The Age of MatheMagic – How Big Data is Changing the music business

Abstract

Technological advances have enabled marketing practitioners in the music industry to see more in-depth and real-time images of the market than ever before. Some music companies have harnessed this plethora of big data and have been able to deliver remarkably good results. However, big-data's effect on the music industry has not yet received much attention from the academic world.

This explorative, qualitative study examines just that, through looking at 1. How these new images of the market have changed impacted marketing practices at a record label such as Universal Music. 2. How this has impacted organizational learning in a record label and how it gathers and acts on feedback, and 3. How these feedback loops and user data affect the market orientation of the company.

After in-depth interviews and three case studies, our findings indicate that these richer and more up-to-date representations of the market lead to record labels being able to correlate user psychographics to music preferences, they lead to consolidation of power towards larger labels, and they lead to ease of finding new niches and sub-genres for artists to find fans within. We found that the feedback loops we studied have gotten progressively tighter and shorter, with information systems being able to produce much faster valid data for decision makers to act upon. Thirdly, we found that as a result of increased capacity to gather market intelligence and respond to it, Universal Music became much more market oriented as a company.

This has some very interesting implications both for theory and practice. For example, we saw that the temporality of feedback loops is an overarching factor across all our big-data research. Due to this, companies such as Universal Music are able to be much more explorative in their practices, and are able to mitigate risks in new ways.

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1. Introduction

Data today is becoming ubiquitous, especially with anything related to information technology. From the moment you start your smart phone or your laptop, every key you pressed, every icon you hovered your mouse over, and every ad your eyeball probably hit (and for how long), is logged and safely stored away under one of the many anonymous online profiles that have been assigned to you.

With the approaching boom in the 'internet of things' and connected products, this plethora of user generated data will increase exponentially, as more and more devices connect and interconnect, and will be used for everything from continuous status checks, to gaining synergies from connecting previously analog parts. (Porter 2014)

Before the beginning of the IT revolution, Michael Porter wrote about how information technology would transform the value chain, and the businesses with 'better information' would be able to create a competitive advantage. (Porter, 1985) At that time, one of the key pitfalls that he outlined was that of 'information overload' due to IT. With connected products about to create an entirely new wave of information and information systems, the danger with 'big data' causing paralysis to a company's decision making seems even bigger.

There are already some companies that take full advantage of the new digital landscape and use data to fuel new products and value offerings. Companies such as Google and Facebook have used user-generated data like internet searches and social profiles to create superior advertising products. Amazon uses your purchase history to cross sell even more products to you, and thereby increase their revenue per customer. Netflix looks at the shows you previously watched, in order to come up with new recommendations for other shows that they think you will like.

As we saw above, data has transformed the product offerings in industries ranging from advertising, to retail, to film and TV. I have decided to examine how the advent of big-data, which apparently paints a 'richer' picture of the market, has affected the business processes of the music industry.

The music industry in Sweden has undergone a rollercoaster of change. From a low of just $144 million in 2008, to crossing $194 million in 2013, the music industry is getting close to making more money than ever. All of this has been on the back of widespread adoption of a digital streaming model, with digital's share of total revenues of the music industry going from 8% in 2008, to 70% in 2013. (ifpi.org, 2015)

Universal Music Sweden is Sweden's biggest record label. It is a part of the Universal Music Group, which is the world's biggest record label. This unprecedented shift to digital consumption of music has given record labels such as Universal Music access to more data than ever about how their listeners consume music, what kinds of music they like and dislike, as well as the possibility to match these musical tastes to other psychographic customer characteristics. As journalist Robert Levine said in Billboard Magazine in April 2015, "Data is taking the guesswork out of music" (Levine 2015) The record labels have realized that since all this data paints a much richer, real-time picture of the market than they were used to, they need to start working in new ways and adapt. This change has been seen broadly across three areas – firstly, real time data has helped marketers optimize not only which channels to market on and which messages an audience responds to, but also which audiences are the ones most likely to respond. Secondly, due to the ability to see a user's 'journey' through different artists and genres, record labels are able to see which other artists a specific user-group streams in addition to the one they are promoting, and are thus able to brand an artist in the appropriate way. Lastly, record labels are now using data to identify listening patterns of how users are streaming their artists, and using these patterns to change the product itself – the next piece of music that they release.

However, these changes (and the flood of data associated with them that music companies now find themselves sitting on) pose some very interesting challenges as

to the functioning of the music industry. One question that particularly stands out is that of 'breaking hits'. A 'hit', in this case, being defined as a new artist reaching the Spotify Top-50 chart, or an established artist reaching the Spotify Top-10 chart. According to Per Sundin, MD of Universal Music Sweden, "It's all about breaking hits. The more hits we have, the better the company does as a whole". Of course, with a different industry landscape today as compared to 25 years ago, 'breaking a hit' in all likelihood looks different today than it did then. Another key issue that the industry seems to be coming to terms with is the artist-audience relationship. Mark Dennis, MD of Sony Music Sweden states that it is easier than ever to get a large group of people to sample new music. However, record companies like Universal Music are endeavoring to make sure they get the *right* music in front of the *right* people. Once the artist has a clearly defined and loyal audience, a the next natural question that arises is how do you reach new audiences and grow your revenues without alienating your core fans? These are all issues that the modern music business in Sweden has been working on.

