MIDI takes a fraction of the time it takes to quantise real drums. I can only imagine the relief experienced by studio engineers who can hit one button and achieve the same results that they would after days of work.

During my interview with Rich Mouser, a studio and live engineer based in Los Angeles, California, he briefly explained how he would obtain drum samples on recordings before the technology was as efficient as it is today.

⁵ Mapex Drums is a drum manufacturer based in Taiwan.

⁶ Adobe Premiere Pro is a video editing software.

When that Alesis D4⁷ came out [in 1991], you could go from a tape deck, an analogue tape machine, and take the kick drum and it would trigger the kick drum off of that. The only thing with it was that there was a delay factor, and what I discovered was that it was about four milliseconds. What I would do is I would flip my tape over and I would use a delay of four milliseconds. I would print it onto another track and then when I flipped, I would take the same kick drum and would print it to a new track with the delay on it. Then when I flipped the tape over, there would be a kick drum that was four milliseconds earlier than the original kickdrum and I would use that kickdrum to trigger it to get it lined up and to take away the delay factor. (Rich Mouser, interview with Simen Sandnes, 2019)

1.4 My Project(s)

My research project(s) will consist of testing some of the statements from the interviews.

Something that has been said in every single interview, and is a trend online, is that every metal drummer these days sounds the same.

The first project, which I have called “Four Drummers vs. a Machine,” will consist of four drummers playing exactly the same song and exactly the same groove on exactly the same drumkit, with exactly the same setup. We will first record and complete a mixdown, in which the performance has not been touched (i.e., edited or sampled-replaced). This will be to observe the differences between each drummer, how their personal touch, feel, and groove affect the flow of the song. Then, we will quantise all the performances to the grid, sound-replacing the hits with the same samples, and compare the second mixdown with the first. Finally, I will program a drum track to play exactly the same thing the drummers did in their performances, to see if there is any difference between a drummer who has been edited and sound-replaced and 100% computer-programmed drums (which will contain the same samples).

You could have four drummers play the exact same drum kit and the same song and it is going to be completely different. The sound is going to be different. You would swear somebody changed the cymbals or something. It is a magical thing that just strips away when using samples, depending on what samples you use. (Derek Roddy, interview with Simen Sandnes, 2020)

⁷ Alesis D4 is a drum module. It can trigger drum samples to play when an audio signal reaches above a set threshold.

Stephen Street, a British producer and mix engineer known for his work with The Smiths and Blur, shares his insights from using Beat Detective⁸ on drummers' performances:

Drums are so often programmed these days and really tightened up with Beat Detective. Sometimes you do find people, are they tightening up the drums because they really need to or because they can. Because sometimes initially it can sound really impressive, really bang-on, but sometimes the character goes out of it. I remember watching recently a great DVD about the Motown session drummers, Standing in the Shadows of Motown, and there was one drummer there showing, he would play the same drum pattern as two other drummers. It was the same drum pattern but the swing factor, the way he played it was completely different and it was fascinating to see. But if you had taken those three drummers, "Beat Detected" it, and cropped it up and quantized it, they would have all sounded the same. It's knowing when to step in and tighten things up, but there is that pressure on producers to make everything sound really, really shit-hot and tight because 90% of things played on radio now are shit-hot and tight. (Shephard 2007)

My second, and my main, musical project is the progressive metal band Arkentype. We fall under the category "bedroom producers" (which we will discuss more in Chapter 3) and have been utilising new technology to create our music. I do believe programming drums and increased music technology are fantastic tools for creating music. Arkentype and I endorse GetGood Drums, which is a sample library for both resampling drum performances and programming drums. With both my bandmates and me programming drums for our songs, my creativity has expanded, and I have improved as a drummer. I also use the samples whenever I provide listening mixes for my session clients. Samples are a quick way to give my clients a pleasant rough mix to listen to when checking out my performance, without having to spend unnecessary time mixing. Unfortunately, we have been relying too much on technology in order to achieve results that have come to be expected by the industry. I have step-recorded and quantised, and have had some of my drums sampled. By now, we have recorded and released four songs from our upcoming album, the drums for which, so far, have been recorded and edited as described.

Thus, my third and final research project will be to finish Arkentype's new album by doing only "one-take" performances, with no editing and no samples on the final mix. To capture

⁸ Beat Detective is the quantisation program used in Pro Tools.

my performance as faithfully as possible, I have booked time with producer and engineer Jakob Herrmann at Top Floor Studios in Gothenburg, Sweden.

As Matt Halpern, drummer for the progressive metal band Periphery and owner of GetGood Drums, said regarding why they created their drum software:

It is a tool to use at the beginning of the journey. It is not a tool to use as the whole journey. But, we are a bigger band and we have more budget and time. We can afford to do that. Part of the reason that we have made the products the way that we have and made them sound the way that we do is that there are a lot of bands who will use them that way for the whole record and we want those records to sound as good as they possibly can. So, I would say I want them to realise that there are options and the ideal scenario is that they should use our products as a means to get the drummer to a live drum kit eventually. (Matt Halpern, interview with Simen Sandnes, 2020)

1.5 The Structure of the Thesis

In Chapter 2 of this thesis, I will present some methodological considerations, including a broader explanation of what groove is and how groove is interpreted in music. My interview subjects will also be presented, along with my reasoning for choosing the interview format as a method. I will also discuss some of the ethical challenges I encountered in completing the thesis, as well as some of the technical challenges. The thesis is loosely structured around my interview questions, and I use the interviewees' statements throughout the thesis to showcase their views on the different subjects I am writing about.

In Chapter 3, I will present the evolution of the drum sound, drumming, and production across the history of the metal genre. This will include a discussion of the rise of bedroom producers, and how technology changed the way metal music is created.

In Chapter 4, I will discuss my research project, "Four Drummers vs. a Machine," and present the collected research data.

In Chapter 5, I will analyse where I think the metal genre is headed and highlight examples of bands going against the quantised/edited norm. I will also present the details of my one-take recording process in Gothenburg, Sweden, with Jakob Herrmann.

In Chapter 6, I will present my conclusion and discuss further research on this subject.

2. Methodological Considerations

2.1 Groove

Before we can figure out where the groove went, we have to establish what groove is.

Drummer Jan Inge Nilsen describes the term “groove” as a quality, the music’s “pulse.” This makes groove a verb: “to groove.” Groove is also used as a subject—a specific rhythmical pattern that is repeated (Nilsen 2012).

The word “groove” comes from Old Norse, with “grod” meaning “pit,” or from the Middle Dutch word “groeve.” In 1902, it was used to describe the spiral cut in a phonograph record. Today, the literal meaning of “groove” is a long, narrow channel or furrow. The word “groove” is also used figuratively to describe a sense of “routine” (Online Etymology Dictionary 2020). To play “groovy” became a slang phrase in the jazz community in 1932 and meant to “perform well (without grandstanding).” It later became the slang word for “wonderful” in 1941, and this meaning was popularised in the 1960s (Online Etymology Dictionary 2020).

Musicologist Charles Keil defines groove as something that is repeated, but still creates tension:

*Music is about process, not product; it's not seriousness and practice in deferring gratification but play and pleasure that we humans need from it; “groove” or “vital drive” is not some essence of all music that we simply take for granted, but must be figured out each time between players; music is not so much about abstract emotions and meanings, reason, cause and effect, logic, but rather about motions, dance, global and contradictory feelings; it's not about composers bringing forms from on high for mere mortals to realize or approximate, it's about getting down and into the groove, everyone creating socially from the bottom up. (Keil, *The Theory of Participatory Discrepancies: A Progress Report* 1995)*

What Keil is saying here is that groove is a constant relationship that needs to be worked out every time. It is not something that is just there—it is a give and take in each situation, and each motion and feeling play a big role in how the groove is affected:

There is no essential groove, no abstract time, no “metronome sense” in the strict sense of metronome, no feeling qua feeling, just constant relativity, constant relating, constant negotiation of a groove between players in a particular time and place with a complex variety of variables intersecting millisecond by millisecond. Abstract time is

a nice Platonic idea, a perfect essence, but real time, natural time, human time, is always variable. (Keil, The Theory of Participatory Discrepancies: A Progress Report 1995)

Keil points out that real time, natural time, and human time are always variable. These elements are something that the metal community has been removing since quantisation became standard. It is very interesting that he mentions “real time,” as most of the interview subjects for this thesis have described much of what is happening in the metal industry today as “fake.”

I worked so hard to make sure I sounded great and I was developing tone and touch. All these things went through my head as a player that a lot of the younger drummers do not even think about because they are too worried about the technique and about the physical side of it, the not putting the energy into the touch. Because they do not have to. That is why I do not connect with new music anymore. It is like not hearing the band and not hearing the drummer and not hearing the individual hearts—the soul. It is all stripped away. (Derek Roddy, interview with Simen Sandnes, 2020)

When acclaimed metal drummer Derek Roddy mentions “the soul [being] stripped away,” he is emphasising that every drummer these days is being edited to the grid, and their individual touch has been replaced with samples. The humanity, including its imperfections, has been taken away.

Jazz scholar Matthew Butterfield discusses a variety of statements from Keil’s publications, emphasising the productive tension created by the push and pull fluctuation between the instruments, and how that enlivens and energises the groove. It is the small imperfections that cause the groove to occur:

A popular theory holds that “swing” stems specifically from asynchronous timing between bass and drums in their shared articulation of the beat, a phenomenon Charles Keil has dubbed “participatory discrepancies” (Keil, Participatory Discrepancies and the Power of Music 1987).

The “push and pull” between these instruments purportedly generates a “productive tension” thought to drive the groove with energy... Music, insisted Keil, must be “out of time to groove,” for “participatory discrepancies are where the juice, the groove, the funk, and the delights of music, and of life, are” (Keil and Feld, Music Grooves: Essays And Dialogues 1994), and their effects inspire listeners to “get up and dance because the music is so contagious.” (Keil, The Theory of Participatory Discrepancies: A Progress Report 1995) as cited in Butterfield (2010)

These statements go hand-in-hand with musicologist Richard Middleton’s definition of groove:

The concept of groove—a term now theorized by analysts but long familiar in musicians’ own usage—marks an understanding of rhythmic patterning that underlies its role in producing the characteristic rhythmic “feel” of a piece, a feel created by a repeating framework within which variation can then take place. (Middleton 1999)

Per Elias Drabløs discusses in his book the meaning behind the word *feel* in Middleton’s statement: “The *feel* Middleton mentions here constitutes a popular and telling synonym for the word groove among practicing musicians” (Drabløs 2016).

World-renowned drummer Keith Carlock shares what groove means to him in the drum education film, *The Big Picture: Phrasing, Improvisation, Style & Technique*:

To me, a groove is something that makes you want to move, makes you want to dance, you know. Even when I play, a lot of times, when I’m really feeling it, I move in my seat a little bit, just to kind of keep a consistent feel happening in the hands, in the space between the notes. And that’s really what’s important—the space between the main pulse, meaning the kick and the snare, for groove music is very consistent. And then everything in between, all the subdivisions, the grace notes, and different accents and dynamics that you use in between those main beats are what makes it a little more special and unique...having that space between that very simple groove consistent. And then subdividing in between with sixteen notes, you know, needs to stay very consistent also. And then there are different ways that those can, they can, you know, those sixteen notes can be very strict or they can be more loose, depending on how you feel them, and how the rest of the band feels them, too, you know. So, there are a lot of variables...and then there are dynamics. (Carlock 2009)

As Carlock states, groove is something that makes you want to move. It is stomping your feet, dancing, headbanging, or moshing—it all originates in the energy of the groove. Groove is not only connected to our auditory experience, but also to the physical. By looking at someone who is grooving, we can become affected by the very same groove. In the metal community, we have the “stank face,”⁹ a facial expression that indicates when something or someone is grooving. This expression has become something both musicians and listeners express when the

⁹ A human facial expression identified by the flaring of the nostrils and raising of the upper lip, traditionally associated with 1970s-influenced funk bass playing. Vocalist Jens Kidman may have popularised this facial expression in the metal genre. If you search “stank face metal” online, the result is a series of memes and pictures describing the feeling of hearing a great metal groove, or a heavy breakdown, often featuring Jens.

breakdown of a song is “heavy” or some aspect of the song is grooving. This face probably originated in modern metal with Jens Kidman, the vocalist of Swedish metal band Meshuggah.

Carlock also states that it is not only the beat that determines if you can feel a groove, but also what is happening *between* the beats, the relationship between elements. Musicologist Carl Haakon Waadeland states that the music grooves if its rhythmical elements lead to physical motion (Waadeland 2000).

Furthermore, musicologist Hans T. Zeiner-Henriksen claims that the rhythmical elements do not need to contain micro-rhythmical variations to make the listener move:

The question of which musical events are relevant to an analysis of grooves becomes clear when they are viewed in relation to their effect upon body movements. Rhythmic events that are repeated are central to the recognizable structures that form the basis for movement patterns. The ideal of machine-precise rhythmic timing in electronic dance music challenges popular notions in rhythm research related to the foundational nature of microtemporal discrepancies for grooves. Live musicians and subtle microtiming are in fact not especially relevant in the production of grooves in electronic dance music, particularly in comparison to recording techniques, rhythm programming, and sound design. I consider the activation of (rhythmic) body movements to be a central criterion when groove is used to describe aesthetic qualities. How the music is produced or played to activate this movement varies according to different musical genres. (Zeiner-Henriksen 2010)

It is very interesting that Zeiner-Henriksen states that how the music is played or produced to activate movements varies across different musical genres. What is considered a good groove in metal is not necessarily what funk players and listeners would consider a good groove. Groove in metal is more about energy, the accentuation and the relationship between the guitarist, bassist, and drums. It is not so much about the spacing between the beats, or the microtiming; it is more about the orchestration between the drummer and the string players, for example.

A good example of a metal groove is the introduction of British progressive metal band Tesseract’s song “Nocturne.”¹⁰ In my opinion, this is one of the grooviest riffs in modern progressive metal. The song features programmed drums quantised to the grid, but it is the relationship between the accented notes in the kick drum, cymbals, bass, and guitar that makes it groove, how the snare drum follows the guitar’s ghost notes and the offbeat accentuation of the

¹⁰ Tesseract, “Nocturne” (Kahney, Acle; O’Hara, Ashe), 2013, *Altered State*, Century Media – Listening example 1.

cymbal stacks. The riff in of itself lays a great foundation for a groove. Then when the drums emphasise this riff using clever orchestration, it makes me put my stank face on and headbang.

I grew up playing rock music and fusion and funk and pop. I always liked metal but it was never my forte in terms of what I focused on. I just had fun making people smile and laugh and move. That is what I enjoyed doing. Learning metal was secondary for me in comparison to that. When I teach now, I strongly encourage every single one of my students to focus solely—at first—on being able to enjoy and feel the music as opposed to trying to be perfect because you are never going to be perfect. (Matt Halpern, interview with Simen Sandnes, 2020)

2.2 Interviews

The qualitative research interview seeks to describe and the meanings of central themes in the life world of the subjects. (Kvale, Doing Interviews 2007)

With the qualitative interview formula, I collected experiences and thoughts from each of my informants, who were active musicians or engineers during the time there was a shift in how metal drummers played. To collect the required research data, I had the option to either analyse pre-existing interviews with these individuals, or to interview them myself.

Interviews are particularly useful for getting the story behind a participant's experiences. The interviewer can pursue in-depth information around the topic. Interviews may be useful as follow-up to certain respondents to questionnaires, e.g., to further investigate their responses. (McNamara u.d.)

I opted to conduct my own interviews, which fell under the broad term “in-depth interviews.”

An in-depth interview is a one-to-one method of collecting data where an interviewer and interviewee discuss specific topics in depth. In-depth interviews may be described as conversations with a purpose. (Hennink, Hutter and Bailey 2010)

From speaking with colleagues and other musicians about my research subject, I have found that this topic is of interest to many people. I have presented my research question publicly on my social media platforms (Facebook, Instagram, and YouTube), and it sparks great debates every time (I have not included any of these conversations in this thesis). Taking into account my experiences with these conversations, I decided to take a “general interview guide approach”:

The guide approach is intended to ensure that the same general areas of information are collected from each interviewee; this provides more focus than the conversational approach, but still allows a degree of freedom and adaptability in getting the information from the interviewee. (Valenzuela and Shrivastava 2016)

This way, I could ensure that all my interview subjects would be able to speak freely about their experiences, in what psychologist Steinar Kvale refers to as a “professional conversation” (Kvale, *InterViews: An Introduction to Qualitative Research Interviewing* 1996). My interviews were “interviews with elites,” which are interviews with people who are leaders or experts in their community (Kvale, *InterViews: An Introduction to Qualitative Research Interviewing* 1996).

I interviewed two of my drum idols, providing them with a good introduction to my research question and explaining why the topic was something I was interested in. Doing so, I quickly established symmetry in the interviewer–interviewee relationship.

The interviews focused on the interviewees’ stories, and I welcomed all philosophies and metaphors, in order for the subjects to be able to express their opinions. The stories came up spontaneously during the interviews, which I encouraged. This approach is called a “narrative interview” (Kvale, *Doing Interviews* 2007).

The structure of the interview was such that after I presented my research question, I allowed the subject to talk freely. The first interview I did was a bit stiffer than the later ones, as it was my first experience conducting a real interview. I was very well-prepared and had all of the questions written out, which made the setting somewhat formal. I had introduced the research question fully to my interview subject the day before, which resulted in the subject talking freely about the research question without the boundaries of the “interview setting.” This resulted in a great talk, but I was not able to collect any of the research material. Following this experience, I decided to only introduce the research question briefly when reaching out to my next interview subjects so that I could capture their candid, initial thoughts within the interview setting.

Kvale discusses the interview setting and how the first minutes of an interview are decisive (Kvale, *Doing Interviews* 2007). With this discussion in mind, I discovered that it was best to merge my questions into the conversations and to ask the interviewees to elaborate more on what we had discussed until we reached a natural pause in the conversation. Then, I proceeded with some of the questions that I had written down on paper. In this way, the interviews were more similar to a conversation than a Question and Answer session.

Finding interview subjects for my thesis was not as difficult as I imagined it would be. Drummers and studio technicians were extremely willing to join, and, with most people being active online these days, it was easy to get in touch with them.

Matt Halpern, drummer for the progressive metal band Periphery and owner of GetGood Drums, was the only interview subject who I had previously planned to interview. The rest of my interviewees were either recommended by someone along the way, or I encountered them in a convenient setting where it was natural to ask them for an interview.

Although I was planning on interviewing a larger number of drummers and producers, after my first two interviews, I understood that interviewing more than 5 or 6 people would be redundant. As Kvale states about how many interview subjects you need, “Interview as many subjects as necessary to find out what you need” (Kvale, *Doing Interviews* 2007).

2.3 Interviewees

Jakob Herrmann

Jakob is a world-renowned producer and engineer based in Gothenburg, Sweden. He has worked with some of the most popular metal bands in today’s metal and rock industry (e.g., Anthrax, In Flames, and Europe). Colloquially, Jakob is often described as the “king of drum sound.”

I attended a masterclass Jakob hosted about recording drums as an exchange student at Musicians Institute (M.I.) in Los Angeles in 2019. I was familiar with Jakob’s work, and we were already acquainted on Facebook because of a shared connection with the Swedish custom drum manufacturer Beat Head Drums. After Jakob gave his masterclass, I contacted him about my research topic. His reaction was, “Really? That’s amazing. You have to send me that as soon as you are finished with it.” I requested an interview, and we completed the interview in-person at M.I. the week after.