2. Problem Area –

'Big data' is a topic that is on everyone's lips these days, and is already bringing competitive advantages to industries as diverse as ecommerce, health, politics, and security. (Chen, Chiang, and Storey, 2012) However, the impact of this data on the music industry has still not been sufficiently explored. This thesis aims to shine light on these new developments and how the industry is reacting, with the hope of creating a platform for future research.

In the scope of this paper, the terms music business, and record labels are used interchangeably, and Big Data refers to the new, richer, and more up-to-date images of the market that are being generated due to the technological advances we discussed above.

Ever since the late 1980s, when a new sales reporting technology changed the way Billboard Inc. ranked top songs and thus changed the way the music business measured success, (Anand and Peterson 2000) changes in the music business have been driven by technology. The shift to MP3s in the early 2000s (Richard 2000) led

to a widespread wave of piracy that decimated the industry (Hill 2007), followed by record companies embracing the digital revolution, to the point when now digital services such as iTunes and Spotify contribute to 70% of the music industry's total revenues. This digital shift, as we discussed, has also allowed platform owners to log every click, swipe, and scroll a user does on their app or software. As a result, record companies are now able to see much richer and more up-to-date pictures of the market. How this has affected the actual business practices of companies will be one of the key issues we examine in this thesis.

Argyris (1976) stated in his paper about single and double learning loops that in the real world, situations are dynamic, and thus decisions must always be made on incomplete data. This is why feedback is always needed to evaluate whether an action was effective or not. This gives us the concept of 'feedback loops' – the feeding back of information from the environment to the actor on the degree of effectiveness of the action, and then the actor optimizing his/her next action for higher effectiveness. These feedback loops have always existed. However, the digital shift, which has enabled more detailed and up-to-date 'pictures of the market', is able to tell music companies which kinds of users are listening to which kinds of songs on a daily basis. This 'feedback from the environment' becoming more frequent and more detailed seems to have had massive effects on how music companies learn about what works and what doesn't, particularly when it comes to marketing tactics such as the message to convey, the channel to use, the audience to reach; as well as more strategic topics such as long-term artist branding and product design. It is through these loops also, that we can best see how environmental factors such as technological change have affected the market understanding of a record label like Universal Music, and how they channel this into their activities. Feedback loops will thus be a key aspect that we examine.

Finally, we intend to examine whether or not these changes in business practices are theoretically likely to actually benefit the record companies. To do this, we will introduce the concept of market orientation from the perspectives of three articles – the business intelligence perspective, (Kohli and Jaworski, 1990, Kohli and Jaworski, 1993) and the customer-orientation perspective. (Deshpande et al, 1993)

It is hoped that this thesis will offer real world usefulness to musicians and their marketers in breaking through the clutter, and gleaning actionable insights when it comes to product design, marketing tactics, and artist branding.

3. **Purpose of the thesis**

This thesis is intended to be an explorative study to explore the effects of Big Data on the business processes in the record label industry Sweden. Throughout our study, main question was the following:

- How has big-data entering the music business affected the way the business works?

We will explore this phenomenon by answering the following three research questions:

1. How have marketing practices been affected by the systemic change of the streaming model leading to more detailed and up-to-date representations of the market?
2. With this shift in mind, how do record labels 'learn' today, and how has the speed and degree to which feedback is returned to the actor changed with respect to before?
3. How has the development of these feedback loops and prevalence of user behavior data affected the market orientation of record labels?

One of the primary motivators for this study was the privileged position we found ourselves in. With almost 80% of its revenues in 2014 coming from streaming subscription services, Sweden is the most advanced streaming market in the world. (ifpi.se, 2014) Furthermore, since I, the researcher work at Universal Music Sweden, we had insider access to seeing the digital transformation of the market leader in the music business. We thus had the unique opportunity to study this rapidly evolving business in its most advanced marketplace, Sweden. A study by CISCO in 2010 also found that the music business is likely to be a frontrunner of

change, and the changes it goes through will reverberate around the news, television, and airline industries; among others.(Reese, 2010)

As a result, the study of this phenomenon was an extremely compelling prospect for us.

4. Delimitations –

As we saw in the introduction, 'big data' is infiltrating almost every area of life by today. The music industry is equally large, permeating into the daily lives of the majority of the population in one-way or another. Thus, we have delimited the scope of the research to the Swedish music industry, since the business is at different stages of maturity in different markets. (IFPI.org 2015) We also consciously chose to look at Universal Music Sweden in particular, partly due to our deep relationship with a company which granted us access to insights that may otherwise be hard to obtain, and partly due to the inductive, explorative, qualitative nature of our research, where our case-based research attempts to create a snapshot of a business at a certain moment in time, to provide an understanding of the dynamics of a process. (Merriam, 1994)

It is also important to note that we limited the scope of the thesis to three broad business processes– marketing tactics, artist branding, and product design – based on our own experience, as well as a pre-interview with Managing Director, Per Sundin, at Universal Music Sweden, who named these 3 as the parts of their business that are being affected the most. It is very possible that there are other areas, not explored in this thesis, which can be addressed in future research.

5. Theoretical Background

Now that we have identified the purpose of the thesis, in this section we will sum up relevant academic papers, models and theories to refresh the user's knowledge on the subject, and provide a context for the rest of the paper.

5.1. Representations of the Market and Their Effects

Our first research question aims to help us understand how the systemic change to a streaming business model, and thus richer and more up-to-date images of the market, has affected business practices in the music business. These 'images of the market' are the outcomes of what Kjellberg and Helgesson (2007) refer to as representational practices – that is, activities that contribute to depict markets and/or how they work. Any systemic change in representational practices thus merits attention, since Kjellberg and Helgesson (2007) theorize that representational practices are key to the functioning of markets. These practices are one of the three pillars of interlinked types of practices (the others being normalizing practices and exchange practices) from which markets are created.

An interesting way to evaluate the phenomenon would be to examine it against the backdrop of a similar, previous systemic change in representational practices in the same industry. When Billboard Inc. changed the methodology of their data collection and shifted from panels and surveys to actual sales data, there were several deep-reaching consequences within the music industry. (Anand and Peterson 2000) The authors found that record labels were now able to correlate newsmaking events (such as winning a Grammy award or an appearance on a TV show) with sales data. Secondly, the bigger record labels had the resources to better make sense of the new market data, and were thus able to increase market share. Lastly, better segmentation of the consumers allowed record labels to focus on narrower niches.

Today, instead of moving from surveys to weekly sales data, we are moving from weekly sales data to music labels receiving daily real-time streaming data, as well as a plethora of other related information, such as customer demographics.

There is a clear similarity in thought between Kjellberg and Helgesson (2007) and Anand and Peterson (2000) in that it seems clear that images of the market, and market actors' understanding of their place within the market is central to deciding the status quo of an industry or a market, and changing the way these images of the market are presented to market actors will have deep consequences. Kjellberg and Helgesson present this as the interlinkage between normalizing and exchange

practices, while Anand and Peterson are more general in saying that changing the scope, methodology, or political tone of market information will give a jolt to its actors.

In the case of Universal Music, we know that the company has moved from weekly sales data to daily streaming data, along with a plethora of other related information, such as customer demographics. Thus, the market images and way they are presented have changed – and merit examination.

5.2. Organizational Learning

Our second research question deals with learning within music labels, and whether the speed and degree to which feedback is returned to the actor have changed with respect to before. Argyris (1974) defines learning as the detection and correction of errors, where errors are any feature of knowledge that makes action ineffective.

In the real world, actors have very limited time and scope for analysis. The closest one can come to understanding effectiveness in this context is defining key questions, which, if answered, would make it possible to evaluate effectiveness'. Thus, learning is simply a series of comparisons between actions and feedback from the environment, providing information to base the next decision on. Increasing the effectiveness of learning, according to Argyris (1974) is down to two sets of variables – one is the degree to which interpersonal, group, and bureaucratic factors produce valid information for decision makers to monitor the effectiveness of their decisions; and the other is the receptivity to corrective feedback in the decision making unit.

March (1991) talked about 'Exploration and Exploitation in Organizational Learning'. Exploration refers to things such as discovery, search, variation, risk, and innovation; while exploitation refers to things such as optimization, execution, selection, and incremental improvements.

He theorizes that since exploitative practices are much easier to measure, closer in time, and more certain; when a company is in a competitive market, its processes

naturally adapt to favor exploitative practices, even though companies that do not also engage in exploration are in a danger of being in 'suboptimal state equilibria'.

Building on this, O'Reilly and Tushman (2004) talked about 'The Ambidextrous Organization'. The authors discovered that some companies do exceedingly well at exploiting the present and exploring the future – these companies were ambidextrous. The authors found that the best ambidextrous companies had separate departments for exploring and exploiting opportunities, but a tightly integrated management team that sought to create synergies between the two.

Jaworski et al (2000), on a similar note, state that companies must be both market driving (changing players and their roles in a value chain or changing behavior of customers, competitors, or suppliers), and market driven (accepting market structure and behavior as a given) at different times.

That is, a company must choose judiciously when it wants to be market driving and market driven. It would be interesting to see what part learning and feedback plays into signaling to a company like Universal Music when they must proactively change the market dynamics, and when they should accept the status quo.

With the advent of 'big data', it makes sense to examine the change in factors which produce valid data for decision makers – as well as the frequency at which they produce it.

Explorative activities, such as innovation, risk, and discovery put forth by March (1991) may also have similarities with the receptivity to corrective feedback in the decision making unit put forth by Argyris (1974). That is, there will not be much variation, discovery, and risk if the decision-making unit does not want to receive unexpected and new feedback.

In our case, the Swedish music industry has gone through a total transformation over the last few years, as we saw in the introduction. It would be extremely interesting to see which factors contributed to them turning their business around. Did they start learning faster? Did they open up their decision-making units to

more feedback? Was it due to technological factors? We will explore these questions in the paper.