Little did we know at that time that Jakob would be hugely involved with the thesis. When I presented some of my planned research, he immediately offered to help me conduct it. That way, I could ensure that my research on real-life vs. quantised/sampled vs. computerised drumming was completed at a state-of-the-art studio used by popular metal bands. This also helped legitimise my research, as it is backed by one of today’s most in-demand studio engineers.

Jeff Bowders

Jeff is a drum teacher at M.I. I first knew Jeff from using his book *Essential Double Bass Drumming Techniques* during high school. At M.I., Jeff and I quickly hit it off, as we were both passionate about double bass drumming, and shared many of the same ideals about how a drummer should play and sound.

Jeff has played with some of the greatest rock and metal musicians in the world, such as Paul Gilbert, John 5, and Joe Satriani, popular acts such as Shakira, and sessions for MTV, Disney Channel, Discovery Channel, *The Voice*, and many more. Jeff, having been a very active drummer in the years metal drumming began to change, was a very interesting interview subject. We conducted an interview at his office at M.I.

Rich Mouser

I met Rich while working as a stage manager for the progressive metal drummer Mike Portnoy. Rich was the front of house sound engineer, and we toured together for two weeks in South America.

Rich has been a recording engineer for a long time, and has told me stories about how he did recordings back in the day with very limited technology. Rich has engineered albums for many great progressive and rock bands, including Clawfinger, Weezer, Neal Morse, Dream Theater, Spock's Beard, Transatlantic, and many more. I wanted to interview Rich because he has been in the industry ever since the changes in drumming began to happen. Rich invited me to his studio in Los Angeles, and we had a good day talking about drums, recording, and touring.

Matt Halpern

I first contacted Matt in 2015 when he was giving online lessons through his platform Bandhappy. We completed online lessons together, and then met in-person in 2016 and 2017, when his band Periphery was touring in Norway. Ever since, we have been good friends and, now, colleagues. Matt asked me to be an ambassador for his company GetGood Drums in 2018, and I have been supporting them ever since.

As Matt is the drummer for one of the pioneer bands in today's modern metal scene and owner of a sample library company, his thoughts on my thesis subject were very interesting to hear. Matt has also won multiple awards, including best teacher/clinician and best metal drummer in the drum magazine *Modern Drummer*, making his opinion particularly valuable.

Matt and I tried to schedule a meeting in Los Angeles, but because of a shortage of time, we did not manage to meet in person regarding the matter. We had a conversation through Skype, which I directly recorded into Pro Tools on my computer using software called Loopback, which allows for the internal routing of sound.

Baard Kolstad

Baard and I have been good friends for a long time, and I personally think he is one of the best metal drummers in the industry today. Baard has been challenging the norm with open drum sounds with very little sampling in his recordings with the band Leprous, which include very little editing and more focus on capturing the energy of the performance rather than the “perfection.”

Baard agreed to do a live interview through the streaming platform Twitch, where we talked for an hour about the subject with an audience of about 100 people watching. As our interview was live and we had a great discussion with the people watching as well, I decided to not transcribe Baard’s interview and use it in the thesis, as it would have been excess material.

Derek Roddy

The first time I saw Derek Roddy play, I thought, *This guy is not human*. But it turns out he is. Derek is one of a few extreme metal drummers who showcases his real performance in everything he does. His interview opened my eyes to how important it is to develop your own sound and style.

Derek has played with many bands, but is most known for his work with Nile, Hate Eternal, and his solo project Serpents Rise. He also won the title of Best Extreme Metal Drummer in 2014 from *Drum! Magazine*. I interviewed him through Skype as well, and we spoke for roughly two hours.

Jeff Bowders suggested that I contact Derek, as he reportedly held a very “controversial” opinion about the industry standards in modern metal. When I reached out to Derek through Facebook, I saw that this was one of the last Facebook posts that he had published:

Boy, sure would be nice to hear real drums and real drumming on modern metal recordings. (Roddy 2019)

Since the purpose of this thesis is to explore and make an impact on the metal industry, I had to ensure that I was not the only one who had noticed the changes that had happened with metal

drumming. I chose a qualitative methods approach to collect data from different informants and compare them against each other to see if I could find any recurring patterns in their answers.

A friend of mine was working for Lady Gaga and she was talking about how on an album she wanted to use real people playing and real instruments. She didn't want the drum machine all programmed out. She wanted it more real. When you get big pop artists thinking that way... (Rich Mouser, interview with Simen Sandnes, 2019)

Additionally, it is very promising to see that a hugely popular artist such as Lady Gaga, who is involved in an industry/genre in which most of the instruments are programmed on a computer, wants to bring back real musicians to play on her next record.

2.4 Focus Group Interviews

For the “Four Drummers vs. a Machine” project, I will conduct focus group interviews with different types of musicians and producers. Focus group interviews can be a great way to investigate consumers’ motives and product preferences (Kvale, Doing Interviews 2007).

Admittedly, it will be difficult to determine the best way to conduct these interviews, as obtaining participants’ honest opinions on each version of the drummers’ performance can vary depending on the information they have received on the topic, and what they are listening for. If I do not tell the focus group members what they should be listening for, will their answers be truthful, or will they vary because there will not be any context to their answers? If I give the participants too much information, I might affect their answers, accidentally favouring what I want them to answer.

Leading this form of interviewing requires extensive training, especially if you want to be an efficient, effective moderator (Kvale, Doing Interviews 2007). A focus group usually consists of six to ten participants led by one moderator (Chrzanowska 2002).

Because of the COVID-19 pandemic, gathering these groups physically is not possible, so I will conduct the focus groups virtually over Skype or FaceTime.

My first focus group will consist of up-and-coming producers, engineers, and musicians. My second group will only be highly acclaimed musicians and producers.

The aim of the focus group is not to offer a consensus or solution to the issue being discussed, but to bring forth different viewpoints on an issue (Kvale, *Doing Interviews* 2007). The issue here is if the focus group participants prefer real drum performances over artificially created drum performances. The focus group participants will be anonymous, and they will submit their answers using Google Forms. There will be multiple-choice questions to answer about each drummer's performance. After the participants have entered their answers, we will talk about their experience and discuss the matter at hand.

2.5 Ethical Issues

I know from my own experience that I would be hesitant to state in public that my own drum recordings are quantised. Hence, I am assuming that other drummers, especially highly acclaimed drummers who have received awards for their drumming, would be reluctant to share such information as well. One potential issue with my thesis is that I want to highlight the "truth" among the interviewees, but I do not want the drummers to be anonymised, as their identity is crucial for the thesis. Thus, I will only interview subjects who I know do not want to be anonymised.

During qualitative interviews, the interviewee might exaggerate or downplay certain aspects at the expense of others. For example, the drummer might decorate the "truth" by exaggerating his own skills and downplaying his experience with quantisation, sample replacements, and programming. I know from talking with the mix engineers involved with some of the most extreme and ground-breaking metal drum recordings that there has been plenty of programming, quantisation, and "fixing in the mix."

It is going to piss people off if you repeat it but I have to be honest. The metal community, we used to laugh at pop and shit because it was so fake. I honestly think that the metal community is probably the fakest community in the entire industry. It is the truth. (Derek Roddy, interview with Simen Sandnes, 2020)

Derek, however, was extremely honest in our interview. He was not afraid to state that things were being faked, and that he had talked with engineers who had fixed and sample-replaced other drummers' performances without their knowledge. I was amazed to hear that Derek had never done these things to his own drumming. Since the beginning of his career, he

has been very focused on developing his own sound and expression, having avoided using click tracks and having never edited his performance—which is probably why he has become such a world-renowned drummer.

On the other hand, I hope that people can be honest about their experiences if they have already knowingly allowed engineers to quantise their drum parts. Quantisation and editing have been considered standard in the genre since the beginning of the 2000s, and if someone says today that their drums have been quantised, you don't blink an eye, because “everybody” does it. But back when groove, feel, and power were the ideals, playing “quantised-tight”¹¹ was new and ground-breaking. If their performances were artificially created or enhanced using a computer, will performers admit it if they are not anonymised? My ethical issue is this: Will my subjects be honest when they reveal personal information?

The everyday community accepted that in the pop world for a long time until everybody woke up to the fact that it was fake. That is when music died. It was not MTV. At the end of the day it becomes unimportant because the stuff is not real. Again, music is where it is at because of it not being anything real. (Derek Roddy, interview with Simen Sandnes, 2020)

What Derek states here is extremely important. When producers take away everything that is real about an artist's performance in the studio, all music can begin to sound similar. The listener then changes their perspective on and expectation for music as a whole. Today, the regular listener may not know the difference between a real music performance and one that is artificially created because we have become so used to hearing the artificially created ones.

Interestingly, some of the drummers I contacted were extremely open about the issue of artificiality, and keen on telling the complete truth about the subject. They were more than willing to participate and thought this was a subject that needed to be talked about more, and a trend that needed to change. On the other hand, some drummers I contacted for an interview had absolutely no interest in participating, even though they have a very strong opinion in favour of the human touch and feel. The setting of a master's thesis interview may have been too formal for some of the drummers and engineers I contacted.

All interviews have been completed with full permission, and each participant has been given the option to be anonymised or removed from the thesis until its publication. Derek Roddy

¹¹ To play “quantised-tight” means to play in a way that is so precise that it seems already quantised.

was the only subject I chose based on advance knowledge of which opinions he had on the subject. In contacting the rest of the subjects, I had no idea where they stood.

This thesis might become too large of a project, even though it has a very clear research question, as the terms around it are very subjective and there is no right or wrong in art. But that is also why the topic is interesting, because in today's metal scene, we have set a standard for what art should be.

I think it is interesting that you say the word "should," right? Because all of a sudden, we have a standard for art. This idea of living up to what we should sound like robs us of our identity. There is a level of competence and a level of technique and ability that we should all strive for obviously. But when we are talking about quantising to the grid and everyone to that and that is the goal and if anything short of that is considered wrong, then that is robbing ourselves of feel and personality. (Jeff Bowders, interview with Simen Sandnes, 2019)

2.6 Technical Issues

In the article "The qualitative research interview" (DiCicco-Bloom and Crabtree 2006), the authors review the interview setting and the technical issues that may arise while doing interviews. They mention that the process of transcribing interviews is a relatively unexplored area (DiCicco-Bloom and Crabtree 2006).

It can be difficult to transcribe interviews because of sentence structure, use of quotations, omissions, and mistaking words or phrases for others (Meadows and Dodendorf 1999). To ensure that the transcriptions were done in the most professional manner, I hired Totaltekst, who specialise in transcribing, translating, and other text services. Their service is also recommended by the Language Council of Norway.¹² I have also read through all of the transcriptions while listening to the actual recordings in order to clean up any phrasing or terminology mistakes.

The problem with storing interviews is that interview subjects' statements can be incontrovertible. Recorded data should be carefully guarded and generally destroyed after transcribing (DiCicco-Bloom and Crabtree 2006).

¹² See the following link for more information about Totaltekst: <https://totaltekst.no/en/about/about-the-company>

As all of my interview subjects are interested in the thesis topic, they have consented to the use of their interviews. I have also given every interview subject the chance to read through the transcript of their interview and change or take away any of the written statements. In addition, I will not mention by name any bands or other performers who are referenced in a negative way in my thesis, and will instead say “a well-known drummer, band, or producer.” This is to prevent the interview subjects from encountering any type of unwanted attention or possible conflict.

The collecting of research data has been approved by the Norwegian Centre for Research Data and follows their guidelines for collecting personal information and research data.

3. Showcasing Differences

The evolution of the sound of metal drumming can be heard when comparing Iron Maiden's "The Trooper"¹³ (released in 1983) with Pantera's "Walk"¹⁴ (released in 1993). The former song consists of open, perfectly sloppy, but still very groovy and precise drumming; the latter song's sound and drumming are on another level. The open drum sound has now turned to a very short and closed sound. The entire mix of guitars, vocals, and drums shines through on the high end. One of the reasons the drums sound so defined is because of the use of drum samples, which adds extra definition to each hit with a new (most likely) static drum hit/sample that is even throughout the entire performance. I chose to compare these two bands to show how clear the evolution of the drum sound was in heavy metal. Interestingly, Iron Maiden preserved their open, pushy, and natural drum sound even on *Fear of the Dark*, which was released in 1992. As you can hear very clearly, the presence of the bass drum is different on *Fear of the Dark* and "Walk," even though they were recorded in the same year. ("Walk" was recorded in 1991, but not released as a single until 1993.)

Another band you could compare Pantera with is Sepultura. Their 1993 release *Chaos A.D.* still contains a lot of the natural drum sound. You can hear that the kick drum sounds tighter than on their previous records, but it has nowhere near as many highs and as much definition as Pantera's "Walk."

3.1 EQ Analysis of Drum Tracks: "The Trooper" (1983) vs. "Walk" (1993)

From the EQ analysis of Iron Maiden's "The Trooper," I can see that it is muddy compared to "Walk" (see Figure 1). There is a huge cut from around 300 Hz to 1 kHz on "Walk," a space that is usually filled by distorted guitars. Perhaps that frequency area has been cut out because Pantera has a gnarly distorted/overdriven guitar sound that could occupy this space. Maybe the drums were shaped by the guitar sound. In order to cut through the mix, would the drums need to sound more precise and have more high-end to be heard?

¹³ Iron Maiden, "The Trooper" (Harris, Steve), 1983, *Piece of Mind*, EMI – Drum Track, listening example 2.

¹⁴ Pantera, "Walk" (Dimebag, Darrell; Paul, Vinnie; Anselmo, Phil; and Brown, Rex), 1993, *Vulgar Display of Power*, Eastwest – Drum Track, listening example 3.

It is interesting to see how “The Trooper” drum sound becomes more “modern” if, in it, we try to replicate the EQ curve from “Walk.” The modern metal drum sound in this case being mid-cut with a high-end boost.¹⁵

“The Trooper” “Walk”



Figure 1. EQ curves from “The Trooper” and “Walk” drum tracks.

3.2 “In Between” Production and Change

We have another example in Gene Hoglan, who played drums for Dark Angel. Their 1989 release “Leave Scars”¹⁶ is a good example of a mixture of the drumming of both worlds: the open sound, but extremely precise drumming. What the drum track lacks is definition in its sound. Much of Gene’s playing is not heard, as the drums are not defined enough. The complex double-pedal playing can barely be discerned because the drums are too open and resonate too much. As guitars became louder and more overdriven/distorted, drums required more definition to cut through the mix. This was done through tuning, dampening, and the use of close mics on each drum to manipulate the sound in a way to make every aspect of the drumming audible.

As technology became better, more tracks could be recorded, and studios became more digital. With that, drum sounds became more distinct. You could now hear every single detail the

¹⁵ Iron Maiden, “The Trooper” – Modernised EQ, listening example 4.

¹⁶ Dark Angel, “Leave Scars” (Hoglan, Durkin), 1989, *Leave Scars*, Combat - Listening example 5.

drummer played, which was not possible before. This made it more important for every single drum hit to be precise and consistent, as it would all be heard and not “drown” in the mix as it would before.

This technological shift led to a new sound and a new direction of how to play. Drummers had to be more precise, or all their small imperfections would be heard—hence the thesis title, “Where Did the Groove Go?” With all the musical elements now being 100% tight and all performances edited and sampled, the groove disappeared. There is a reason John Bonham of Led Zeppelin still is a relevant drummer; he had his own groove and did not sound like anyone else. The same is true of Ian Paice of Deep Purple and Vinnie Paul of Pantera—they all had their very own signature sound.

I think that that Necrophagist¹⁷ (1995) record started all this. I think people were going for that and realised that the only way they could do it was to grid it. If that is the way, it just took over the whole recording community because they were trying to replicate that one record. That happens every decade or so... I think that is why quantising was admitted to solve sloppy drumming. Once these drummers got back to the studio and heard themselves, especially with samples on, it was a mess. (Derek Roddy, interview with Simen Sandnes, 2020)

It’s very interesting that Derek says that everyone in the scene attempted to replicate a single album, and that this happens every decade. After Periphery released their album *Periphery II: This Time It’s Personal* (2012), every progressive metal band tried to replicate the sound on that album. I remember the first time I heard it; I had never heard anything like it, and the album was extremely unique at that point. It revolutionised the progressive metal genre at that time. Eight years later, technology has come so far that anyone with a computer and a DAW can achieve the same sound.

YouTuber Rick Beato has published two research videos: “How Computers Ruined Rock Music” and “How Would John Bonham Sound Today? (Quantized).”

He says the following on the first topic:

Feel or groove is really a sense of swing or a person's rhythmic sense. Do they play in a way that makes you want to move, whether it's dancing or tapping your foot or moving your head or even jumping around in a mosh pit does-it-make-you-move? I'm

¹⁷ Necrophagist was a German technical death metal band.

talking about human beings playing music that is not metronomic or quantised. I want to define this term “quantisation” or “quantising.” Quantising is where you determine which rhythmic fluctuations in a particular instrument’s performance is imprecise or expressive, you cut them, and you snap them to the nearest grid point. Once you’ve done, this depending on the level or strength of the quantisation or quantising, you’ll have a machine-like precision.

It’s all (rock music today) on grid and never changes tempo. There’s no flow, there’s no feel, I mean, to me it doesn’t even sound like real music because it’s kind of not like real music. (Beato, How Computers Ruined Rock Music 2019)

To explain the second topic, how John Bonham would sound today, the YouTuber quantises one of John’s drum tracks and compares the original drum track with the quantised one:

Not only is it (the real performance) more dynamic, it breathes. Some of those slightly delayed kick drums make the groove breathe. The quantised version is so stiff. Once you quantise, it just sounds dead, it sounds robotic, it sounds programmed. There’s really no comparison between the two... The real-version Bonham in human form sounds amazing, has so much more feel, especially with that “Purdie shuffle.”¹⁸ No comparison between these. That is actually really enlightening to me, because the idea of quantising John Bonham, not only is it sacrilegious, but it sounds horrendous. (Beato, HOW WOULD JOHN BONHAM SOUND TODAY? (Quantized) 2019)

As Darkthrone drummer Gylve “Fenriz” Nagell says in 2013 in an interview with Norwegian music magazine *Eno* about drum sound:

In the 80s, the big thing was to copy the feel of a stadium on each and every album. Shit sped up in metal after a while. The drummer works his ass off and plays really complicated stuff. And tells everyone, “Everything I do on the drums has to be heard.” Then the engineers said, “If you want that much bass in your bass drum, you will only hear rumbling.” [To] which the drummers replied, “Remove the bass in the bass drum, then you’ll just hear clicking!” Oh, no. That’s when it all started to go downhill. It started in 1986 to 1987 and then just snowballed. I hate that. There is nothing I hate more. Just put some bass in the bass drum, don’t be an idiot. (musikkmagasin 2013)

¹⁸ A type of shuffle groove invented by the highly acclaimed drummer Bernard Purdie.

3.3 Rise of Bedroom Producers

From the early 2000s to around 2014, there was an explosion of guitarist and bedroom producers programming their drums, and then asking a drummer to play the parts on a real drumkit in a studio before quantising the drumming to perfection in the mix. As the programmed drums were spot-on the grid, the “real” performance had to be as well. This unrealistic expectation of drummers having to be as tight as programmed drums has shaped the way drummers play today.

Guitarist and producer of the modern metal band Tesseract, Aclé Kahney, has this to say about how the genre developed and how the band writes drum parts:

It was probably back in 2002 / 2003 when the online community of producer–musicians who spawned the bands of this new wave of progressive metal, or “djent,” began to come together. A key unique factor that set this community / scene / then-to-be-genre apart from others is that it had no geographical base; people from all over the world were (and still are) sharing ideas, recording parts for each other, and even jamming via the Internet. Like punk came from the bars, clubs, and rehearsal rooms of New York, this scene started in chat rooms, forums, and home studios. This made it easy for many like-minded people to find each other, something which would have been impossible without the Internet. (MetalSucks.Net 2010)

From then on, more and more musicians could start to achieve studio-like quality without having a real studio. To be able to obtain this quality, they were forced to at least use samples, as recording drums properly requires great attention to detail in terms of tuning, playing, microphones, microphone placement, pre-amps, room treatment, etc. Some studios and rooms just sound better than others. But with the rise of bedroom production, you could easily, instantly get the good drum sounds on your recording.