5.3. Market Orientation

Our third research question asked if the development of these feedback loops of learning and prevalence of user behavior data has affected the market orientation of record labels. Deshpande et al (1993) look at market orientation as a set of activities and processes that are geared towards creating and satisfying customers through continuous needs-assessment. They found that a company evaluated as customer-oriented by its own customers was related positively to business performance. That is, the more customer oriented a firm is, the better it generally performs on the market.

Kohli and Jaworski (1990) and Kohli and Jaworski (1993) break down market orientation into three factors: 1. Intelligence generation, which is being in touch with customers' future and current needs as well as exogenous factors like government and environmental influences. 2. Intelligence dissemination, which is the concerted effort of all departments to respond to market needs. 3. Responsiveness, which is actually acting on the market information in an appropriate way. Responses can range from selecting target markets to promoting products in a way that elicits good end-consumer response.

A common theme among both Kohli and Jaworski and Deshpande et al is that it is very important to stay in tune with what the customer wants, and to act on those needs appropriately. Kohli and Jaworski refer to this as the collection of, dissemination of, and responsiveness to market information; while Deshpande et al address this as assessing the needs of the market and gearing business processes towards meeting those needs.

The most important consensus between Kohli and Jaworski's articles and that of Deshpande et al is that market orientation is correlated to better business performance. Thus, if we can study if and how the market orientation of Universal

Music has changed over time, we can predict how the business might perform in the future.

Takeaways

A useful way to look at how the music industry has been affected by all the new consumption behaviors, distribution and marketing shifts, and the emergence of vast amounts of listener data; would be to look at it through the perspective of market orientation and organizational learning, corresponding to research question 2 about how music businesses learn today, and research question 3 about how music businesses' market orientation has changed over time.

When dealing with market orientation, there are 2 main common themes that can be found between the thoughts of Deshpande et al (1993) and Kohli and Jaworski (1990) – firstly, companies that are market oriented, generally tend to perform better than those that are not. Secondly, market orientation in general involves, gathering data about the market, and then optimizing your efforts based on that data. In a similar way, Argyris talks about learning as 'a series of comparisons between actions and feedback from the environment'. Thus, the idea of feedback loops and using new market information to optimize a part of a company's marketing is not a new idea. Putting together existing research and our interviews with Universal Music Sweden employees, we expect a generic feedback loop in the music business to look like the following –
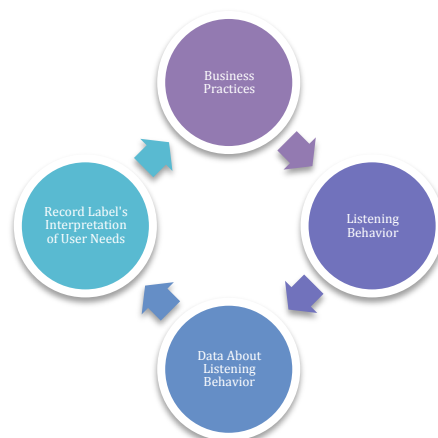
Figure 1 - A Generic Feedback Loop in the Music Business

Summary

We will use the above theoretical base to analyze our empirical studies and answer the research questions we posed in the beginning. In order to see how new representations of the music market have affected Universal Music's marketing practices, we will analyze it with the article about sense making in markets by Anand and Peterson. For the second question, to explain how the feedback loops have changed, we will look at the empirical studies through the model set forth by Argyris (1976) relating to how organizations learn, and further examine it, asking what this means in terms of explorative versus exploitative practices (March 1991, O'Reilly and Tushman, 2004), and for companies in general being market driving or market driven (Jaworski et al, 2000).

Lastly, we will examine the question of how the above has affected a firm's market orientation by analyzing the empirics with respect to 3 main articles, Deshpande et al (1993) and Kohli and Jaworski (1990), and Kohli and Jaworski (1993)

6. Relating Theory to Practice

When we asked Per Sundin, MD of Universal Music Sweden what market practices were most affected by this transformation of the music business, he named 3 things – Marketing Tactics, Artist Branding, and Product Design. Thus, these are the 3 feedback loops that we focused on in this study.

The shift from the physical to the digital world of music – and with it a change in representational practices – is central to each of these loops, and it can be argued, was the catalyst to the majority of the changes the rest of the phases went through, respectively.

In the following sections, we will evaluate each of the loops in turn, and explore how they have changed, how the relationships between the different phases in the loops have also changed over time. We examine all the loops starting off against the background of new images of the market (that is, changed representational practices as a result of the new availability of data), and following the ripple effects this had throughout the other phases of the feedback loop. Of course the music

industry, as any industry, is a moving target, and thus none of these are closed loops. Although there will always be outside influences coloring the respective phases in one way or another, the loops as they are described below, are the main hubs that drive the marketing practices at Universal Music Sweden, according to the understanding of the researcher.

7. Methodology

We have decided to do a qualitative, inductive study to paint a picture of how the record label industry works today. This study is based on deep, semi-structured interviews with people working at Universal Music Sweden, as well as 3 case studies, which illustrate the changes that the industry has gone through.

7.1 Explorative, Abductive Study

Extant research within the area of big data in the music industry is scant, and the phenomenon being studied lacks a clear description of how it manifests itself in real life, due to record companies traditionally keeping their proprietary methods behind closed doors. Since it is a new area with little attention or understanding so far from the academic perspective, an explorative study is most suited to it, assisting in collecting preliminary information and definition of problems and suggestion of hypotheses. (Kotler and Armstrong, 2013) However, we will use a theoretical base from other areas such as marketing practice and organizational learning to start from, combining insights from the theory with our empirical observations to increase our understanding of how big data is affecting the record label industry. Thus, it is an explorative, abductive study.

7.2 Choice of Qualitative Research

The choice of qualitative research is echoed by Bryman and Bell, (2011) who state that this kind of study is most suited to getting a detailed and thorough examination of a phenomenon at the same time as an understanding for the overall context. This is thus perfectly suited to our needs, since we aim to gain a deep understanding of how data has been integrated into the music business, and how business practices have changed as a result.

Our research aim of examining the effect of new images of the market enabled by big data led to us studying the changes in an industry across the span of almost a decade. In addition, we researched across business areas ranging from product design to marketing tactics. This implies a very broad scope, for which Bromley (1986) suggests the use of a qualitative study.

Our choice of qualitative study is backed up by Merrian (1994) who discusses that qualitative studies are best for examining the dynamics behind a process, in this case, the effects on business practices of faster and richer images of the market.

Therefore, we opted to go for an explorative, qualitative study, relying on in-depth, in-person interviews with the people driving the changes that the recording industry is seeing – the executives, the promoters, and product managers. This study also gave us 3 'cases within a case' studies. That is, in-depth illustrations of the processes we studied, in action.

This mixture of interviews and case studies was designed to give us both a picture of how the record label business has changed through the different perspectives of people leading that change, but also to see how this change has objectively played out in real life, by analyzing the opinions of the interviewees, against the backdrop of real-life events.

7.3 Case-study Method

Case studies are a great way to explore and research relatively new phenomena, which have not yet received much attention from the academic world. (Foreman, 1948) Yin (2013) also recommends a case study as a way to conduct an explorative study. Yin (2013) also recommends case studies as a way to build theory and give more substance to the following analysis and conclusion. For this reason, we have used three in-depth illustrations of the processes we are exploring, to give us a broad overview of the examined phenomena in action. These 'cases with the case of Big Data affecting business practices' pertain to marketing tactics, artist branding, and product design.

7.4 In-Depth, Semi-Structured Interviews

For the interviews, although we had an interview guide, the explorative nature of the study necessitates that we allow the interview to take its natural course, while keeping with the main themes of the paper. This was done because in qualitative research, the perspective of those being studied – what they see as important and significant – provides the point of orientation. (Bryman and Bell, 2011)

In addition, it was essential to interview the entire hierarchy of people working within a record company, to be able to gauge how employees at each level integrate data into their jobs. There were 13 interviews in total – 12 employees of Universal Music Sweden, and 1 of Sony Music Sweden. They were all recorded in a quiet, closed room at the Universal Music Sweden office in Stockholm, apart from the interview with Mark Dennis of Sony Music, which was recorded at the Sony Music office in Stockholm; and the interview with Emily Enegren of Universal Music, which was recorded at a restaurant in Stockholm. A full list of our interview participants is attached at the end as an appendix, along with the interview guide.

For the interviews, we used a semi-structured approach, where we had an interview guide and a loose set of questions around specific topics that the interviewee was an expert in or had experienced. We chose the most relevant topics to the interviewee based on the researcher's own judgment (having known the interviewees), and often posed follow up questions and allowed the interviewee to go off on tangents. The interviewee was given a lot of leeway to answer the questions as he/she saw fit. We did this to place emphasis on how the interviewee frames and understands issues and events, showing what he/she views as important in explaining and understanding events and patterns. (Bryman and Bell, 2011)

The interview guide was customized to each interviewee, to ensure that the results contained as much relevant information as possible. (Yin, 2013) The interview guides are attached in the appendix. They were adapted to individual respondents by the researcher's own judgment, taking into account their areas of expertise and previous experience.

7.5 Choice of Concepts Explored

Our first interview was with Per Sundin, Managing Director of Universal Music Sweden. We used this interview, as well as the researcher's own judgment and experience to define the 3 business areas that are being influenced the most by the phenomena we are examining – marketing tactics, artist branding, and product design.

7.6 Researcher Reflections

It must be stated that I, the author, work with Universal Music, and have been involved in conceptualizing and developing several of the marketing practices associated with better data usage. Thus, in a way I am studying myself, and the decisions that I have made.

This can sometimes be a tricky proposition, given the fact that it is often hard for a researcher to see his/her own biases and 'blind-spots'. To guard against compromising the integrity of the research, we have put in several lines of defense.

Firstly, since I was mindful that I was studying myself, I have paid attention to consciously not let any pre-conceived notions color any analyses. This was the first line of defense.