Unfortunately, with the way modern metal has been recorded, with tons of sampling and triggered layering on top of the sounds and quantising, it makes even a drummer sound like a machine. Also, for the drummers that grew up only listening to that style of music, they then end up learning how to hit the drums and end up playing so they sound like that. There are very strong benefits to that kind of ability, like being powerful and being consistent. Having a very on-the-beat, quantised sense of time and feel. The downside is that you lose groove, to your point. You lose fluidity. You lose the artistic side. You lose motion. In a lot of ways, you lose the fun of it because the fun of it is in the dancing and the movement, not in making it sound perfect. (Matt Halpern, interview with Simen Sandnes, 2020)

3.4 Modern Production / Standard Metal Production

With Fleshgod Apocalypse's release *Agony* (2011),¹⁹ you can hear just how much the sound of drums in the metal genre has changed. The drums are extremely precise, and the overall production is of very high quality. The bass drum does not even sound like a bass drum anymore—it sounds more like a clicking noise or a machine gun.

To hear every bass drum hit at this tempo, which is 270 beats per minute, there must be enough definition in the sound to tell each hit apart. If the drumming were as open-sounding as Gene Hoglan's performance on "Leave Scars," we would basically just hear a continuous note, instead of individual hits. We can also tell from the drums' precision that this performance is quantised. No human plays so precisely at this tempo. Having watched many live clips of this drummer, I can tell you that the playthrough does not match the studio performance. Even though he plays with extreme precision live, the performance has a human flaw to it and, in my opinion, grooves more.²⁰

Derek addresses the issue of bands being able to perform their music live, and how these performances may not compare to the studio version:

This is the problem with the acceptance of this [editing and samples] because we say "as long as they [the band] can do it live." Record that shit and tell me that sounds like their record. No. It does not. Far from it. (Derek Roddy, interview with Simen Sandnes, 2020)

Meanwhile, bands such as After the Burial²¹ and Born of Osiris²² have incorporated this way of editing to make everything sound extremely tight as an artistic decision. This style definitely has its own flavour, and there are many aspects of the music that make me appreciate it. Does it groove? I do not think the goal of these bands is to groove—their goal is to make tight music. In watching Justin Lowe,²³ the former After the Burial guitarist, you can see that he does

¹⁹ Fleshgod Apocalypse, "The Violation," 2011, *Agony*, Nuclear Blast – Music video, <https://youtu.be/xjKyzwqIT7s> - Listening example 6

²⁰ Fleshgod Apocalypse, "The Violation," Live Drum Playthrough – <https://youtu.be/451Kzibd14w> - Listening example 7. Starts at 00:11.

²¹ After the Burial, "Neo Seoul," 2013, *Wolves Within*, Sumerian Records – <https://youtu.be/9hOghDTPvJg> - Listening example 8

²² Born of Osiris, "Machine," 2013, *Tomorrow We Die Alive*, Sumerian Records – <https://youtu.be/wLdlw46Ru9I> - Listening example 9

²³ After the Burial's Justin Lowe demos the Ibanez RG90BKP, Live Guitar Playthrough – <https://youtu.be/9l64aDvWTvk> - Listening example 10

not move too much while he is playing. Rather, he is focused on playing the correct notes as tightly as possible. In my opinion, this guitar playthrough has some more character to it, as it not as edited, or edited at all, as opposed to the original recording. There is a bit more sense of air to his playing here.

Examples of live vs. quantised performances include two “live” YouTube playthroughs by drummer Luke Holland of the same song, where one is obviously quantised, and the other is totally live. Luke Holland is a great, highly respected drummer, but it is easy to see and hear which is the real performance and which is artificially created.²⁴ The majority of Luke’s performance in the real live video is very good; this is an instance in which the composer (Jason Richardson) has composed something beyond Luke’s level of double-bass drum playing—or the level of basically any human. The only way to have it sound as it should on the record and playthrough video is to quantise or program the drums.

World-renowned session drummer Thomas Lang shares his opinion on the matter:

The way I see it, musicians will be in two camps: performers and recording artists. Performers are the people who can play precisely in a recording and a live situation, who can really play, and who don’t need to quantise or Beat Detective their performance, and then there will be the musicians who are not really session players, because they’re not precise—they have to be Beat Detected and quantised, they are not really proficient performers. They may be players, but they’re not good enough to perform live without the aid of technology, and there will always be those two camps: the guys who don’t need technology, and will be “live” performers, and ultimately the more valued musicians, and then the guys who are really not up to par performance-wise, and will need to use technology to make their performance better and enhance or improve it, and work mainly in bands with their friends and are not so great when they perform. And I see this already now, everywhere, there are guys who really can’t execute the stuff on stage. They sound amazing on record, because it’s a fantastic edit, but it’s not a great performance at all. You see that on YouTube a lot, you get these videos that people make that are all Beat Detected and sound-replaced and quantised, and you’re like “wow!”, and then I see them live and there’s nothing. So

²⁴ Version 1 (Quantised): MEINL Cymbals. 2016. *Meinl Cymbals Luke Holland Jason Richardson “Hos Down.”* 14 November. <https://youtu.be/MYHq2OYRpE4> - 5:53–5:56. Listening example 11.

Version 2 (Live): MEINL Cymbals. 2018. *Meinl Drum Festival – Luke Holland – “Hos Down.”* 20 June. <https://www.youtube.com/watch?v=z-aTXSsiGeQ> - 5:43–5:46. Listening example 12.

there's definitely a huge discrepancy between what people produce, and what people can actually play without the aid of technology. (Lang 2014)

4. Four Drummers vs. a Machine

The original plan for this project was that Jakob Herrmann would travel to Kristiansand, Norway, from Gothenburg, Sweden, to work with me in Studio A at the University of Agder. Because of the COVID-19 outbreak, we could not proceed with the project as planned. Instead, I completed the recordings myself at my practice room in Oslo, Norway. Being experienced with session work and recording drums for other artists many times per week, I felt confident enough to take on the task of recording and engineering the drum performances. Again because of the COVID-19 crisis, I unfortunately could not record all the drummers at the same time as intended. (This had been the intention in order to ensure no differences in tunings, mic placements, etc.) However, each drummer used exactly the same kit, with exactly the same setup.

I will now present the four drummers and why I chose them:

1. Lars Erik Asp

Lars Erik has been my drum teacher and “guru” since I entered Vågsbygd videregående skole in 2010. We have worked together often and discussed my master’s thesis in depth. Lars Erik plays with a traditional grip and has been a professional drummer for the last 15 years. I thought it would be interesting to see the timing, sound, and choices of someone with whom I have been taking lessons for over five years. Lars Erik was also my main instrument teacher this past semester.

2. Carsten Omholt

Carsten is a fellow student at the University of Agder and has impressed me with his work ethic, great sound, and creativity. Although he used to play metal, Carsten has been playing more fusion and jazz since he entered the University. Carsten hits more softly than both Lars Erik and I, but he has a really great flow. I was curious to see how his sound would differ from ours, and how samples would affect his style, as he comes from a world where samples and editing are not present.

3. Baard Kolstad

As previously mentioned, Baard is one of the leading drummers in today’s progressive metal scene. Baard has a truly unique style and hits incredibly hard. His flow is also very good, and I thought it would be fun to see such an acclaimed drummer take part in this task.

4. *Myself, Simen Sandnes*

I decided to immerse myself in the research to see the differences in sound, touch, and feel between the other drummers and me. It is always enriching to analyse one's playing at a scientific level, and to actually see and hear what the differences may be. Do I have my own personal sound?

4.1 The Song

I asked my good friend Filippo Rosati, a skilled guitarist and composer from Rome, Italy, to create the track we drummers were going to play along to. Filippo and I have been working together for a couple of years, and I played drums on his solo EP. He makes high-quality modern progressive metal, the genre in which most people these days use drum programming, samples, and editing. As I mentioned earlier in the thesis, he is what we would call a bedroom producer, like most modern progressive metal musicians are these days.

I requested that Filippo create a short, 1- to 2-minute-long modern progressive metal song in the style that he usually does. The main riff of the song had to contain a basic bass drum ostinato that followed the guitar and bass. "No double pedals" were the only limitation I gave him. Along with the track, he sent me his programmed drums, but I rewrote them to be easier for the drummers and to have a more natural feel. Lars Erik was the only participant who heard the programmed drums, as he had limited time and wanted to review them before he said "yes" to the project. I then sent him the song without drums and with a drum sheet. Baard and Carsten only received the drumless version of the track and the drum sheet.

My initial idea was to ask everyone to play the exact same drum part, note by note. But I quickly realised that this request would be unrealistic, as every drummer has their own personal approach, with ghost notes, fills, and internal dynamics. I then decided that each drummer could "do their thing," but within set boundaries: no gospel chops, only triplet-based fills between kick, snare, and toms, etc.

Another initial idea for this research project was to see if the drummers could be recognised from one another *after* they had been quantised and edited. But that became uninteresting after we saw how much of a fingerprint each drummer left on their part. Just inserting a snare sample on Lars Erik's part took away everything that was unique about his snare drum touch, making he and I sound similar immediately.

It then became more interesting to see which version of the three different versions—the original recording, the quantised and sample-replaced recording, or the entirely computerised

recording—would resonate the most with people. I decided to pursue this question in the form of a survey and focus groups. For the drummers who knew what had happened, though, there was no doubt at all. Everyone liked their real performances much better than both the edited and sampled and programmed tracks. To quote Carsten: “*The programmed version of me sounds like shit.*”

4.2 The Sessions

The drum recording sessions took place in early July 2020, and we mixed them in mid-July 2020.

In the first session I did with my instructor Lars Erik, we immediately noticed how different we sound. We could at all times know which take we were listening to without knowing what was playing back on the speakers. Lars Erik had more open low end in his bass drum than I did, and he had more ring to his rimshots on the snare. Meanwhile, my bass drum was a bit more “clicky” and concise than Lars Erik’s. Additionally, Lars Erik was more on-the-beat with his back beat (snare), but he was a bit behind with his kick drum, making the double-kick drum notes a bit close. Because he was a little behind the beat, some of the hits within his playing were slightly rushed. I know from recording myself often that I am constantly pushing the beat, meaning that I am always a bit ahead of the click. Usually, you can just move my entire take a couple of milliseconds back to align it with the grid. This was also the case in this recording.

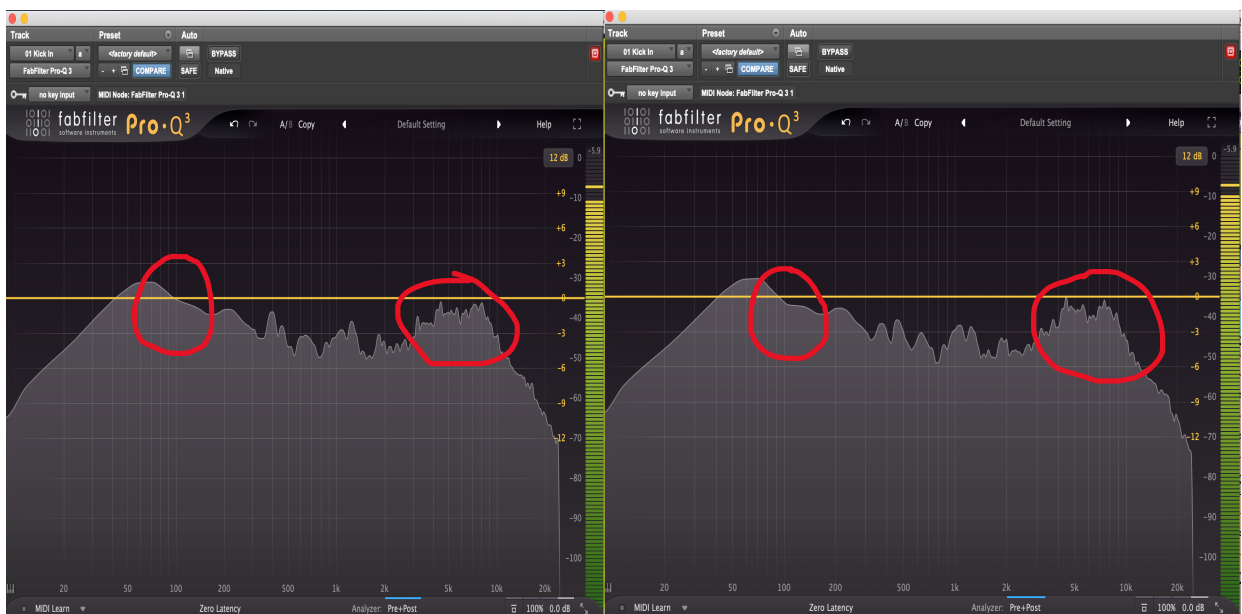


Figure 2. Lars Erik's (left) and Simen's (right) kick drum average EQ curves.

As shown in Figure 2, there are minimal differences in the actual EQ curves of our performances, but as stated earlier, we noticed that Lars Erik had a bit more bass in his sound. Looking closely at the 100 Hz mark, you can see that Lars Erik's curves take more time to go down. His recording has more information in the 100 Hz area than mine does. This difference is, again, very minimal, but it shows us that our ears were right, and that we can trust them in analysing sound further in the thesis. I also have higher peaks at 5,000 Hz and at 7,500 Hz, meaning that I have a bit more high-end (click) in my kick, which we also heard.



Figure 3. Lars Erik's (left) and Simen's (right) snare drum average EQ curves.

Earlier I stated that Lars Erik had more ring in his snare tone than I did, even though our takes were recorded immediately after one other. My snare recording has a large dip around 400 to 700 Hz. If you use an EQ analyser, you can see that from 400 to 700 Hz is where the snare drum ring is (see Figure 3). My snare recording also has more information in the lower frequency range, around 100 Hz, than Lars Erik's does.

The second day of recording involved Beard, Carsten, and me. To minimise any tuning differences or pre-amp changes, I decided to record my track again with them in order to make a fair comparison between us. It turned out that the changes that had occurred between day one and day two were so minimal that there was no need to use both of my takes; the results were so close that we could all tell the differences based on playing style rather than the microscopic changes in tuning and pre-amp gain on kick, snare, and mono room mic. I then decided to keep my take from day two.

We immediately noticed that Carsten played more softly than Beard, Lars Erik, and me. We had trouble hearing his first kick hit of the double kick pattern, where the two notes come straight after one another. However, this is something that makes Carsten's playing very pleasant

to listen to; his internal dynamics are great. He also added more ghost notes than I did, and Baard naturally did the same (without hearing Carsten's performance).

Baard was also a bit softer than Lars Erik and me on the first kick hit of the double kick drum pattern, but not as soft as Carsten. Baard is a powerhouse and played the drum part with ease. He was the most "on-the-grid" of all of us and played some really tasty drum fills that were impossible to replicate nicely when programming his performance. We also noticed something very interesting when Baard listened back to his performance. He said that in the beginning of the song he was a bit behind with the snare drum. But actually, taking the "grid" as our blueprint, we noticed that his kicks were early while his snare playing was perfectly aligned. This situation opened our eyes to how we each interpret time: Baard felt that his snare hits were behind, while in reality his kicks were early. But if we had moved his kicks onto the grid, his snare would indeed have been behind. The idea that, internally, his snare was behind the beat compared to the fact that, on the grid, his kicks were early was interesting to see and hear. These types of small nuances contributed to the unique feeling of each performance.

From the discussion presented here, we have established that there are some key objective differences between the playing and performances of Lars Erik, Carsten, Baard, and me, and that we all have our own unique fingerprints in how we interpreted the song. As I stated earlier, a lot of people say that all metal drummers sound the same in today's metal. The fact is that drummers do not sound similar, but engineers and producers are the ones who takes away their unique timing (micro timing) with editing and replaces their sound and touch it with drum samples. When four drummers sound different on the exact same setup, think how much the sound would change if everyone recorded at their own setup, with their own drums, cymbals, heads and tuning of choice.

I asked Filippo (creator of the song) to rerecord all of the guitars and bass tracks to match each drummer's performance, to lock in more with their natural time and feeling. What I then noticed was that Filippo struggled to lock in with some of the players more than others. Filippo is an very tight guitar player, and I can imagine that this occurred because he is used to record his guitars to quantised drums and has not done many recordings where the intention is to lock in with the drums and not the grid. The natural feel of him recording to each drummer still feels more "alive" than the recording made to the programmed drums, but at some points, he could not lock in. I very lightly edited the guitar recordings in those exact places to lock in more with the drums, totalling five to ten edits across all four performances. I asked Filippo about my findings,

and he agreed with my statements and to be edited. Here are more of his thoughts on the recording process:

Recording the same song for four different drummers changed my perspective and my playing during every single take. Four drummers with a unique style and technique. I've found myself adapting to every one of them without even noticing. I felt more confident and comfortable in different parts of every drummer's performance; I also noticed that a simple dynamic change altered my playing and my vision of the song radically.

I certainly developed more and more ideas through each take, I even changed notes or techniques in some parts where I feel that a particular drummer was inspiring me to do so. Watching them play on video also helped a lot in creating a bond with them during recordings.

I definitely see how a different drummer can drastically affect the ending result of a piece of music.

Following: A detailed report of my experience with every drummer.

Baard:

Baard is an incredible drummer, his energy almost made me break my strings. His drum chops and fills really made me feel like I had super solid ground under my feet while playing. It's incredible how a drummer can give such great energy and feel to a simple one-minute song. I noticed that my best bass recording was on this take.

Carsten:

With Carsten, I had to dig further looking for the right dynamics for every part of the song. This surely was my softer take, but I must admit I was certainly pleased by the result of the solo section. He has an excellent time feel!

Lars Erik:

This was a challenging one; his timing is really different from other drummers. I adapted both guitars and bass in order to fit his "straight-ahead" time feeling that I had listening to his drumming.

Simen:

Having worked with Simen in the past it was like coming back home after a long run. His energy and his time feeling just perfectly fit mine. I really felt the right groove I imagined for the song. I have to mention that he probably had the most powerful kick drum of the whole “quartet,” that led me to slap the bass harder and to be more aggressive on guitar rhythms.

I was also driven a lot from his cymbals: a nice and solid groove that immediately felt familiar and comfortable for me. (Filippo Rosati, interview with Simen Sandnes, 2020)

After receiving feedback from the first few people I sent the survey to, I decided to only use the initial track Filippo made for all the drummers’ performances. The later tracks, in which he rerecorded to each drummer’s performance, were not used for the final survey, as there was a risk that the focus group participants would react to the differences in guitar tone, dynamics and mix of the music rather than the changes in the drummer’s sound.

I sent the files from Filippo and all four drummers over to Jakob in Gothenburg, Sweden. We have been communicating through FaceTime and Screen Share, which are apps made by Apple. We also used a plugin called Listento, which sends the master bus in his DAW to an online streaming service, where I can log in and hear exactly what he is doing on the mix of drums. This way I could see Jakob’s screen as well as hear his work and communicate with speech. Although this is not an ideal setting, it gets the job done.

Jakob was happy with the recordings I provided, and we got quickly to work. The only thing I did not plan for was how long this project would take. Preparing the files, programming the drums, planning with the drummers, and directing Filippo to make the song became a much more comprehensive project than I could ever have imagined.

Jakob and I spent half a work day preparing the project, three full days mixing, editing, and sampling, and then half a day making the last finishing touches. I was really amazed by Jakob’s work ethic and how thorough he is. With him, it’s either done right, or not done at all. I transcribed some of Jakob’s statements while we were working on the project together:

As soon as I started editing, it just sounded boring. Now this does not sound like an individual. I already feel like I have taken away a lot of the drummers’ identity.

So now we have established that he (Lars Erik) sounds 100% as boring as the programmed drums when being edited to grid. This sound so weird, man. When editing, we are making them all stale, we are transforming their performance to “notes” on a paper.

Not being on the grid is seen as a mistake, but it's really just everyone's individual style.

What you are doing is creating the perfect meal to look at, but it tastes like every meal out there.

To be good is to be able to not "play on the grid" but play music instead.

When you sound-replace a drummer, that is, a jazz drummer like Carsten, he even sounds more unnatural.

In the mix we had to turn off the kick and snare drum gate on Carsten, as he did not hit as hard on each hit as the rest of the drummers. His softest bass drum hits did not go through gate threshold.

Lars Erik puts his ghost notes in a part of keeping the groove nice and steady. Carsten does them as a part of his groove, but does not play them as hard. Simen keeps them as a part of the groove and timing but plays them a bit harder and audible than Lars Erik, while Baard plays them as a part of his groove but very audible.

Carsten was probably the most "alive" drummer of you all. His natural playing had a great flow and he played around the grid, making it sound alive and human.

The way we mix today is so different than a couple of years ago. Everything has to be loud all the time; nothing really sounds like the real instrument anymore. I'm not saying it's a bad thing. But I do feel some of the nuances get lost. (Jakob Herrmann, interview with Simen Sandnes, 2020)

To make the comparison between the sampled and programmed drums with the real performance as fair as possible, we mixed all the sampled drums individually, just as we would do on a normal drum mix. We used Superior Drummer 3 from Toontrack for the samples and programming, as it is the most popular drum sample library on the market today. We also EQ-matched all the samples with the real drum performance.

From my interviews, it seems that most of my interview subjects prefer a natural sound with real performances over edited and sampled performances. But as Derek Roddy said in my interview with him, when fans were polled to ask if they thought it was okay to sample and edit, around 60% said they were okay with it as long as the band could pull it off live. Thus, I want to

figure out if these people actually do prefer real drums over edited and sampled or even 100% programmed drums.

4.3 Focus Group 1

I posted in the Facebook group GetGood Drums Forum, which consists of people who regularly use GetGood Drums products, and asked if anyone wanted to participate in a survey. I would be sending them all four drum performances, with videos, containing three different bounces²⁵:

1. A) Real performance, mixed by Jakob Herrmann.
2. B) The drum performance quantised 100% to the grid, with all shells replaced with samples.
3. C) 100% programmed drums, but with the same samples as in the second mixdown (B).

I would not be telling the participants anything about the mixes. The only thing I would want to know from them is which one of the versions resonated with them the most, or was most to their liking.

To prevent the participants from discerning a pattern, I would change up every drummer's mixes, meaning that the tracks labelled A, B, and C change for each drummer. If every drummer's A track were to be the real performance, it would be easier for listeners to compare every drummer's take and figure out that A is the real performance. Does the listener actually enjoy real performances over edited and sampled performances? My hypothesis is that the participants from this group will prefer either the programmed drums or the edited and sample-replaced drums the best, as that is what they are used to both listening to and working with. None of the people in this group owns a big recording studio where you can capture drums at their finest and mix without samples. They all use programmed drums for their projects or sample-replace real drum performances, as their drums are not recorded in optimal settings.

The importance of using a focus group is to test my hypothesis. That way, I can see if the answers that the participants provide match my hypothesis.

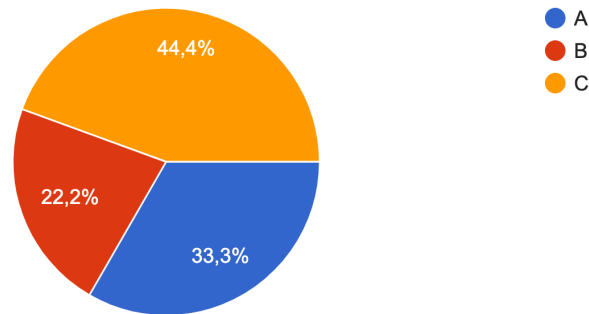
After gathering everyone's initial answers to what type of drumming they like the best, it will be interesting to see how they think the tracks differ—and if they like the real performance more after all.

²⁵ Exporting the mix in a DAW to a single mp3 or wave file.

Now that all the tracks have been mixed,²⁶ I have sent out the different versions to my focus group, using the guidelines outlined above.

These are the results I received from the nine participants from the GetGood Drums Forum:

Drummer 1
9 svar



A = Programmed Drums

B = Real Performance

C = Edited and Sampled

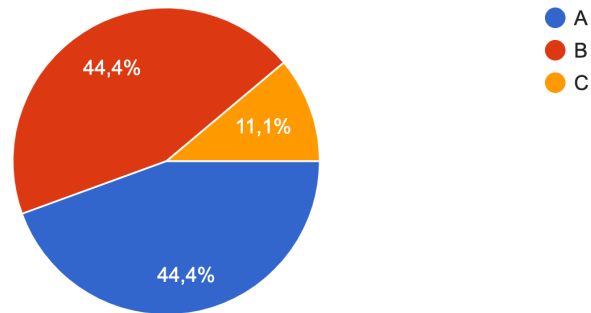
For Drummer 1 (Larks Erik),²⁷ most of Focus Group 1 (44.4%) seemed to prefer the edited and sampled version, while one-third preferred the programmed drums (33.3%). There was a much smaller response (22.2%) to the real version.

²⁶ The versions of the tracks that I sent out to the focus groups can be downloaded here: <https://www.dropbox.com/s/u9pdp0mscavuffv/Master%27s%20Thesis%20Project%20.zip?dl=0>

²⁷ Listening example 13: A, B, C

Drummer 2

9 svar



A = Edited and Sampled

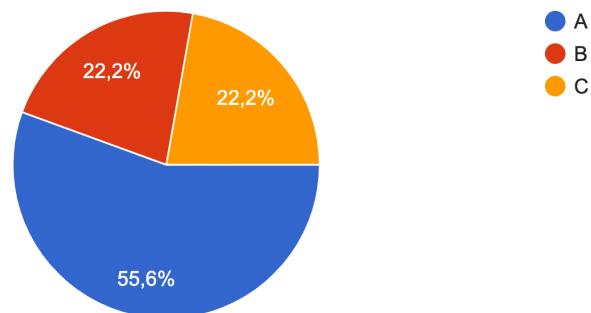
B = Programmed Drums

C = Real Performance

For Drummer 2 (Carsten),²⁸ once again, the programmed drums (44.4%) or edited and sampled drums (44.4%) resonated the most with people. Very few here liked the real version best (11.1%). Which is probably since he is the one playing the least like a machine of the drummers.

Drummer 3

9 svar



A = Programmed Drums

B = Edited and Sampled

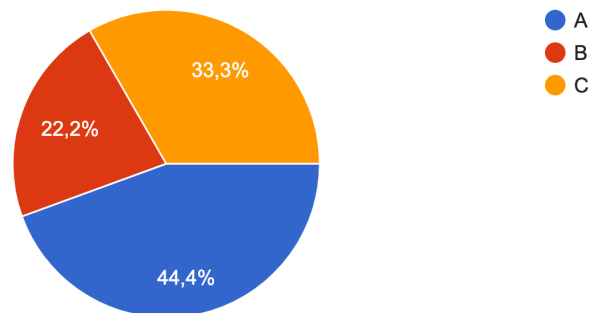
C = Real Performance

²⁸ Listening example 14: A, B, C

Most of the participants here enjoyed the programmed version of Drummer 3 (me)²⁹ best (55.6%). Far fewer people liked the real or edited and sampled performances (both 22.2%).

Drummer 4

9 svar



A = Edited and Sampled

B = Real Performance

C = Programmed Drums

I would have expected people to like the real version of Drummer 4 (Baard)³⁰ the most, as it was played by one of the leading drummers in progressive metal. But even with Baard, most people either preferred the edited and sampled (44.4%) or the programmed drums (33.3%) over the real performance (22.2%).

Interestingly, it is the same two focus group participants who liked the real performances of the drummers most. This is the reason why I wanted more than one drummer to contribute to this project. If I had only used one drummer, the results could have been because people did not enjoy that drummer's playing style, but here there are four very different drummers, and none of their real performances received the majority vote.

As stated in my hypothesis, and as has been shown here, I believed this group would enjoy either the programmed or edited and sample-replaced versions the most, as, in all likelihood, they either have not worked with real drums, or none of the music they listen to contains real drums.

²⁹ Listening example 15: A, B, C

³⁰ Listening example 16: A, B, C

Even more interestingly, one of the participants messaged me, saying that he really enjoyed Beard’s performance of the track, and that he was definitely the best of the four of us. When I asked him to determine which performance of Beard’s was the real one, the participant answered with the 100% programmed version of Beard—which is the same for each drummer, except for some ghost note variations and fills. This means that the participant thought the 100% programmed drums were the real performance, and he liked one of the 100% programmed drums performances better than all of the others. To me, this emphasises the point that today’s up-and-coming engineers and music producers cannot tell the difference between real and programmed drums.

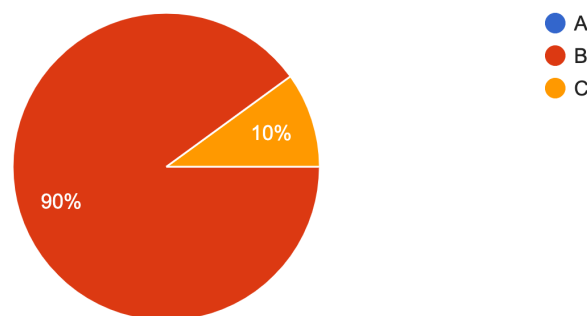
4.4 Focus Group 2

The second focus group consisted of highly acclaimed musicians and producers. This group received a slightly different version of the survey questions. I presented all of the different versions of the recording to them and then asked them to spot which of the versions were the real performances, and then to answer if these versions were the ones they liked best or not. I hypothesised that when these people are more observant about what they are listening to, they will prefer the real performance.

In retrospect, I should have organised a third focus group, and asked the exact same questions. Coordinating these two focus groups was extremely time consuming, however, and it takes many weeks to gather the participants and their answers.

These are the results I received from the ten participants in the acclaimed musicians and producers’ group:

Drummer 1
10 svar



A = Programmed Drums

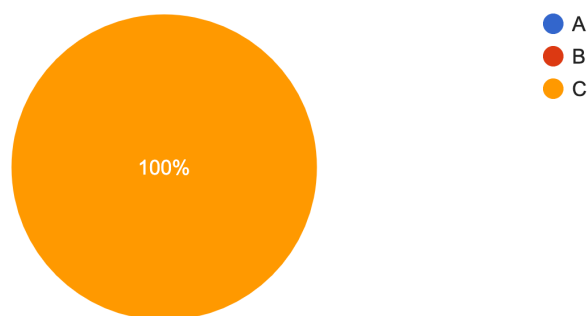
B = Real Performance

C = Edited and Sampled

For Drummer 1 (Lars Erik), only one out of the ten people (10%) thought that the sampled and edited version was the real version. This participant later said that he thought the snare drum on the real performance sounded so good that it must have been a sample. This is something that researcher Stewart Ehoff talks about in his thesis “The Hyper-Real Aesthetic of Modern Drum Production.” When the programmed version sounds better than the real version, you may start to question what is real and what is not because something sounds “too good to be real” (Ehoff 2014).

Sixty percent of this focus group’s participants enjoyed the real performance the best. When I asked the remaining 40% why they did not prefer the real performance, they said it was because of how they felt the drummer locked in with the music; they mostly preferred him sample-replaced and edited because that made him sound more “locked in” with the music. Maybe if the music locked more with the drummers real performance, they would have enjoyed it better.

Drummer 2
10 svar



A = Edited and Sampled

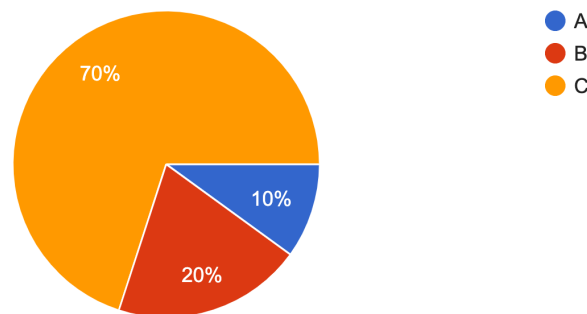
B = Programmed Drums

C = Real Performance

For Drummer 2 (Carsten), everyone (100%) could easily spot which was the real version, as he is the jazz drummer and his live playing is coloured by internal dynamics. Jakob did say during the editing process that editing a drummer like Carsten results in an extremely weird track because so much of his fingerprint was removed.

Eighty percent of this focus group’s participants enjoyed the real version best because they thought it had a good, “human” vibe and suited the music. The 20% who preferred the edited and sampled version said that they thought it suited the style of music more, but they definitely would prefer Drummer 2’s real drums in another genre.

Drummer 3
10 svar



A = Programmed Drums

B = Edited and Sampled

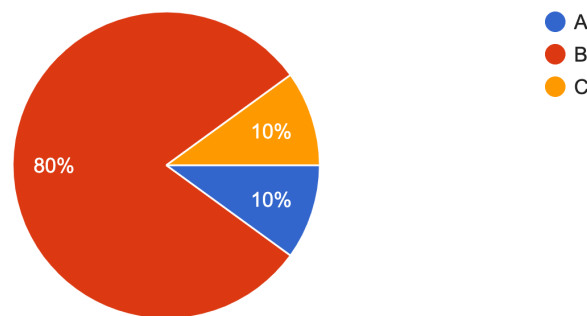
C = Real Performance

Now, this is where things get interesting. I, Drummer 3, have been working hard these past few years to sound as good as a machine, and it seems that I have come to the point where, in some instances, my playing style is more difficult to tell apart from edited and sampled drums. Although 70% of this group’s participants recognised my real performance, 20% incorrectly selected the edited and sampled version, and 10% incorrectly selected the programmed version. I suppose that when even a professional has a difficult time differentiating between my real performance and artificially created drums, I have somewhat succeeded, or failed—succeeded in the sense that I sound as good as a “machine,” but failed in that I sound like a machine and do not have my own identity.

I asked the participant who thought the 100% programmed performance was the real one why he thought that, and he said he had wavered between the real performance and the programmed part. Again, he had thought that the real performance sounded “too good” to be real, and that the programmed one sounded a bit “more bad,” which he then thought must mean it was the real performance.

Ninety percent of this group’s participants said they enjoyed the real performance the best, but, then again, only 70% selected the real performance correctly. This, to me, indicated that when people listen for what they think is real, they will like that better. Only 10% correctly selected the real version and did not prefer that version.

Drummer 4
10 svar



A = Edited and Sampled

B = Real Performance

C = Programmed Drums

It is also interesting to see that, for Drummer 4 (Baard), the subjects are struggling to hear the differences, as Baard is also a highly acclaimed musician in this genre. Even though Baard has an extremely open and lively approach to playing drums, one (10%) of this group’s participants thought that the 100% programmed performance was Baard’s real performance, and another (10%) thought the edited and sampled drums were real. Again, this may have been a case of the participant thinking the real performance was “too good” to be real.

One hundred percent of participants said they liked the real performance the best, but only 80% selected the real performance correctly. This tells me once more that when people

think they are listening to the real thing, they will automatically like it better, because they think it is real. Jan Inge Nilsen writes in his thesis:

By looking at a performance, this can enhance our impression of groove. To feel a groove can also be connected to group psychology. We go to a concert to see a band who are known for having a great groove, you see the audience move their heads to the groove and so do you. (Nilsen 2012)

In the case of this focus group, their positive feelings are likely because they think they are listening to the real performance, which makes them prefer it.

My experience with these focus groups also reinforced for me that there is definitely a correlation between ear training and being able to hear a real performance. Focus Group 1 is so accustomed to listening to programmed or heavily sample-replaced and edited drums that they prefer listening to that even over real performances. There might also have been minor things like the mix of the artificial drums that they could have preferred. Some Focus Group 1 participants, for example, liked the programmed version or sample-replaced version the best because the snare “popped” a bit more in the mix, and that is why they liked it the best.

Focus Group 2 consists of trained musicians or producers who, most of the time, preferred the real versions, but who also knew when and why they did not like the real performance the best.

As Kvale states, “The prime concern of a focus group is to encourage different viewpoints in the group” (Kvale, *Doing Interviews* 2007). At the same time, I managed to find some recurring patterns in some of the participants’ answers. But again, I also could have asked two more groups and received different answers, so my research results are not set in stone. Rather, they give a small insight into the differences between the answers in the two focus groups. To me it was very important to see if the upcoming producers and musicians who is going to be responsible for the next generation of progressive metal music was affected by the way technology has changed the way drums sound, to the extent, that they would not recognize or like the way real drums sound. To make sure that it was not in the way we played or the way it was mixed I wanted focus group two to be my control group. If their answers had been somewhat similar to focus group one, it could have been the music, performance, programming or mixing that could have been a reason why focus group one did not prefer the real version. As focus group two had a clear favouring towards the real performance in all cases, it confirmed my hypothesis that the upcoming producers are not used to hearing real drums in this genre, and therefore do not like it as much. It also tells me that technology has changed the way drums

sound in modern metal to such an extent that real drums are not preferred anymore.

5. Where Are We Headed? The Future

I think we are headed in the opposite direction for the standard of drum sound in the future. When listening to the Norwegian band Leprous,³¹ a leading act in the progressive metal genre today, both the drumming and “humanness” sound much more like Nicko McBrain from Iron Maiden and Gene Hoglan from Dark Angel, the way it did before the drum machine, editing and samples was invented.

In my interview with Beard, the drummer of Leprous, he told me that they no longer edit or quantise any of his drum parts. They do several takes of each song and choose the best parts from each section, which is a large part of the reason why Beard is such a unique drummer in the genre. Does this mean the “perfectionist” war has ended? Is it okay to groove again, and to have human flaws?

Because quantising and having perfect drums have been the industry standard in metal drumming since 1995, something new or, rather, something old is due to happen in metal drumming. I see more and more drummers and bands taking pride in *not* editing or quantising anything on their latest releases, and in not using samples. Now, it seems like some bands and musicians again take pride in showcasing that it is truly their performance you are listening to in the recording.

I think everything is trends. Trends come and go. In the 80s, things were very fake when it came to sounds. In a way, things were plastic and larger than life and synthetic. I know a lot of people that are tired of the fake sounds of too much gridding, too much editing, and too much sound-replacing. I also know some people that love that sound. It's very much part of their sound. And I also think that now [that] it's out of the box, you can't put it back in. (Jakob Herrmann, interview with Simen Sandnes, 2019)

³¹ Leprous, “From The Flame” (Solberg, Einar; Suhrke, Tor Oddmond), 2017, *Malina*, Inside Out Music – Listening example 17 . <https://youtu.be/FZSIX1zXnfM>

5.1 Recording Arkentype's New Album in One Take



Figure 4. Jakob Herrmann (left) and me at Top Floor Studios in Gothenburg, Sweden, in August 2020. (Photo: Kameraworks)

In relation to my research “How technology changed the way metal drummers play and sound” I wanted to record the remaining songs for the new Arkentype album without the aids of the technology that have been discussed earlier in the thesis. The technology has affected the way I naturally sound as my ideal have been to play machine tight and to be very consistent in the way I hit rather than focusing on groove. I have always worked hard to have an extremely strong and loud kick drum to be able to live up to the ‘unreal’ expectations triggers and samples have given us. The focus group confirmed this. Even professional musicians and engineers had trouble differencing my natural performance from a programmed or artificially enhanced performance. To me personally and for the research it is important to showcase that metal today can be created without the *unreal* standard that has been set by the industry. The songs were to be recorded in one take, without any editing and with no samples allowed in the final mix. We treated the DAW as a tape machine. I was scheduled to travel to Jakob Herrmann’s studio in Gothenburg, Sweden, on 6 July 2020, but because the Norwegian government changed the rules for COVID-

19 quarantine two days prior to my departure, we rescheduled to 27 July. Fortunately, this change gave me some extra time to prepare.