Secondly, in the interview guide for my interviewees, we were careful to ask open-ended questions, which allowed interview participants to speak freely around a topic with their own views and perceptions, to give the reader a multi-dimensional perspective of the situation, rather than just one person's idea of what the market looks like.

Thirdly, in the empirical cases we studied, all the people involved in those specific cases from Universal Music Sweden went over the texts and verified the accuracy of the events as they happened. Where there were disagreements about the events, it has been noted. This helps by adding a layer of respondent validation, (Bryman and Bell, 2011) which ensures the quality of the research.

Lastly, semi-structured interviews have a much lower potential for being influenced by any sort of bias, since it is the interviewee who defines what is important and

worth discussing. Thus, through corroborating what we found in the interviews with what we saw in the case studies, we were able to triangulate our findings and minimize my own biases an any moderating factor in the research.

One thing that worked in my favor as an 'embedded researcher', however, was that I had an intimate knowledge of the people I was going to interview, and as a result, had a good idea of which artists they had worked with and what their previous experience was. In several cases during the interview, even though the respondent had earlier, in the heat of a moment told me how they feel about a certain thing (such as artist branding), it was difficult for them to re-articulate those feelings in the hot-seat of an interview situation. In the interest of remaining unbiased, when I saw that they were struggling to articulate an answer to my open-ended question but I knew that they had given me their thoughts on it before, I prodded them by saying "Do you remember X date where we discussed this?" (X being the specific date) In my interview with Head of Radio, Emily Enegren, for example; this worked like a charm. If they still could not recall, I moved on.

7.7 Quality of the Research

The reliability and validity of the research work are often used as yardsticks to measure the quality of a thesis. However, Lincoln and Guba (1985) and Guba and Lincoln (1994) put forth the suggestion that there are 2 alternate, more appropriate ways in which to evaluate the quality of qualitative research. They are trustworthiness, and authenticity.

The trustworthiness of research is made up of 4 factors – credibility, transferability, dependability, and confirmability.

7.7.1 Credibility

Lincoln and Guba argue that ensuring credibility is one of the most important factors of gaining trustworthiness, and asks the question – "How congruent are the findings with reality?". In order to do this, we employed 2 methods. Firstly, the development of an early familiarity with the culture being studied before any data collection takes place. (Shenton, 2004) Lincoln and Guba (1986) also suggest

'prolonged engagement' with the party being studied to establish a degree of trust between the parties. This was easy to do, because the researcher himself was working with Universal Music Sweden in this case for 7 months before the data-collection process began. Another measure suggested to establish credibility of research is that of triangulation. (Shenton, 2004) Triangulation is the use of more than one method or source of data in the study of social phenomena (Bryman and Bell, 2011). In this case, we used the methods of in-depth interviews and case studies as part of our empirical research. Using more than one data collection method could also be a way to cover their individual limitations. (Brewer and Hunter, 1989)

7.7.2 Transferability

As we discussed, we found ourselves in the privileged position of having insider access to seeing a unique business transformation that is likely to impact several other industries in the future. Thus, the goal of this study was to generate deep, new knowledge and insights about this new process, the scope and ambition of which came at the expense of transferability. We decided that it was an acceptable trade-off, and focused on studying the process as in-depth as possible, even though it may not be transferable (at least for now) to other settings and industries.

7.7.3 Dependability

The dependability of a piece of research is simply a sign that if repeated in the same context, same methodology, and same participants; whether or not we would obtain the same results. Of course, since in this case we are dealing with a dynamic and ever-changing business, it would be nearly impossible to repeat the findings. However, Lincoln and Guba (1986) suggest that there is a very close relationship between credibility and dependability, and ensuring the former (which we did through prolonged engagement and triangulation) goes a long way to covering the later. Furthermore, we have described how we conducted our interviews, who the participants were, in what contexts we interviewed them, and our interview guide for them; so as to document the data gathering process adequately.

7.7.4 Confirmability

This is concerned with ensuring that the researcher has acted in good faith and that theoretical inclination and personal values have not compromised the integrity of the research in any way. (Bryman and Bell, 2011) As discussed earlier in this section, this was a special danger to us since the researcher concerned was observing himself, in a way. We battled this through triangulation, respondent validation, and always asking open-ended, objective questions.

In addition, we also wanted to ensure the authenticity of our research (Bryman and Bell, 2011), of which fairness is a major part. This asks the question of whether the research fairly represents the different viewpoints of the setting studied. In order to do this, we were careful to interview people from the entire hierarchy of the Universal Music Sweden office, right from the managing director and general manager who have a high-up, strategic view of things, down to the promotion managers and product managers, who are much closer to the action and day-to-day tactics.

8. Empirical Observations

Universal Music Company Organization Chart

One of the keys to understanding how a company like Universal Music works with Big Data is to understand how it is organized internally, and the analytics tools it has at its disposal.