I prepared by practicing recording all of the songs in one take, while filming myself. This way, I grew used to playing the songs in full, and I received instant feedback on which parts to improve. Overall, I was trying to capture a good vibe while being as precise and tight as possible. I had never been as nervous nor as prepared for any studio session; I was losing sleep over it, and it was something that was continuously hanging over my head. Before recording, I talked with Matt Halpern about this project and his experiences recording drums for Periphery:

I've made it very clear that when I go into the studio, we record each song section by section. We do multiple takes of each section with different variations and then we listen back to all the takes from each section. And then we comp together the best parts to build the perfect song. It is all real in that I have played every single note, but how it is crafted and how it is pieced together is through editing and comping. And I think that that is a really good thing actually because it alleviates stress for drummers because we have the means to do it that way now. (Matt Halpern, interview with Simen Sandnes, 2020)

As Matt states, the option to edit song sections together can alleviate a lot of stress for drummers. I have never been stressed about recording unless the intention is to capture it in one take without any editing. There is something magical about the nerve in certain takes. But as Matt states, editing sections together can build the perfect song, thus getting the most nerve out of each take.

Jakob and I worked together on the single-take Arkentype songs from 27 July to 1 August. On the first day, we set up the drums, changed the drum heads, and decided on a drum sound. Jakob then dialled in the sound to his SSL console,³² asking me to play a steady 4/4 beat throughout. I probably played the same beat and fills for two to three hours before he had dialled in the whole kit. This process, which Jakob does with every drummer he records, shows how thorough he is in everything he does.

We began day two by choosing which snares to use for the different songs. All in all, we spent one and a half days just capturing the drum sound. Afterwards, we started to record, with Jakob pushing me to give my best performance on each take. He was very active in choosing which takes were best and which needed to be recorded again.

What quickly became clear to us was that if we had been recording the “regular” way, with editing and comping between takes, the recording process would have been done after take

³² Solid State Logic (SSL) is a company that manufactures high-end studio equipment.

one or two—which was a huge confidence boost. We could have recorded all five songs in a single afternoon. My first takes were always good, and if we had edited them and sample-replaced them, they would have met today’s metal standard. But today’s metal standard was not what we were going for.

I recorded two songs on day two³³. I was satisfied, but not *too* satisfied with the takes. I decided to skip to the following songs the next day and return to those songs if I had time. My playing was a bit stiffer than usual due to the preparation we had been doing. I also had begun to realise that all of my practice had led up to this very moment. My words were being put into action, and I was afraid that I would not be able to do it—especially because one of the five songs to record was ten minutes long. But Jakob gave me another confidence boost after our first day of recording: “*The cool thing about this is that it sounds more alive than any other progressive metal band out there.*”

On day three, we recorded two more songs³⁴. One of them turned out very well, and I was extremely satisfied—everything had been captured in one take, with no editing. The other song had also been well done, but it was a long song with a few parts that did not feel as good as they could have. We cut in one bar from another take on this song, as I had messed up one snare hit.

Fortuitously, on day four, a camera crew dropped by the studio to shoot a quick promotional video with Meshuggah guitarist Per Nilsson for a guitar amp company called MLC Amps. Per and I decided to jam a little bit and it was good fun. We talked with the camera team about my project and how I was recording it. They really took an interest in the idea and asked to film one of the songs, so I completed a playthrough of the song I had finished the day before³⁵. The take I recorded for their video actually became the take we ended up using for the album version—all in one take, no editing. The crew then interviewed Jakob and me about my project and thesis.

Later that day, I attempted another song, but it just did not happen. I was completely drained, so we opted for an early night; I went to bed at 20:00 and slept until 10:00 the next morning.

On day five, the last recording day, I only had one song left. We managed to complete it within the first hour or so³⁶. But we ended up using the entire verse two from a different take

³³ Listening example 18. Arkentype - TOIT - Raw Drum Recording from Top Floor Studios, and 19. Arkentype - PEGASUS - Raw Drum Recording from Top Floor Studios (Drums Only)

³⁴ Listening example 20. Arkentype - GIVEN - Raw Drum Recording from Top Floor Studios and listening example 21. Arkentype - WHALES - Raw Drum Recording from Top Floor Studios

³⁵ Listening example 22. Arkentype - WHALES - Raw Drum Recording from Top Floor Studios version 2

³⁶ Listening Example 23. Arkentype - WINGS - Raw Drum Recording from Top Floor Studios

than the main take. As it was a physically demanding song, and I really wanted time to redo some of the other songs, we decided that spending my energy to achieve one perfect take would waste time. Instead, I rerecorded the ten-minute song from day one again, and achieved the “perfect” take on the first try³⁷. We only cut in one bass drum hit from another take (that I forgot to play in the beginning of the song), along with the very first bar of the metric modulation that is midway through the song, for a total of two cuts on a ten-minute song.

We then spent the last hour trying to better the second song from day one. Fortunately, after just one take, it was already better than the one I had recorded on day one. I did two more takes and ended up using take two out of the three.³⁸ In this song, there is also one tom fill in the last chorus that has been cut in from the first take. While recording, I remember thinking, *Is this the final chorus, or do I have one more?*—which caused me to make a mistake in the last fill. Overall, to have recorded 34 minutes of music with a total of four cuts to different takes, with three of these cuts having been a single bar, I would say my mission was accomplished. Not a single edit was done.

Never before have I felt so involved with our music. I have never been scared of releasing our music, but I have also never been this honest about my playing—which was rewarding to perform, in the end. On these Arkentype songs, people will receive my performance. They will hear what we captured in the studio. They will hear the moment. That is what my project was all about. And on the next Arkentype album, we will go one step further, capturing the entire band playing together at the same time.

One of the highlights of my recording session with Jakob was that we never looked at the grid. On some of the songs, we did not even sync the tempos of the project to be correct; I just exported my click track from Pro Tools and sent it to Jakob’s computer. And when deciding upon which takes to use, we only used our ears. We never checked the grid to see if I was “on the grid” or if I was behind or rushing; we just used our ears. This was a fantastic experience.

I am going to capture what we sound like. I do not want to be in that kind of a band. I will push these guys [from my band], saying I would make them play their tracks from A to Z, from beginning to end, and I would say fucking play your shit. You are going to have this ego and walk around like your shit don’t stink, you’re going to have to talk the talk and walk the walk. I am not going to sit here and be in a band with dudes that think they are better than everyone else around because they have got a little bit of skill

³⁷ Listening example 24. Arkentype - TOIT - Raw Drum Recording from Top Floor Studios Version 2

³⁸ Listening example 25. Arkentype - PEGASUS - Raw Drum Recording from Top Floor Studios Version 2

and you can't play your song from A to Z. When are you going to be happy with the fucking musician that you are? (Derek Roddy, interview with Simen Sandnes, 2020)

My interview with Derek really inspired me. That last sentence, in particular, resonated with me, and it was the final push I needed to really go for this project and stand for it. This is the musician I am, and I would have never thought in a million years that I would ever be at the calibre I am now. And it is about time that the real me is what is present on my own projects. If I am not satisfied with this performance, when will I ever be?



Figure 5. From the recording at Top Floor Studios. (Photo: Kameraworks)

6. Conclusion

Where did the groove go? The groove did not necessarily go anywhere, but it did change. What was considered groovy in the 1980s and 1990s changed to being considered sloppy in modern production. Each drummer's fingerprint became less important, and the perfection of each performance became more important. Every little nuance had to be heard, and everything had to be perfectly aligned to the grid, as that became the industry standard for "groove." Music and drummers, can, of course, be groovily quantised, edited, and sample-replaced. *Periphery II* is one of the heaviest and grooviest progressive metal albums out there, and it has been heavily sample-replaced and edited. Because Matt Halpern is a great drummer, and the band has a unique way of looking at how disparate things can sound together, it still grooves and makes you want to bounce your head; the energy is there. But I honestly think it would groove even more with more of Matt's natural performance. The unedited live clips from his performances at different drum festivals are some of the finest examples of modern metal drumming.³⁹

So, when I teach drummers, I always tell them that it is always great to learn consistency, technique, power, and speed, but those are tools to have in your tool belt that goes around your body. Your body needs to move like a human and you need to play like a human who is enjoying their job because you are playing drums and it is the most fun job in the world. That is what it should be. (Matt Halpern, interview with Simen Sandnes, 2020)

Definitions of "groove" reflect different perspectives and musical norms. I find it odd that all metal drummers are trying to sound more like machines, and that all machines are trying to sound like humans. If you search for any drum video showing how to make programmed drums groove, you will see the producer moving the MIDI notes away from the grid to make it more groovy, while in real life, producers will edit all the drummer's notes to the grid to clean up the performance and make it tight.

The only way we may be able to "get the groove back" is to stop looking at the grid and to start using our ears. Listen to the drums alone; do they sound good? If yes, leave them. If no, try another take or maybe edit the performance within itself, taking it off the grid and editing

³⁹ MEINL Cymbals. 2016. *Matt Halpern "THE WAY THE NEWS GOES" - Meinl Drum Festival Video*. 17 December. <https://youtu.be/rlaZWhgBM54> - Listening example 19

using your ears. And ask people to play to the drums without either the click or the grid turned on. As discussed in chapter two, Charles Keil describes the space in between the grid and placement of notes as *participatory discrepancies* wherein the groove lies.

One rushed bass drum or late snare hit does not matter in the long run; it is the overall experience and energy that matters. If the entire music also rushes or drags with the drummer, it would not necessarily be perceived as rushed or late but “the push and pull between the instruments purportedly generates a productive tension thought to drive the groove with energy.” (Butterfield 2010) In other words, make the other musicians lock in with the drummer’s performance.

I also think we need to talk about the standard for recording metal drums more openly. As Matt said, more drummers should be open, giving people a glimpse of the recording process. If the performance is quantised and sample-replaced, let people know. If it is a real performance, let people know. This knowledge might change their perception of it, either for good or for worse. As we saw in Focus Group two, the subjects seemed to like what they thought was the real version more, because they thought it was real.

Regaining the groove starts with the musicians wanting to take chances, setting goals for themselves, and starting to think about their own expression. Record what you sound like, and if you do not like that sound, practice until you sound the way you like.

In conducting further research on this topic, I would interview more individuals one-on-one, perhaps trying to find someone who is pro-quantising and pro-samples and who can share what they think. It would also be interesting to investigate where the line is drawn, at what moment each drummer loses their fingerprint. How much, as a percentage, do they have to be edited before their natural time is taken away? And how much of a sample can you add/blend before the drummer’s sound is taken away? For future research, I would also try to recruit more people to the focus groups and test different approaches for presenting the material to the different participants. I could try to complete different recordings with bands, where one is all recorded live and together with no click, one is all recorded separately with no editing, one is all recorded separately but with editing, and one is 100% programmed. The research possibilities for this topic, to try different variations in order to find the “line” between artificiality and reality, are endless.

We have used it (samples) on live recordings before to help round out the sound. There are just so many benefits to it. Obviously, I am a very big supporter of this style of recording. I just do not want it to detract from the drummer's ability to actually make people feel something. (Matt Halpern, interview with Simen Sandnes, 2020)

I am looking forward to exploring the world without the aids of modern technology more as a musician and, hopefully, making an impact on the genre with my choices. I hope the way I recorded the remaining songs for the new Arkentype album will inspire more bands and producers to do the same. At the very least, I am going to publicly be more open about how we do things in Arkentype, and with my own projects. My work with the thesis has already made me a much more fluid drummer. My own voice and touch have improved drastically.

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Listening Examples

- 1 Tesseract: “Nocturne”
- 2 Iron Maiden: “The Trooper” (Drum Track)
- 3 Pantera: “Walk” (Drum Track)
- 4 Iron Maiden: “The Trooper” (Drum Track with Modernized EQ)
- 5 Dark Angel: “Leave Scars”
- 6 Fleshgod Apocalypse: “The Violation”
- 7 Fleshgod Apocalypse: “The Violation” (Live)
- 8 After the Burial: “Neo Seoul”
- 9 Born of Osiris: “Machine”
- 10 After the Burial’s Justin Lowe: Ibanez RG90BKP Demo (Live)
- 11 Luke Holland: “Hos Down” (Quantised)
- 12 Luke Holland: “Hos Down” (Live)
- 13 Drummer 1: A, B, C
- 14 Drummer 2: A, B, C
- 15 Drummer 3: A, B, C
- 16 Drummer 4: A, B, C
- 17 Leprous: “From the Flame”
- 18 Arkentype - TOIT - Raw Drum Recording from Top Floor Studios
- 19 Arkentype -PEGASUS - Raw Drum Recording from Top Floor Studios (Drums Only)
- 20 Arkentype - GIVEN - Raw Drum Recording from Top Floor Studios
- 21 Arkentype - WHALES - Raw Drum Recording from Top Floor Studios
- 22 Arkentype - WHALES - Raw Drum Recording from Top Floor Studios version 2
- 23 Arkentype - WINGS - Raw Drum Recording from Top Floor Studios
- 24 Arkentype - TOIT - Raw Drum Recording from Top Floor Studios Version 2
- 25 Arkentype -PEGASUS - Raw Drum Recording from Top Floor Studios Version 2
- 26 Periphery’s Matt Halpern: “The Way the News Goes” (Live)

Appendix: Interviews

Jakob Herrmann

SIMEN: When did you first encounter drum samples in your work?

JAKOB: I think it may have been – and I can't recall the project – it may have been a recording of something that someone else mixed. That happens a lot and I like it because I mean, I like mixing but I'm really into the recording and producing side of it. And, I remember, not really when it was, but I remember reacting to it like this sound is so different to what we recorded and this doesn't really sit well with me because we had a vision for it and I also know the band was a bit like "I don't know", you know? I reacted harder to it probably. It might have been ten or 15 years ago.

SIMEN: So you had been in the game quite a while when the sample side of things started?

JAKOB: Yes. At least with what I was doing. Yes. I would say so.

SIMEN: So has your view on the use of samples changed over the years?

JAKOB: It depends on why you do it. I use it, and I have used it, and I will again. I do it to enhance the sound that I'm working on. I do it to bring out the drums. If I use it, it is just to even it out, or maybe there was a bad hit and I use "one shots" from that session. But I'm not shaping my sound, or my mixing or anything, around samples. So, I like them when it comes to what they can do for me. I don't like the fact that you can just replace a performance because to me it's not really the drummer performing when it's 100% replaced with samples. So, when I do it I use it and it doesn't define the sound, at least for me.

SIMEN: Why do you think, in the early '90s, people started using samples?

JAKOB: I think it started with good intentions when people started playing and it was more about enhancing the sound, listening to the sound and making the sound more to the idea of the production and what they were looking for in a sound. So, I think it started as something that was not in any way colliding with a performance. It actually enhanced the performance, and again, I'm not against the idea of it. I'm against some of the usage of it. I think it has gone more into a thing where you don't have to play well anymore. For the drummer it means that some of them don't have to play well. They just have to play really fast and precise. And maybe they're looking into how they play – how they hit the drum and they're not thinking about the sound they're producing as a musician. They're just focusing on being precise and fast or whatever. The bad ones get away with "oh it doesn't matter. I can be sloppy. It's going to sound fine after." To me it doesn't really work when I hear something that is so obviously enhanced because the drummer didn't play it well, or it replaces the sound in a way that is just unnatural to me, then me, personally, I kind of lose interest. But that's me. Everyone has their own taste and that's fine.

SIMEN: When drummers come to your studio to record have you seen a change in their mindset of how they want to sound now compared to when you started?

JAKOB: How they want to sound?

SIMEN: Yes, in the sound that they are producing or their approach to playing drums.

JAKOB: I'm still kind of young compared to some colleagues who really saw the shift. They were working at a high level when it happened. I came in, and sure, I've been recording for a long time, but when I really stepped into the game the change was already going on. But, sure. I've seen the change but I also think many people come to me because they don't want a lazy production. So I'm not really that kind of studio. I think the drummers that want that sound, either they record themselves or they go to a studio where they know it's going to be 100% sound replaced anyway. I think people

come to me when they want more. They want a proper drum production. A proper drum sound that is a real sound. And they want to work with someone who wants to work with drums instead of working with signals and basically replacing it. I mean, sure I've seen a change in drumming. How they want it to sound, though? Yes, I guess. But like I said, I'm not that kind of studio so I don't really get many of those drummers.

SIMEN: Could you elaborate a little bit about what you think has changed with the drumming?

JAKOB: I think that you are allowed to be much sloppier. To me a musician has always been someone who cares as much about their sound as what they're playing. Can you tune your instrument or hit your instrument in a way that produces a sound you want, instead of playing fast and not having to care how you hit? It gets weird to me when you see play-along videos and you see the snare drums hit in a way and then I see it is hit in a different way, and I know just by looking that it would produce two very different sounds and it sounds exactly the same. Again, that's when I lose interest because it's not real to me. That's more like playing electronic drums which I've never been a fan of. When you don't have to focus on making the drums sound good as a player you can focus only on being fast or having really cool fills. That's fine. I will say that today, players are at an insane level of technical ability, but to me it has always been about how the drum sound and how a big part of your performance is about how you make your instrument sound. I don't like to look at a drum set in the studio as some overheads and the close mics are there to record some hits so they can be replaced later. To me it's a whole package: the performance, the sound etc. I've always liked the fact that the sound we're recording now is "The Sound". That is your performance and it's you. Sure, I'll help a sound with sound replacing, but I don't like the fact that I'm expected to help the drummer in that way.

You used to be able to sense that there were some drummers that would say, "Sorry, did you have to replace some hits?" Now many drummers are like, "Yeah, that's just normal." It doesn't matter how shitty you were

hitting your drums. To me that's not interesting. I don't like the fact that some people expect, not just me but engineers and producers in general, I don't like that it's just expected that this is a thing. To some people it's not even a conversation about you playing or performing in a way that makes the drums sound in a way. It's just expected that this sound replacing will happen. And I'm not a huge fan of that, I guess. This is just me. I know colleagues that are totally into sound replacing and that's fine. It's their sound. But it's a difference even there. I don't like that sound, but I have to respect that people like it. But if you do it because it is a sound, OK, we can have that discussion, it's totally fine to work like that. Everyone is different and everyone has a right to their opinion or taste or sound. Whatever, that's totally fine. If a producer or mixer has it as their sound, that's one thing. Or if the band has it as their sound. But if it's just done because the drummer doesn't play that well or hit that well, that's another thing.

SIMEN: Do you feel that the use of samples has contributed to an unnatural approach to drum sound?

JAKOB: It goes hand in hand doesn't it? It's all about technical abilities. And I'm not talking about the drummers. I'm talking about what you can do on a computer. Just because you can do something doesn't mean you have to. It's a choice. You can choose to not do something. Just because you can make a singer pitch perfect doesn't mean you should. Just because you can put someone on the grid 100% doesn't mean you should. It's all choices. We all make these choices. No one is forcing you. So in a way, it goes hand in hand. And in a way I ask, why do we do it? If I'm a chef, I don't have to use all the stuff I have in my kitchen. I choose what to use and how much or little. And I feel like it's a bit like that. Like some people are putting everything on the grid or sound replacing everything because they can and it's the easier way to do it, but it doesn't mean that we should. Yes, of course they go hand in hand. The playing and what you can do on a computer has shaped some of the sound we hear in music when it comes to sound replacement.

SIMEN: A lot of drummers get edited. Are there certain places that you feel that it is called for? When?

JAKOB: Absolutely. I used to work with a band – they don't exist anymore – but their sound is so precise and their drummer was amazing. He actually played all the parts more or less flawlessly. But their sound calls for close to 100 if not 100 at times percent on-the-grid-editing because that is their sound. Their sound is very faked and synthetical, and it's supposed to be. That's their artistic choice. So I never had a problem with that when it came to gridding that drummer because that was a part of their sound. Of course, I do it. If not 100%, even with something really groovy sometimes it helps shaping it up just a little bit. Maybe 30% to the grid will make a really good difference but it still keeps all the groove but it's not even 50%. Sometimes 50 is fine too. Sometimes you don't do all of it. You go in and find things you want to correct. I recorded a band called Lullwater two years ago that recorded without a click track. So we recorded the drums very loosely. And that was perfect for them. It was very loose and groovy. A cool rock album. But I went in, I had some places in the songs where I wanted to go in and shape things up. Because the performance is great. There are two or three hits here and there that need to be put in place. That's fine. There's a big difference between that and always gridding because that's what you do. Again, you don't have to because no one is forcing you. It's your choice to do this.

SIMEN: Do you think the editing and quantisation has made it unrealistic for drummers and changed the way drummers play?

JAKOB: Yes. I honestly think there are drummers who are better drummers because of these things. And that is cool. They are aiming to replicate what is on the album and are really going for what is precise. They are aiming to be, not a machine, but very precise. That's one part of it. Some of the other ones are going in the opposite direction. They know that they do not really have to care. They don't really have to practice their songs because if there's a part they don't know, that's fine. They can always just do the

bridge. They can do that weird bridge that they never practiced and the just piece it together. Then they can edit it and it will be fine. So they play sloppy and they don't rehearse because they know it will be sorted. And that's the thing I don't like. When it's a musician not practicing because they know that they can always sort it. Sometimes, and this does not mean all drummers, but sometimes I feel drummers or musicians because I see this in other musicians as well – some musicians do not have pride as a musician any more,. They don't pride themselves in knowing their instruments or even knowing their songs. In knowing how to play. They know we can fake it to the extent that they don't really have to care. They know they can sit in the studio and say "Im sorry, but what are we going to do?" So I think some drummers are benefiting from it and learning to be more precise because they want to replicate what they hear on the albums and that's one way. And the other is that I feel that some drummers are getting sloppier or they don't put as much energy into it as they could because they know we can just sort it in the studio. To me that is a bit of losing your pride as a musician. This is you playing. Or it should be you playing.

SIMEN: We're going towards the last questions now. I want to talk a little bit about programming drums. These days you have a lot of metal guitarists programming drums and then just handing to a drummer to replicate this. Do you think that this approach has come to change the natural way drummers would play to a riff in a song or in general how they approach making drums groove with the riff?

JAKOB: This is probably where I change my standpoint at least compared to the expected one. I feel that there is so much creativity in this. Non-drummers can piece together a groove and it doesn't have to be that groove. The drummer or me as the producer – or both, we can have a discussion about it – we can say either if this doesn't really work because this will sound different on a drum kit and this won't give the song the groove you feel it does, but it has also lead to some fantastic artistic moments in the studio where the drummer is now learning something that he or she would never

have come up with themselves. It's trying to figure out how to play this groove that is so different to what he or she has played before. And if they had just done it themselves, or a fill – maybe a programmed fill will give them an idea like “oh, that's really cool, I'd like to try that. Maybe I'll adjust it a little”. But something along those lines. If it had been just up to the drummer maybe the fill would have been a little more standard or boring. So there are definitely two sides to this when it comes to programmed drums. What's scary about programmed drums or demos in general is that the level of what you can do is now so high that people think that it sounds good and I feel that people are now married to their demos or preproductions, to the level that they can't really work well in the studio because they feel it doesn't really sound like their demo. I feel that the demo should sound kind of shitty so you're working with the song/ and not the sound. That's great. Some people can't and they focus more on the sounds than the actual songs and this is where I feel that programmed drums are sometimes in the way of working with a song or a band's sound. And sometimes I feel like it's a great asset that can work with grooves and sounds and come up with different ideas for the drums and work in a very creative way before coming to the studio. It's a hard balance, for sure. It goes for every level.

SIMEN: Lately I've been seeing a lot of great drummers when they release records and they take very much pride that there are no samples and there is no editing. Or very minimal editing.

JAKOB: Does it say so on the album, or in interviews?

SIMEN: In interviews. On Facebook they post and say “no samples” Do you think that it's a shame to use samples? Do people talk down about it? Between producers and fans?

JAKOB: No. Maybe. If the fans knew how much was faked in the studio, they would revolt. They would be surprised for sure. These musicians are

hailed not only as musical geniuses, but sometimes the fans do not realise how much is going on in the studio that doesn't really have to do with the people in the band being masterminds.

Sometimes it's someone else coming up with ideas for a melody or instruments or how it's going to be played or drum grooves. Sometimes I do albums where I'm very much in it and then I see these fans hail these things and give cred to the player. That's fine. I'm a producer. That's sometimes what I do. And I love working with bands that want the best for the song and can throw their egos out the door. But I think that if the fans knew how much was faked in the studio, they'd be surprised. When it comes to everything. If you explained drum samples to them. If you explained quantising or pitching in Melodyne or whatever. For some bands I feel their fans would be really surprised. Still, in a way bands have always been superhumans to fans and that's the thing. But when I put on "Burn" by Deep Purple, I know that's one take. I know that they're playing together in the same room. And I know that those drums are awesome because Ian Paice is an awesome drummer. There is a difference to me but that's just me. That's fine. You were asking if there was shame involved. I don't think so. Sure, show me one studio documentary where they actually show the engineer pitching it up in Melodyne or gridding the drums or something like that. Of course, it doesn't happen. Or copying the choruses or whatever. Of course they don't show that. Is that because they're ashamed? No, but maybe a little? There's a reason you never see it.. No it's not shame but it's more accepted than it was. That also means that there are some players that tell other musicians or colleagues when it is something that is made as a real one-take. That song is actually... we have not touched it. But this is in metal music. You try to tell a jazz band that and they won't even understand what you're talking about. This is very genre specific. No, I think there's an artistic need for editing and when it's for that, I'm not as against it. When it's just laziness or sloppiness you're basically faking yourself to be better and that's another thing. I also know drummers in pretty big bands that, when they hear the mix they're not happy compared to what they have felt when they heard

the scratch mixes from the studio when it wasn't gridded. It was edited here and there, but it wasn't gridded. It was more alive and the songs weren't sound-replaced to the extent that it is at the final mix. They were just happier with it. And they sometimes say it doesn't feel like them playing, and that it feels bad to them. It is a big question.

SIMEN: Where do you think we're headed in the future?

JAKOB: No idea. I think everything is trends. Trends come and go. In the 80s things were very fake when it came to sounds. In a way things were plastic and larger than life and synthetic. Then we moved back in the early 90s to something else. Not everyone, but some found a new way – sure with grunge – but it kept going in rock and pop. We found our way back to a more natural sounding sound. Listen to “Black Hole Sun”, it's not a huge sound, but the song is big. Same with Rage Against The Machine. They're a very natural sounding band. So I don't know where we are headed. I can't foresee the trends. I know a lot of people that are tired of the fake sounds of too much gridding, too much editing and too much sound replacing. I also know some people that love that sound, and it's very much part of their sound. And I also think that now it's out of the box, you can't put it back in. If we stop talking about the artistic side of it or the choice of it for your sound, because I know some great players who have it as part of their sound. But if we look at the other side of it where you have people that don't really need to be that good or to prepare that much, they don't really care. They just want to record it and move on. They don't really care that they played it. They want to be able to say “hey, so we did an album. Me and my band, we recorded an album.” No, not really. So, of course I think it's going to continue. But where we are headed? I think there's also going to be a side of people going back to a more natural sound or a more natural approach to it. There is enough room for both. But then again, who knows if we'll even be here in ten years.

Jeff Bowders

SIMEN: Can you tell us a little bit about when you began to encounter drum samples in a recording setting?

JEFF: Sure. It first started on the first record that I did which was in 2005 and it was for this Croatian guitar player called Damir Simic, a really good player. I went over to some guy's house which was a studio which was basically just a garage. It was super boomy and it was not sound-treated at all. I think it was just carpets hanging around me. That was the kind of isolation around that they had, they were trying to control "some" of the sound. I thought this was going to sound horrendous. Why are we even recording in this? They said no trust me it will be fine. I remember three months later getting the record and just going, man, those drums sound really punchy and really clean. This and really articulate. Those do not sound like my drums at all. And we were talking about whether this was actually me on the recording? Again, man, that actually you. You sound great. That might be me playing. But those are not my drums. Oh yes, we did a little replacement. Here and there. Here and there? Did you keep anything? And then eventually I found out they had replaced everything. They did not keep anything. They did not try to blend which I think is more popular now. But at the time I think it was still a newer technology and everyone got all excited about being able to totally replace everything and control everything. And they said screw having my natural sound. Just replace everything. And that is what it was. And I said okay, it is a sign of the times. Why even have drums anymore when it does not matter? You could play cardboard boxes. People are just going to replace them. That was discouraging. At the time, too, a lot of things in technology are fads. There are seasons that people go in and out of. My hope was that this was just a fad that was going to go away. Hopefully quicker than not. But that was 15 years ago and we are still talking about it. It has changed though since then.

SIMEN: My follow-up question is, have your views on samples changed over the years from when you first heard it and now?

JEFF: Yes. I think they are being used more conservatively and they are not used as a complete replacement. As far as what I experienced lately is that they are used more as an enhancement than as a replacement. I get that. That can be nice. But it takes an experienced engineer to really understand because it is a nuanced thing as you know. You can really enhance a natural sound of drums by blending it with a similar sample with a wood sound of the same timbre which is great because it depends on how it was recorded and what the mic position was, you can actually make up for bad mic techniques and that is fine. I'm much more open to the idea of using it as an enhancement. But the replacement thing I cannot get behind will stop and I do not know if we're going to talk about this later but I think the thing is that the total replacement thing basically robs any drummer of their own specific voice. Not only to the drums but how they play the drums. We could have one drum set and have 50 drummers and it is going to send it 50 different drum sets. I think that is a beautiful thing. We are artists here, I hope we have our own identity and we want to have personal attributes that people can recognise. But once that is robbed from us and everyone conforms to this one sound and we are all sounding the same then: well that is exciting. What is so unique about the art at that point? If we all sound the same. And I think in some music genres we are at that place right now. It is unfortunate but I think it is reaching a tipping point. My hope is we are reaching a tipping point.

SIMEN: Do you think that samples make an unrealistic expectation of how drums sound? Do you think it is a reason why people want their drums to sound a specific way?

JEFF: I think they totally do and that goes back to the '80s when the LinnDrum machine came out and it was basically just drum machines that were programmable drum machines coming out.

They had this very synthesised drum sound coming out. They were full of attack and punch and they did not have a whole lot of resonance. So what people were doing with their drums at the time was duct-taping the heck out of them and trying to get them to sound like these electronic, synthetic drum sounds. The sounds that these drum machines were creating. And so, because there was that expectation now that people were thinking that drums just sound like that I think that revolutionised double ply heads, pinstripe heads. Any way to control the sounds more and to get it to sound more and more synthetic was a bit of the goal in the '80s. If you listen to some of those records with live drums, they were definitely going for that. That was a specific thing that was in a time when people were expecting to hear that. Drummers did not want to be left out in the cold by going: "I do not want to be replaced." I can give you a drummer's feel and still give you that sound you are looking for. The machine is not going to be able to give that every feel so they are trying to get the best of both worlds. I think the same thing kind of is now a little bit, but I also think that we are at the point where we all know that live drums and acoustic drums are never going to sound like synthetic drums. We should just be happy with that.

SIMEN: Do you think the use of samples have changed the way we record and engineer drums?

JEFF: Totally. Like I said before I think the art of engineering has suffered because of it. You can. It does not really matter what angle the SM57 is to the snare drum. Whether it's 45° or 46° or 2 to 3 inches away. There are some parameters the engineers really pride themselves on and they do. They get really good drum sounds. And then you got a guy that has never recorded a drum set in his life and throws up some mics and as long as it is receiving a signal it is okay. It is good. Now I know what to replace at the soundwave and I will determine that.

SIMEN: More onto the editing side of things, we know that a lot of drummers get edited in the studio. At what point do you think it is acceptable and how much do you think it is acceptable to quantise and what do you think is not acceptable?

JEFF:

That is a good question, wow. The thing is I have recorded and done “passes.” Let us take a pass at the song. We have taken a pass and the feel of it just feels really good but there is a couple... Maybe there is a rim click. Maybe a rushed bass drum placement a couple of times. But the overall vibe felt really good and I thought the whole thing was very good, but let us try to take the whole thing again and that magic has gone a bit. We all know that is some metaphysical thing going on there. We do not know why it is sometimes that we are in a better headspace and more locked in but something else was going on. That is not something we can just call upon and say we can totally recreate it. I think in those instances I am fine with going with their better feel and if these five or six things there that need to be fixed and keep the overall thing, I say go for it. I think that benefits the song as a whole because the whole vibe is better. So, if there is a handful or if you have one good verse at a whole take and you are editing the heck out of every other section maybe you should take another take. But if it is 95% there, feels good, then use the technology. And also there is the budget. That is a huge factor now. A lot of time people do not have the time to spend three or four days in the studio to record the drum tracks. Is not the luxury to spend all this time. So a lot of the time I do not think I have done an album session which is 10 to 12 songs. I cannot think of a time that I spent more than three or four days on it in a studio. Because it is 3 to 4 songs a day and you just crank it out. That is what you got to do. You would probably put this in the category of editing: let us do 5 different takes. The verse from take two, the chorus from take three is good. And then we start flying those in. I am totally fine with that.

It speeds up the process and it gives you more freedom. It is not like you did not play. He did play. They were just different takes. Just to expedite the process. Just to make it quicker and to get the best result possible. I think that is fine. I am a fan of that. If technology allows us to do that then that is great. Back in the day when you were on reels you did not have that luxury.

SIMEN:

Or you could spend \$1 million and have people edit.

JEFF: It could be the Metallica Black album. How long was it? Six months to record the drums on that? Mainly because of the editing.

SIMEN: Yeah, one weekend to edit one drum fill. On the editing side of things have you ever done a recording session where you have been edited because the producer or the guy who hired you felt like their music needed it for the music called to be edited?

JEFF: Yes. I do pop sessions all the time. Lots for Disney channel. Even first School of Rock there is a TV show on the Disney Channel. I played the theme on that and it sounds like a machine. I even told the producer, this great guy called Linus of Hollywood. He writes a lot of the stuff, produces it. I am always like, why do you have me here, why do not you just program the stuff? He tells me no, because there is a vibe to it. I do not do everything. But people expect to hear this. And once again has this expectation especially in pop that it's machine-driven anyway. And even if the drummer comes in they just Beat Detective the heck out of this and quantise this. I still do not understand why you do not just program this because a lot of times they are blending this severely. Again you are not getting my feel and you are not getting my sound. All you are getting is my choice of notes. My note selection and what I choose to play and not play. That is really it. That is fine. That saves you time to program. He is very specific in what he wants in the bass pattern and the drum fill. They know exactly what they want to hear so why do not they just program it. I do not know, I cannot get into the mindset of that. I have totally experienced that.

SIMEN: Do you think that editing and quantising has set an unrealistic approach about how drummers should play?

JEFF: Yes and I think it is interesting that you say the word should, right? Because all of a sudden we have a standard for art. Not that I am opposed to having a standard. Especially now that we have modern art where someone just pees on a canvas and calls art, is just garbage. But I think there are standards of art. The thing is, we are talking drums. So if were

talking about drums in particular, Keith Carlock who is such an organic and fluid drummer that his time is great he has an ability to swell time and to bend it up and out of it. That is his natural thing that stems from his technique and you listen to him and you know no one sounds like him. No one feels like that. It is a beautiful thing. But if we are like: “but wait he should be subdividing everything and everything should be on the grid. Everything should sound like this.” Then there is no more Keith Carlock in the world. Is number 99% drummers in the world. This already of living up to what we should sound like robs us of our identity. There is a level of competence and a level of technique and ability that we should all strive for obviously. But when we are talking about quantising to the grid and everyone to that and that is the goal and if anything short of that is wrong, then that is as robbing ourselves of feel and personality.

SIMEN: Why do you think drummers accept being quantised?

JEFF: It depends on the drummer.

SIMEN: We talked about some big guys and stuff earlier not mentioning too many names.

JEFF: I do not think they have much of a choice.

I think there is an expectation especially on certain styles of music. Obviously, the extreme death metal side which is just machinelike and there is a sound and I feel and an expectation from listener that is a derivative of all their production that has come before that of embracing the technology to be on the grid and to sound like this. And then when drummers go to record the stuff a lot of it is not humanly possible to be able to play that consistently at those tempos for that period of time. Those guys that play are incredible. Not to de-value them at all. They are insane and they are incredible, very gifted drummers. When you hear them live compared to what you are hearing of course there is a difference because there's a human component there. Why is that a bad thing? The thing is that a lot of people have embraced this and that they should sound like

this. It needs a sound like this. It is once again robbed them of an identity. Those drummers that are in the situations I think just get complacent and go yes, okay. If that is what I have to do to create it, to be kept in the band or in the session and go ahead and quantise me. I would be very interested to know what percentage of those drummers are really happy that the getting quantised. I bet you it is a low percentage of them that are. They may be doing it just because of some expectation.

SIMEN: So we have to butcher that expectation?

JEFF: It has to. It has to. I think it will and once people and once enough and start doing it I think it is going to turn really quickly. It is going to be at the point where when you hear a band that is all machinelike it is going to sound lame. It is so passé. It is so out of style that it is embarrassing. Can you believe they did that? That is what I hope. I think it is going to get to that point because right now we are still accepting it, but we do not realise how phony it is. It is so fake and phony that it is unrealistic but yet were living in denial and going: "is totally cool." I think once enough bands do it and create awesome music which there are already and once people start embracing it is that old mentality is going to be embarrassing.

SIMEN: The follow-up question for this is do you think it is shameful in the drumming community to admit that you have been edited and quantised? Do you think that people do not want to say that they have been edited?

JEFF: It would be funny if they were embarrassed to admit it when we can all hear it. Do they really expect us to think that they are playing with that type of precision? That is great. But I do not think that is a reality at all. I would hope that they would all have enough humility to go: "yes of course it is. That is just how the producer and the band decided to record." I do not know. I think that is going to depend on the drummer. I can't speak for anyone says that. Whenever I am edited or sound replaced, I say: that's is me but that is not me. That is what it is.

SIMEN: So you think there will be a time where drummers just do not put up with being edited and send place?

JEFF: There could be a drummer revolt. I will not stand for this technology. Yes there could be. I would be a pretty bold stand. That would be very interesting though that becomes one of the criteria for joining a band. Wherever band is looking for a drummer part of the audition process “is are you okay with being quantised and edited?” If that actually becomes part of that. How interesting. I have never thought about that. Because maybe it will get to the point where drummers are sick of it and do not want to rob them of their identity. I think that would be pretty awesome. If that was a thing. If it came to something like that that would be pretty cool.