Universal Music Sweden is Sweden's largest record label, a subsidiary of Universal Music Group, which is the world's largest record label. Universal Music Sweden is the mother-company which owns several smaller record labels, namely Sweden Music, Svenska Inspelningar, Capitol Music Group Sweden, Virgin Records Sweden, and Polydor Sweden.
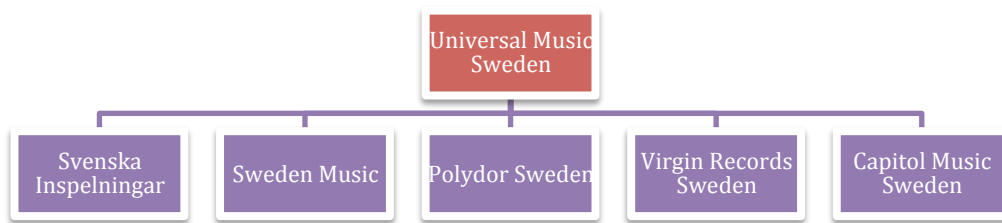
Figure 2 - Universal Music Organization Chart. Mother label owns 5 sub-labels.

Each record label is typically made up of people in one of three roles – the A&R manager, who is the talent scout and is responsible for the musical side of things; the product manager, who is typically a project leader that assigns budgets and plans marketing activities; and the promotion manager, whose job is typically a public-relations person, in constant contact with media outlets, trying to get exposure for his/her artists.
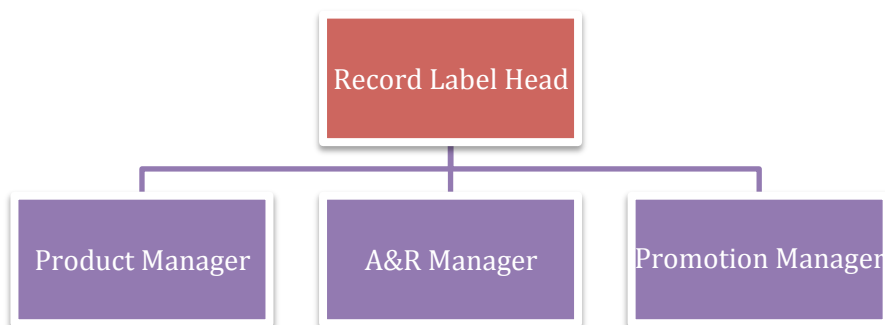
Figure 3 - The Set-up of a Typical Record Label

Analytical Tools at Universal Music

Over the course of our interviews (and from the researcher's own experience at the company), we got to know some of the analytical tools at the disposal of a music marketer. Proprietary to the Universal Music Group is the artist portal, which

allows marketers to view not only how much a song is streaming, but overlay concert appearances, radio plays, and marketing campaigns; to be able to gauge what moves the needle and what doesn't. The artist portal is also able to break down listeners into different segments, ranging from the cool hipsters who always want to be the first to get new music, to the middle-aged fathers who are loyal to their 80s rock playlists – this is to help marketers choose which segments they want to target, and in what order.

In addition to the artist portal, employees at Universal Music Sweden also rely on campaign data from its marketing partners – mainly Google and Facebook, which tell them how many people clicked on their ads, how many viewers saw 50% or more of their newest teasers, and how many unique people their advertising reached every day. These 3 services make up the marketing dashboard of a Universal Music Sweden marketer, according to the researcher's own experience.

8.1 Big Data's Effect on Marketing Tactics

"You always hear people saying – 'The music revolution is over! Your industry has been disrupted by technology, you adjusted and lived through it, and now it's on to the next industry: TV, Print, whatever it is.' I think those people couldn't be more wrong. Yes, the music industry has been disrupted, but it's only the distribution that has changed. Instead of selling physical CDs, we're now selling online access. The marketing, until now, has still been the same. If you have Katy Perry coming to Sweden, our promotion teams would still call up a newspaper for an interview – but that is not where her fans are anymore! The new way of doing promotion will be generating buzz, being top of mind, and breaking through the clutter." – Per Sundin, Managing Director, Universal Music Sweden.

One of the biggest differences in the music industry today, is how the product spreads and how hits are created, especially in Sweden. The adoption by all major Swedish music companies of streaming and specifically the software called Spotify, put to test the long-tail theory coined by Chris Anderson in 2004, who said that the internet and unlimited choice would enable more and more niches to become profitable. (Anderson 2004) Although hits and blockbusters still make up the majority of Universal Music's revenues today, a very attractive and significant target audience for the company is also men over 35, because they stream their favorite rock bands from the 1980s over and over, bringing in significant revenue

from the 'middle' and long tail, according to Nora Bellil, product manager at Virgin Records Sweden.

However, the shift in marketing tactics goes deeper than that. According to Managing Director of Sony Music Sweden, Mark Dennis, "In the olden days, you knew that if you got your artist played on this specific radio channel, and if you got this specific reporter to write about the artist, and you ran your TV spot at this specific time, you were pretty certain to get a hit." There were, in a way, only a few boxes to tick, and artists that ticked those boxes had a monopoly on your musical attention. Mark Dennis continues – "Now, there are almost unlimited exposure opportunities for our artists." A side effect of almost everyone being able to upload their music is that almost everyone actually does produce and upload their own music. As Per Sundin says, "This means that the job of a record label is shifting from being the gatekeeper, to being the advisor that helps an artist cut through the clutter".