SIMEN: Even myself, although I am writing my thesis, I accept being quantized. Our new stuff is almost 100% quantised. I do accepted it.

JEFF: It is the climate of the industry now.

SIMEN: And now thinking that maybe the next song that we record should I spend a lot of time practicing, no editing and no quantising. Should I be a guy who says “this is how it is and this is how it sounds even though its sloppy? This is just how it is and that was the best I can do right now.” But That is scary.

JEFF: I think a really good example is in the 80s the popular rock music was hair metal. That was Bon Jovi, Mötley Crüe, Poison and that right. If you listen to those records it is an arena rock sound. The drum sounds a lot of times they would record the drums in arenas just because they wanted that huge drum sound. (imitates heavy reverberating drum hits). It was a larger-than-life production. And then what happened was a lot of little bands from Seattle with barely a recording budget came out with clanky guitars, out of tune vocals and a lot of times not to a click track. The whole world just went this is so refreshing. We want this. This is something new, exciting, different. We are sick of this whole monster music mentality where everyone looks the same and everyone sounds same. Something needs to

change. So it took a couple of brave bands. At the time a lot of bands were playing that way. If you took a wave of record executives to take a chance and put their focus on these bands to make a change and hopefully it will be a good thing and will change some people over. It was the last music revolution. And ever will be because at the time those on the radio and MTV at the time. That was the only place to hear music at the time. There were not so many outlets. We did not have the Internet at the time. The Internet has made the world flat where everyone has almost an equal voice so there is not a chance of a music revolution like that again any more. That is exactly what happened. There was this one conforms music mentality that everyone was subjected to and then it took this little group of bands to totally turn it on its head and change everything. It is pretty crazy.

SIMEN: I am looking forward to the band that does it in this genre.

JEFF: Me too. We know it is coming. Everything is cyclical. These bands already exist. Some people know about them, but it is going to take one of those bands becoming very popular to know is that the new standard and that will be cool.

SIMEN: Let us talk about programmed drums. A lot of these things like Tesseract and Periphery use programmed drums to write out drum parts and its usual guitarists that write out every single note and then the drummer learns it. Do you think that programming drums has taken some of the musicianship out of just jamming to a tune and having the drummer come up with their natural drum parts for a song?

JEFF: I think it has done both. I think something happens when as drummers we are introduced to music and we instinctively play what we think. We play off instinct. There is something special about them will stop where is that coming from? It is coming from us and our background and our influences. Everything we worked on. This is purely us. That is a beautiful thing. It has its limitations. That is where when someone else has programmed something for you to go and learn and you go I would never

do that. Is that necessarily a bad thing? I have had other things programmed for me and they have said, Jeff, I want you to play this. Man I would never play that, but this is really cool. This is awesome, how did you come up with this? And then it becomes a part of my drumming DNA at that point. So I think it does both. It does rob a bit of how drummers can influence and music, but it can also enhance the drummer's creativity because he is getting influence from something that was not inside of them already. I think it is good on both sides.

JEFF: It is cool to watch them pull it off because it is almost like a classic pianist. Some of those including when one of my friends that just sent me a by Rachmaninov the Russian composer. This guy is playing this Rachmaninov and it is frightening. How would you even practice this? That in and of itself where classical music there is a lot more breath to it. All I am saying is that when I do see those bands, even though Matt Garstka I love that guy and I see sometimes when he plays some of the older and when he got in to the band first he did a show and he was pretty "in the band" and he was playing a lot of stuff off the first record. Even though he made it his own, just to be able to mimic those programmed parts just did not seem natural. I hate to say it but it seemed artificial. It was like he was playing drums but they were a different kind of drums. They were artificial, cyborg type of drumming that was going on there.

SIMEN: I actually just spoke with Matt the other day. And he said that when he first got to learn the old stuff he did not know that it was programmed

JEFF: He thought a drummer played that stuff? Wow.

SIMEN: That is why he was sitting there trying to get everything as clean as possible. "This guy recorded this and it was fucking unreal."

JEFF: Are you serious? I never knew that. Well.

SIMEN: Small things like that where I go oh my god.

JEFF: Well kudos to him for not being scared to death. If I knew that was another drummer playing that I would just be like oh. I guess I just do not play drums anymore. Right out of the gate. Wow. Good for him. That is crazy. I never knew that.

SIMEN: It is weird but he just tried to get everything as perfect as possible. Without it being too mechanical or too constructed where it does not seem natural. But it is not. And that is why. Do you think that editing and quantising samples and programming notes, will it be a thing of the past? Or do you think it will always just be around?

JEFF: I think it will always be around. It is just going to be used more organically I hope because even though we live in this kind of ultravirtual world and turning into computers and becoming attached to our phones and were already kind of cyborgs because we depend on it so much there is an unmistakable quality about the human heart and soul you can't quench and you can't replace and you can't deny and I think that that in music is something that will always inspire people. And the more we remove that, the less people are going to be interested in. Is going to be a more mature marriage of the two. It is never going to go away just like technology. It is just going to be more subtle. That is what I think. Will see, I do not know. Do this interview again in 20 years and see what have happened. That would be interesting.

Rich Mouser

SIMEN: So, you've been in the recording game for quite some time. I was wondering, when did you hear about samples for the first time in your work?

RICH: In my work I started working with samples when that Alesis D4 came out. That was the big one. Well actually before that one I was using drum machines. Like LinnDrum and sequential circuits drums. But they were more like you were programming drum machines at that point. I'm going to say this was like 1982, 1983. I wasn't really putting samples onto real drums except I think there were times when I sometimes would try to play manually. To play a drum machine's snare drum on top of a real drummer's drum. But you would always have to punch yourself in to get it tight. To meticulously get it as tight as you could and then blend it in. There was some of that, for kick drum I don't think I was ever able to get that because it would never really work, but when that Alesis D4 came out you could go from a tape deck, an analogue tape machine and take the kick drum and it would trigger the kick drum off of that. That was a huge thing because you could take an analogue source and do it that way. The only thing with it was that there was a delay factor. And what I discovered was that it was about four milliseconds. What I would do is I would flip my tape over and I would use a delay of four milliseconds. I would print it onto another track and then when I flipped, I would take the same kick drum and would print it to a new track with the delay on it. Then when I flipped the tape over there would be a kick drum that was four milliseconds earlier than the original kickdrum and I would use that kickdrum to trigger it to get it lined up and to take away the delay factor. So, it was a process. I did it. There was one band called Corrosion of Conformity and this guy was doing all this intricate kickdrum work on this thing and I was mixing it. It was really hard to get those kick drums to come out in the mix. It was almost impossible to get them. So, I use this D4 on it and it was funny because there were no available tracks on the 24 track. There was nothing free. So, what I had to do was I had to take his

kickdrum and I set it to another fader on the console. It was flying fader automation. So, I was able to write in the volume moves feeding the D4 because you had to change the threshold to get it to trigger exactly correct on all these little fast beats and stuff. I don't know how long it took me. It took like an hour or two hours just to get the trigger right. But then I couldn't actually print it down, so I had to run it live as I printed the mix. So anyway I remember that I sent it off to the producer who was off working at a different studio – off working at Muscle Shoals Studio – and he called me and says, “Man, we're all down here listening to this mix on the speakers. What the hell did you do to that kickdrum? It sounds amazing! How did you get that kickdrum to sound like that?” I felt bad telling them that it was actually an Alesis D4. That was probably the first thing. I'm going to say that was in the 80s/90s. You could do stuff but still it was hard to line samples up on top of samples. It was better to just replace something. Because then you could get away with it. Remove the original and put in the sample. But, nowadays with samples, the way I use samples is to put them on top of the existing drums most of the time. Occasionally I'll say, “just take that out”. I want to completely change the sound of the kit. But very rarely. Now I add them in and exactly phase align them with the original and you can hardly tell that they're even in there.

SIMEN: Have your views on samples changed over the years, like they're in the mix now? Do you feel that there is a difference with how you hear samples and how you use them?

RICH: Maybe there was a time when I wasn't that much into using them and then I started getting into it and realising that it can actually benefit.

I like it when you can't tell that it's a sample. When people say “that sounds like a sample” then I know I don't like it. I do hear that on some modern recordings whenever they hit a snare drum it's like... You can tell it's the same. Granted there are some really great sampling programs now with various drum hits. It's a slight variation every time you hit. It's come pretty far. I think it's made some new engineers work not as hard on

getting some great drum sounds because they know all they need is something to hit the trigger on the kickdrum, no matter what the drum sounds like. For me it's got to sound good in the rooms. Those room mics are what pull a drum sound together. If you don't like the snare before any samples you've got to make it right. Make it sound as good as you can.

SIMEN: It's very funny that you say that. Everyone I've interviewed so far has said the exact same thing. That so many engineers don't care about the source tone anymore. They just care that something is coming into the trigger.

RICH: Yes. As long as it's clean, "that will be fine. I can trigger something with that." There's no bleed. Yes. And then talking about source tones, it's not only about needing to move the mic, but it's about having to tune the snare differently or do you need a different drum? Things like that. For some reason the tuning and the way the room is isn't quite working. The snare drum is making a buzz every time you hit that tom. We've got to figure something out here.

SIMEN: Do you think samples have contributed to making an unrealistic approach to how the drums should sound?

RICH: Yes, because if you take them away it's harder to get that sound. I think back before there were samples people would do other things like go crazy and record every drum separately. No cymbals. We're going to play the kick first then the snare. Of course, if the music allowed that. But then you listen to some Phil Collins stuff from the 80s and that stuff is just what it is. That's just him playing. You get the right room and the right drummer, and the right kit and you can do a lot. Samples can do amazing wonders and I can attest to this because I get stuff to mix that come from other places and sources, especially when you get something and you get notes saying "We'd love the drum to sound like this. Have big Def Leppard sounding drums" and they send you something in a tiny, ten-foot room where the snare is like (imitates delicate drum noises) and they want (imitates mic distortion from loud drum noises). You've got to do something. And samples are the only way to make that happen. So, they

definitely have their place and I use them all the time to augment stuff. Sometimes not as much as others. But it can make it unrealistic.

SIMEN: Do you think samples have contributed to or changed the approach of how we record drums, e.g., on the engineering side of things of recording drums?

RICH: I think that like we were saying people aren't working as hard on tone because they're going to put triggers on them anyway. It's close enough. That's where it's changed. Knowing you've got that sample to help you out. In the end you don't have to work as hard.

SIMEN: Do you also think that we have changed the way you mic drums, that we move mics to achieve a more "sample-y" sound now than back in the days?

RICH: No. For me, now, no. I'm doing things as I've always done and I just... there are a couple of times where maybe for a kickdrum I'll think maybe kickdrum isn't quite what I want but we don't have the time to sit here. Maybe it's the drum itself and it's not exactly right. It's not like we call the drum rental company and go ask for another kick drum. In these times of more limited budgets and whatnot you just don't have the time so you go "OK, a sample will give me that extra little thing that I'm missing now." So that's all been good but it's still achieving that on the front end that I'm going for.

And getting into the room mics: when you're recording those, listen to your room mics. If those cymbals, kick and snare are even then you know you're in the ballpark: it's going to sound great.

SIMEN: Have you seen a change when drummers come in to record with you today compared to back in the day in terms of their approach to playing? E.g., how they hit their sound, what they want from their drum kit.

RICH: Somebody who has recorded enough will hit their drumkit knowing how things are a little different in the studio than live. Not hitting the cymbals

as hard as possibly. That's the biggest thing. Most drummers will play the way they play. It's just having a drummer that is aware of what compression on a mic will add to the sound. Sometimes I like to feed them in their headphones semi-processed, so they play according to that. Then you know what you're getting as you play. They play according to that sound.

SIMEN: Do you mostly work with young bands these days or...?

RICH: There are some younger bands. I just had a young band here recently and I was having to push that drummer to hit it. He wasn't really hitting the snare the way he needed to hit it. "There. That's the sound. That's the sound you want to work on to get on every hit." Maybe some drummers... most drummers play the way they play. Some younger drummers might not have as much experience in the studio. This guy had not recorded very much. That's why he played like that. He didn't know yet that for the studio to get it to come across you have to do things differently. Of course, that will make him better live. A lot of times the studio makes you better live.

SIMEN: Studio is a very humbling experience.

RICH: It's a humbling experience. You hear what's really going on. We don't like to look ourselves in the mirror but that's what the studio does.

SIMEN: What is your line between what is OK and what is not OK to edit in a drum performance?

RICH: I think it's OK to edit drum performances as necessary. I think if it gets to where it feels like you're listening to a drum machine instead of a drummer then I think that's where it has gone past the line. But drum editing and punching in has been done as long as technology improves and people try to mess with it. In the 70s and 80s they would cut tape on drummers. You just edit the shit out of the cut and tape, then measure between snare hits. So, it has kind of always been done. Sometimes you get a drummer who has a really great groove. If you feel like the groove is

not quite right and you're editing it, if you edit only with your eyes instead of your ears you've got to use your ears too. To see the drummer and know that he's hitting this one bit late every time and tends to fall on the second beat, be a little behind the pro tools creator – but then you listen to it and realise it sounds kind of right. Or at least try to edit a few and listen to it. Does it sound too fixed? There are things today with pro tools you can edit music to death. People sit around as our ears get used to computer perfection. I like to hear a little of the rough around the edges. But then you know if you're feeling it. If it sounds weird then you know it's messed up. One other thing when it comes to that whole thing with editing and fixing stuff in the studio: listen to the song once in the morning and see if something hits you. If it hits you first thing in the morning, then I think it's a valid concern. If on your 20th listen in the studio you finally notice a little thing then it may not be of great concern. Especially with time stretching, too. I've had people come in who have had to time stretch albums and the cymbals are all weird sounding.

SIMEN: We don't want any of that.

RICH: No.

Sometimes all the fixing... it would be a lot quicker to just play it again. I swear to god it would be quicker.

SIMEN: And it will have a more human feel to it as well.

RICH: It's like lighting in films. Spend the time lighting your shot correctly and then you won't have to sit there in postproduction trying to fix all this stuff.

SIMEN: Do you think quantising and editing have added an unrealistic standard to how a drummer should play?

RICH: Yes, because it makes you sound like a machine. You have to be so exactly on. Maybe it's helping some drummers get better in that aspect. It's just a new trend so there's nothing really wrong with it. I don't think

it's unrealistic. Just pushing people to a higher... not higher but a new standard.

SIMEN: Is that standard something we should live up to?

RICH: I think it depends on the music. Art is expression. We were talking about the new metal. It's a precise, stop-on-a-dime kind of stuff. Whereas you can listen to funk, like this drummer I had in here to play on this D'Angelo record and his whole thing is (imitates laid back drum groove). It was almost late. You would almost think it was wrong, but it was part of the feel. It was so behind the beat. I wonder if you took James Brown and took some of the beats and grooves off them and looked what Beat Detective would do to them. It would be a good experiment. Would it be more funky with all of the little ghost notes? Ghost notes are the thing. Those are the thing that gets you on sampling. Sometimes you have to work really hard to get samples to work properly. That's a whole artform to itself, getting samples to not be heard but know that they're in there. Before there were samples they would overdub another snare drum and put it into a different reverb. If you want a certain reverb on the snare but you don't want the cymbals to get into that reverb you did whatever you wanted to do to serve the song. But it is now, when you got an old-school sound you have to work to get it. Everything is so clean and precise. To get a really messed up sound you've got to... you know, character sound. That's a thing you wonder about samples. Does it take away character? Or the main thing, all these drummers sound alike. That's the big thing. To hear drummers drum and think "oh that sounds like that guy". The samples. Too much of that. Everyone has got the same sample library. Unless you really work at it, that's a big one. It gets boring to me too. If you listen to certain rock radios after a while you're like, "God, every drummer sounds the same in every band. That's the same snare sample I heard on that as I heard on the last three songs. What's the difference?" I totally agree. To have your own mark you have to go extreme.

SIMEN: It's weird that going extreme these days might mean not using samples.

RICH: Yes. Don't use samples, be yourself and try to create your own sound. I can think of a handful of drummers: The Bill Bruford snare, or Stewart Copeland or of course John Bonham. Keith Moon had his own, not only in the sound but in the style. The parts he put in. But it is hard, especially for guitarists too.

SIMEN: These days I see online where people don't use samples, especially drummers when they haven't edited too much except cutting between takes, they always write it like they're very proud of doing it. And I've seen that a lot of times in just the past two years. Do you see it as shameful to admit that you have been edited?

RICH: I don't think it's shameful. It's just to let people know that it is really what it is. I think it's cool that they're doing that. It's a bit like with analogue tape people would put that "this was recorded on analogue tape". So, people have an idea of what to listen for. I think it's the same thing with drummers. Now when you listen to the album you can have that in your mind and know more what to look out for. You're getting the real experience of what that guy really played. I think it's cool that they do that. Maybe it's a bit more for the musicians that are listening to it. The average person doesn't know what exactly is going on or maybe they don't even care and just like the song. But for the musicians and fans – hardcore people – it's cool. There's no shame in being edited, I think. When I used analogue drums, I can think of times when I would take six hours getting a drum track down on somebody because we'd have to punch in. "That was really good but there is the one little spot where it would be great if this was like this." And you'd go to punch in and the cymbal gets weird. You're hitting a different cymbal now. So now we've got to go and punch in on another measure before. All this stuff. It was a task to get it. Certain drummers would be able to come in and nail it. It depends on the music and the preproduction and how well the guy knew the song. Anyway. No shame, no.

SIMEN: Where do you think we're headed, say in ten years from now? Do you think we will be more machine-like, or do you think people will go the other way?

RICH: I hope that it goes back some because I don't know how much more machine-like, we can go. You have these bands that are doing it obviously on drum machines that are quantised. I hope it goes back a little bit more to live people and live playing. But music is always going through changes. Right now, guitar is not that big of a thing in popular music. It's just gone. But it will come back, and you'll have all these bands playing guitar and rock. It's all a cycle. It's just cycles.

SIMEN: Definitely. You're hoping and thinking...

RICH: I'm hoping and thinking it'll go back. A friend of mine was working for Lady Gaga and she was talking about how on the new album she wanted to use real people playing and real instruments. She didn't want the drum machine all programmed out. She wanted it more real. When you get big pop artists thinking that way... I think Bruno Mars is a guy who is pop, but he gets some real drums in there. I think so. We were talking about the Beatles and how you listen to new stuff and the perfection of it, then you go back and listen to the Beatles and it can really mess you up because you can hear how loose it is. The pitch is wavering. They'll have part of a song where the pitch goes down by a quarter cent – some wacky stuff. But the younger generation is still going to be listening to that stuff because it's got a heart and soul and an immediacy. It's not as disposable. That's the thing. The computer stuff can get disposable because there's not as much invested in it.

Matt Halpern

MATT: I do have initial thoughts. Unfortunately with the way modern metal has been recorded with tons of sampling and triggered layering on top of the sounds and quantising – it makes even a drummer sound like a machine. Also, for the drummers that grew up only listening to that style of music, they then end up learning how to hit the drums and end up playing to they sound like that there are very strong benefits to that kind of ability like being powerful and being consistent. Having a very on-the-beat, quantised sense of time and feel. The downside is that you lose groove, to your point. You lose fluidity. You lose the artistic side. You lose motion. In a lot of ways you lose the fun of it because the fun of it is in the dancing and the movement not in making it sound perfect. And the reality is, sure, on an album if you want to play that way in the studio, because you are trying to get very precise, perfect hits, then sure. But if you go out and play live you end up worrying too much about your performance and trying to make it perfect instead of just having fun. That is where I strongly oppose that style of playing. Without naming names, I think it is fair to say that the majority of drummers who have grown up playing that way are very robotic and they lack feel and groove. They are boring to watch. They do not engage with people. I always say this: a drummer like that is going to impress other musicians and drummers. They think, “Wow, this is so technical. It is so crazy they can play that way”. But it’s going to lose the majority of the people in the audience because the audience does not know the difference. All they know is that they see a robot. The thing that the majority of people connect with is movement and feel and energy and happiness and fun. That to me is just so much more important in every way than it is to be robotic. So when I teach drummers I always tell them that it is always great to learn consistency, technique, power and speed but those are tools to have in your tool belt that goes around your body. Your body needs to move like a human and you need to play like a human who

is enjoying their job because you are playing drums and it is the most fun job in the world. That is what it should be.

SIMEN: You have always had that style and I think that is what has made you stand out compared to lots of the other metal drummers. You had that specific type of way of making things groove even though it is very precision based.

MATT: I grew up playing rock music and fusion and funk and pop. I always liked metal but it was never my forte in terms of what I focused on. I just had fun making people smile and laugh and move. That is what I enjoyed doing. Learning metal was secondary for me in comparison to that. When I teach now, I strongly encourage every single one of my students to focus solely – at first – on being able to enjoy and feel the music as opposed to trying to be perfect because you are never going to be perfect.

SIMEN: When did you first encounter drumming samples and sound replacing in your work? Do you know a specific project or something when you first got your eyes opened to drum samples?

MATT: It was probably right before I joined Periphery. Doing some session work where the person who had hired me wanted to have a very specific sound and then that is when I was exposed to it.

Then obviously in Animals as Leaders, that was seeing how Misha using drum samples and drum libraries and seeing how he did all his Bulb demos, that is when I was really exposed to the level and depth that you could take advantage of. Then it became obviously a staple for our writing process because that is how we still write all of our music with programmed drums.

SIMEN: Do you think that the programmed drums side of things has taken away some of the musicianship, like jamming on riffs at the practice space and coming up with your natural parts that you would to a riff?

MATT:

Yes. It can, for sure. Especially if it is the only thing is that bands rely on to write. To me, I have always seen it as a means to an end to make a record with the smallest budget possible so that you can save money. Let me go back. From me the process is: we write and program as a band, then once we get the initial sounds down and the initial arrangements down, then I go play it on the drums. Then I internalize it, learn it and change it so it is like how a human like myself would play it. For me, I make sure that there is a very strong balance of to use it to simply hear what it sounds like in good quality very quickly to decide if it is a song worth investing the time into. But then when you arrange it that goes away and it is solely about the drums. I think if bands take advantage of that process that way then you will not lose... It will be a useful tool along the way to get you to the humanized feel versus solely relying on that as the only way to write music. A lot of it comes down to again what means people have. If you are stuck in an apartment and you do not have the practice space, then it is an absolutely perfect solution. Especially if you are a young band that does not have a lot of money you can put out a record and with the drum samples that are there now, it will sound amazing. You do not have to quantize it. You can program it with feel and there are certainly a lot of educational tools out there to help with that. I think it is about how you use it and how you take advantage of the process. If artists have the means to still get in the room and jam, then that is always going to be the best way in my opinion to at least share the energy. Even then I would still use the software to program the initial demos once parts are jammed out anyway. No matter how you spin it, whether you are jamming first and then taking it to the computer and recording a demo, or if you are demoing first and then jamming it to work out the human feel, either way is great. But you should never, or rather I should not say never, but if you have the means to you should always make sure there is a balance. That is my thought on it.

SIMEN:

Have you ever been in a studio session where you have gone in and done your thing and when the results came back and the mix came back you just went, "Well this is not me. This is just edited and quantized and samples."

MATT: Yes I have. Definitely. But it was also in a place where I did not really care, and I was okay with it because it was a session where the people that were hiring us to do it... It was when I was working with Taylor Larson. People were hiring us to record drums for their songs. They wanted a very quantized feel. It has never happened to where I have recorded something that should be humanized and then I come back in and to my surprise it is now quantized and mechanical. That has never really happened. I have always been very involved in the process especially for my own projects and if it ever is more mechanical it is on purpose. I maintain good communication and control with whoever I'm working with to make sure that things like that do not happen.

SIMEN: Do you feel that there is a sense of shame for people to admit that things have been edited and quantized? Do people not talk about it that much?

MATT: Yes. I think that a lot of people think it's something embarrassing to talk about. I have always been really open to it. I've made it very clear that when I go into the studio we record each song section by section. We do multiple takes of each section with different variations and then we listen back to all the takes from each section. And then we comp together the best parts to build the perfect song. It is all real in that I have played every single note, but how it is crafted and how it is pieced together is through editing and comping. And I think that that is a really good thing actually because it alleviates stress for drummers because we have the means to do it that way now. And there's other benefits to that too. By doing it that way you can keep the drums in tune. There is a lot of quality control involved. You can listen back to parts and really focus in on a part that you want to get right before you have to worry about the whole song. It alleviates a lot of pressure; a lot of stress and it allows drummers to really focus on the artistic options that they might have for each section. To answer your question, I wish more drummers would be honest about that process. And further I wish they would embrace it more because it would really help to alleviate a lot of the pressure that drummers put on themselves. Most drummers who care about their craft will spend time practicing anyway.

By the time that I go into a studio I am certainly capable of that, but as you know, me and Nolly are extremely critical of how our drums sound. With me hitting so hard, and I imagine this is something that you run into, you have the risk of having the snare drum detune or the toms detune and when you have that tuning discrepancy throughout the song that might be noticeable to some people and we have always wanted to avoid that. For other people that might not matter as much. That is probably the biggest reason why we do it that way.

SIMEN: Do you have anything to add about GGD and how you see people use your software.

MATT: The only thing I would say is that I really... Look, we created the software because we wanted to give people the best quality drum samples that we could produce. We wanted to do it at an affordable price that allows people to access the products very easily. Because, there are a lot of different types of users that are going to use this stuff. And the majority of them are bedroom users that might just be starting out and we want to give them good tools to use. I just hope that they know that how we use the products is that we use them as a writing tool in the beginning of the process for our band when writing the songs, but we use them as a way for me as the drummer to really immerse myself in the parts, learn the parts, and then go play them and figure out how to move physically on the drum set. It is a tool to use at the beginning of the journey. It is not a tool to use as the whole journey. But, we are a bigger band and we have more budget and time. We can afford to do that. Part of the reason that we have made the products the way that we have and made them sound the way that we do is that there are a lot of bands who will use them that way for the whole record and we want those records to sound as good as they possibly can. So I would say I want them to realize that there are options and the ideal scenario is that they should use our products as a means to get the drummer to a live drum kit eventually. if that makes sense. At least that is how I see. We use it for sound reinforcement. If there are kick drum parts

that are not perfect, you can always reinforce it to make it sound a little bit more powerful.

We have used it on live recordings before to help round out the sound.

There are just so many benefits to it. Obviously, I am a very big supporter of this style of recording. I just do not want it to detract from the drummer's ability to actually make people feel something.

Derek Roddy

DEREK: I grew up playing with wood beaters with quarters and coins taped to the heads. Playing as loudly as I could acoustically with no mics. Then I got enough money to get microphones but that did not really change the way I played. When I got triggers that change the way I played, but I did not let it because I still kind of play the same way, using the full leg, I have always been that kind of a drummer. The triggers definitely changed the way that drummers approach playing double bass. For sure. You could have four drummers play the exact same drum kit and the same song and it is going to be completely different. The sound is going to be different. You would swear somebody changed the snare drum, cymbals or something. It is a magical thing that has been stripped away with triggers, samples and editing.

Of course, depending on what samples you use and depending on what you're using for sound replacements, if you are using midi notes then probably then you probably won't maintain any of the real performance. If you are using Massey DRT or some of these newer programs that will just take an acoustically recorded track and take the peaks and it turn it into whatever sample you want. The samples still react to the wave file. So it might be a little different going that route. Maybe that should be the middle ground. But again that comes down to how many samples you have, that is the thing.

I would sample the sound of my drum kit, just keep it more natural. If you have 110 samples of each drum...

SIMEN: That is a lot of samples per drum.

DEREK: If you can get to that 80 to 100 or 120 range you are going to start getting closer. Then the only reason you are using samples is for isolation. So if you get 100% or 98% back to the human performance why are you triggering to begin with? Well to get rid of all this shit. (points to his

cymbals)

Or at least that is the way it started. You're familiar with Scott Burns, I am sure?

SIMEN: Yes.

DEREK: There is a podcast with him that's about an hour and 40 minutes or so and he is talking about recording all the metal shit at Morrisound. He said that they calculated kick drums with calculators stuff so they can go back and trigger it the right way with midi because drummers could not play their stuff and it caused this article saying that your favourite 90s records were all triggered and sampled. But what he failed to mention to was they were changing a couple of notes here and there and even doing that was taking hours with the computers that they had at the time. But it was not what we are doing now. Scott Burns said that the way he did it, and I recorded with Scott so I know this is true, is that he fed the signal from the tape machine to an Akai sampler. When the signal got there, the Akai would resample it with whatever sample he wanted, and then it went into a delay to put it back because all of this had a lag to go back to the tape machine but that is how they did all of the stuff that they did. That was the way that they did it then. And he said that he never ran samples on snares and he never did any kind of editing.

SIMEN: It is way harder to edit on tape.

DEREK: The only thing you could do was cut out a tom fill if there was a like a stick click or somethings like that.

The funny thing is I am not so much against sampling and getting it back to as real as possible to get rid of the bleed. For me it would be nice to think that drummers out there go into the studio with their sound but there are very few drummers I know now who at least under the age of 25 that actually have sound. Everybody naturally does but these guys are not concerned because they know can go get Thomas from Meshuggah's snare sound and resample all their stuff. I grew up at the recording studio

for most part. My dad was a recording artist and he had a song on Billboard charts that was old school and stuff. A country song. I grew up in studios. When my buddies and I got old enough to get in a band and start recording we built a studio from the ground up. We were so interested in capturing the musician. When I was growing up the idea of recording was completely different to what is now. I worked so hard to make sure I sounded great and I was developing tone and touch. All these things went through my head as a player that a lot of the younger drummers do not even think about because they are too worried about the technique and about the physical side of it. Not putting the energy into the touch. Because they know they do not have to. I am not afraid of mistakes. That is something that I think that a big part of becoming a proficient musician is learning to live with mistakes. I could go back and listen to every record I have recorded that has gone out and there are mistakes in every song. That is all the stuff that I miss about music. That is why I do not connect with new music any more. It is like not hearing the band and not hearing the drummer and not hearing the individual hearts – the soul. It is all stripped away. I think some bands are trying to get back to how we used to do it. The last Serpents Rise recording we did was completely live with the exception of solos. Pretty much all the rhythm guitars, bass and drums are all live in my studio. Back in the 70s there were probably way better engineers than the guys that you have got nowadays. The new guys know about plug-ins, but they cannot do the work for you. We had to do that stuff analogue, and a lot of the time figure it out on the fly for yourself. This was a totally different thing. Like how many studios have run out of business.

SIMEN: There are different budgets as well.

DEREK: There are no budget anymore.

SIMEN: When did you first encounter drum sampling?

DEREK: Just here (in his studio), personally. I was watching other engineers at the time, sampling things. Technology was not what it was, even in the last

five years. It has got a lot better. So it was not until I got it personally just to experiment with stuff. I was making samples of my drums, and then put that back over the tracks instead of using triggers. I like to record everything with microphones and then going back with my own samples. It just helps to keep it a little bit more natural when you are hearing the same sound coming through the room mics. I try to not gate, I try to just balance it correctly to begin with. I got tired of recording and using triggers. Because most of the recordings I did at that time was just Alesis D4 or D5 whatever I had.

SIMEN: So you did not record acoustic bass drums on your early records?

DEREK: In Cold Blood, we did that in Morrisound, those were mics. Most stuff before that were triggers.

I remember having this conversation with Scott because to me the recording on “In Cold Blood” sounded pretty good and I have a copy of an old cassette somewhere before we re-trigger the kick. I thought the acoustic bass drum sound was pretty solid. Scott would say like: “I got take about two hours to resample the kick”. And I asked why resample the kick? he said: “oh everybody does it.” I said: “it sounds fine. Why do go through all the trouble?” He said: “it needs to be done.” And I said out loud I, why did we not just record with triggers? We are wasting all this time. Then he said: “what you have there is nowhere near what I have here.” That was the first experience with samples outside of just recording what was coming off my D4 and DM5.

SIMEN: Do you remember what year this was?

DEREK: That was 1996. Everything else I did all the way up until “I, Monarch” was coming off the DM5.

SIMEN: Everyone I spoke with are saying that they are so tired of all of this editing and sampling happening in the metal industry these days. What do you think about it?

DEREK: You got to remember this all started because people were trying to make things sound better. There are a lot of drummers I know that are professional players and when they play, they just want to sound good. I love that. I want to hear what you got. I do not want to hear some false representation because that is what is expected. Do you know what I mean? I used to remember I would get a record and I could not wait to get in my car or get home or wherever and to listen to the snare drum sound. I would go through all these questions; I would wonder if he got a new kit. I would wonder if he got a new snare drum I wonder if it is in the same type of heads and I used to pretend I could hear the difference. It was a thing that I always listened to. When I heard records now it is almost the same snare sound on every single record. How did we get here? I am going to say it and it is going to piss people off if you repeat it but I have to be honest. The metal community, we used to laugh at pop and shit because it was so fake. I honestly think that the metal community is probably the fakest community in the entire industry. Do you know what I mean?

SIMEN: That is so good. (both laugh)

DEREK: It is the truth. I was in a band two years ago and we were killing it. We were pulling the best stuff that I have done to this day. And the band members were these young guys and they were phenomenal players. We recorded an EP with five songs, and they were all expecting it to sound like the latest big progressive metal band's album. And I would say do you realize that that stuff is not real? All that stuff you are listening to is all single note stuff pieced together. Even the guitar. People do not realize that this stuff is all fake. And the funny thing is these guys expect to sound like that and they would ask me why can we not make it sound like that? And I would say that that is because that is not what we sound like. I am going to capture what we sound like. I would make them play their tracks from A-Z – from beginning to end and I would say fucking play your shit. You are going to have this ego and walk around like your shit don't stink, you're going to have to talk the talk and walk the walk. I

am not going to sit here and be in a band with dudes that think they are better than everyone else around because they have got a little bit of skill but you can't play your song from A-Z. When are you going to be happy with the fucking musician that you are?

SIMEN: Truer words have never been spoken.

DEREK: It is crazy to think. The band ended up falling apart after that because they had expectations. They expected me who was the engineer to devote my time to change their performance. To somehow or make them sound better. I do not want to play with people like that. If you are not comfortable enough with the musician that you are, I do not need to be playing with you. This is 95% of the fuckers I run into. Do not get me wrong. When people listen to my stuff they go "this stuff is fixed" or whatever. But that is because I take pride in how I play. From a very early age I was developing a sound from the moment I was able to record myself. I was in my early teens doing this stuff. I just think it is a different process for these musicians. It is not the same thing, like we were talking about earlier.

SIMEN: Do you think that quantising and editing have set an unrealistic approach to how metal drummers should play?

DEREK: No. I do not know if it is an unrealistic approach. Here is the thing. There was a poll going around on a Facebook group not too long ago. Something about "if quantising and sound replacing in music was bothering you". 80% or maybe not that high... 65% of people said: "no it is fine." Most of the comments were like "it's fine as long as the band can play live". We keep seeing this statement. "As long as the band can play live." I am here to tell you that at 110 dB with your friends talking in one ear and you looking on your phone you cannot tell me that you know whether that band played that shit live or not. I guarantee you if you were to record them coming off the board and play for these same people live, they would go: "that is not what I heard." This is the problem with the acceptance of this because we say "as long as they can do it

live"... But no they did not. Record that shit and tell me that sounds like their record. No. It does not. Far from it. And this is one of those things I always respected about Slayer.

SIMEN: Definitely.

DEREK: You can go back and watch a big 4 concert with Metallica and even Anthrax, and Megadeth. The fact that that shit is all produced and polished so nothing is out of place and everything is made good. Not Slayer. Sloppy as they are, that is one thing I have always respected about them. I think it is part of the reason why there are shows and bands that are more energetic and vital. Its because... "Slayer!" You do not have people walking around yelling Metallica. I mean, you do. But not like Slayer. It made its way into movies for crying out loud. As far as quantising goes, I do not know. I just think it comes back to it takes away something. I have never experienced it. I do not even know how works to be honest.

SIMEN: So you have never used Beat Detective?

DEREK: No.

SIMEN: That is cool.

DEREK: The only record I have ever recorded to a click was "Black Seeds of Vengeance" and that was only the count offs.

SIMEN: That is insane.

DEREK: I remember somebody saying about a drummer that he was – and I am not going to name names – he was well-known extreme metal drummer who got into a pretty popular band and was doing some good things and one of his teachers was part of "drummer world" and said this is a student of mine. I remember making a reply to them and said: "this kid is really good, but I can't hear him because of all of the sound replacement. I would actually like to hear what he sounds like."

To me your sound is 60% of your musicianship. If you are taking 60% of away...

SIMEN: Do you think when samples came along, they forced drummers to be more precise because you could hear every single note they were playing?

DEREK: That is the thing about the bass drum trigger. Like some of the old school guys do not use triggers because they are not clean enough use it. That is one thing you can say about the trigger. You can hide mics in a live recording, but you can't hide the triggers. You have to play. I think that's what forced a lot of people to play double stokes because they could not play single clean enough and fast enough.

SIMEN: Do you think that is why the editing side of things became more used more because they were heard more?

DEREK: I think that Necrophagist record started all this. I think people were going for that and realize that the only way they could do it was to grid it. If that is the way, it just took over the whole recording community because they were trying to replicate that one record. That happens every decade or so. If you look back at some of the Beatles recordings which were the first record in stereo, they changed everything. Everyone had to do that way. This is just one of those instances. Where as far as the rest of the stuff I think that is why quantising was admitted to solve what you just asked. Once these drummers got back to the studio and heard themselves, it was a mess. Especially with samples on. You can hide a sloppy tom roll in tom resonance. You cannot do that with samples. That is when they realized they had to grid their performances because the drummer was not clean enough. And this is the problem I have with that because now that is not the drummer playing anymore. What would "Symphonies of Sickness" sound like if it was gridded and sampled, It would lose everything that I love about that record.

SIMEN: Yes, and then you have a drummer like John Bonham for instance. Whom would lose everything unique about him if he were sample replaced and edited.

DEREK: There's that video online of the guy (Rick Beato) quantising him, most people cannot tell the difference. Those of us that know how to feel music and know music and how it is supposed to sit, we have developed our ear to a point where we can tell the difference. Quantisation and samples make everything so unenjoyable.

SIMEN: Yes, and I think people do not have a "real reference" anymore because everything is gridded and sampled. I think it's weird that we accept that.

DEREK: The everyday community accepted that in the pop world for a long time until everybody woke up to the fact that it was fake. That is when music died. It was not MTV. It was not video killed the radio star. It is because stuff got fake. At the end of the day it becomes unimportant because the stuff is not real. It is like money. If you knew the money in your back pocket was just Monopoly money, then it would take away your desire to go out and shop. When you know it is fake it is just less desirable. Again music is where it is at because of their not being anything real. How many drummers have recorded that have no idea that they are sound replaced? Most of the people I questioned around here have no idea that the engineer has sound replaced their snare drum. Because they are not into that. They just here to play the drums.