Adjusting the feedback loop model we presented earlier to marketing tactics, it looks something like this –

Figure 4 – The Feedback Loop, adjusted to Marketing Tactics

Now, we will evaluate the relationships between the phases in this loop, and examine how they have changed over time.

8.1.1 Relationship Between Data About Listening Behavior and Record Label's Interpretation of Consumer Preference

The advancement of technology has meant that most of the marketing channels used by music marketers today have become very advanced in terms of the breadth and depth of the data that they report. No longer does an advertiser have to pay a lot of money months in advance for essentially interrupting a viewer's content with a mass-market ad, and then pray that the ad was catchy enough that a significant percentage of the people who saw it, will actually remember it.

In addition to the breadth and depth of data feedback however, the thing that changed the game was also the timing of the reporting. Product manager at Universal Music, Andreas Hindenäs says that they use platforms like Google Adwords and Facebook Ads, which give the advertiser almost real-time reporting on how ads are doing.

This, when coupled with falling costs of computer processing power (Paul 2015) makes it easier (and cheaper) than ever to test which target groups respond the best to an ad, and focus spending there. Thus, since the speed at which data about listening behavior is generated is almost instant, it is able to feed the record label's perception of which marketing tactics the user is responding to, much faster.

We perceive this to demonstrate that we are shifting from a 'fire and forget' model of marketing, to an iterative model. Simply put, this means that instead of taking large risks up front with big-money, mass media campaigns, advertisers such as Universal Music are now able to troubleshoot and optimize their campaigns on the fly – and are able to change everything from the copy, the picture, to the demographics and interests they target to, depending on which combination of the above factors responds best to the ads. Due to this new way of thinking about a marketing campaign as constant and malleable, according to Hindenäs, Universal Music's marketing campaign effectiveness in November 2014 was judged to be almost 600% higher than what it was in November 2013.

8.1.2 Relationship between Record Label's Interpretation of Consumer Preference and Marketing Tactics

Like Sony MD Mark Dennis said, the toolbox of a marketer in the early 2000s was very clear-cut. There were certain levers you pulled every time, be it reaching out to the right journalists, the right radio directors, or crafting the perfect 30-second spot for your captive Friday night audience, and checking these things off one at a time, (or all at the same time) was the job profile of a promotion manager.

Unfortunately for those old-school promotion managers, the game has changed. Local journalists have been replaced by location-agnostic music blogs (Ulloa, 2014). The 3 major record labels – Universal Music launching Digster, Sony Music launching Filtr, and Warner Music buying Playlists.net (the world's largest playlisting site) indicates that playlists are the new radio, and 87% of the captive Friday night audience in front of the TV are on a second screen (Maisto, 2015), watching Youtube videos during commercial breaks.

The modern music marketer's toolbox today is much more varied, and much less cut and dry. Firstly, antiquated methods such as cutting prices for seasonal promotions no longer work, because in an access-based model, there is nothing to purchase. The purchase decision has already been made elsewhere – when the user made the decision to subscribe to Spotify.

Thus, according to Joakim Johansson, General Manager of Universal Music Sweden, "Instead of focusing on direct marketing and selling tactics, the shift is now going to staying top of mind with the consumer, and that means we need to have a whole new toolbox for promotion".

A key component of this new toolbox is social media, and using social media in the right way. According to Josefin Bergquist, a promotion manager at Universal Music, "A lot of people don't realize that the social web is built for spreading. Social media are built to be just that – social. A lot of companies (and for a while, us too) saw it as just another channel to sell to our listeners. We soon realized that this is not the best way to work. Once we realized that we need to start creating content that spreads on its own, we started doing much better."

Here, Josefin is referring to Facebook's algorithm, which only shows a brand's post to about 16% (Loomer 2012) of its fans at first, and gauges to see how the fans react. If fans are engaging with the post, they then show it to more and more people. However, if the reaction is bad, Facebook's algorithms limit the reach of the post, even though the page may have a lot more fans.

When Universal Music understood this, they started doing 'much better', as Josefin Bergquist said. In fact, they did so much better, according to Bergquist, that the average organic reach of their posts increased by about 900% between October 2014 and March 2015. When asked how often they check or tweak their marketing tactics, the answer was "several times a day!"
From our experience and from the interviews, 2 main factors have driven the feedback loops to change. Firstly, the primary aim for a music marketer in Sweden today is to have more of a user's mindshare than to get them to make a purchase decision; and secondly, because the nature of their marketing channels becoming more and more social – such as Facebook or Twitter – they must invest significantly in pull strategies (rather than push strategies) such as viral content creation, because content that spreads virally exposes the product to more people, for the same cost.

As a result, these factors have changed *how* label perceptions of customer preferences are translated into marketing tactics.

8.1.3 Relationship between Marketing Tactics and Listening Behavior

We discussed above how new marketing objectives and new marketing channels with their own distinct characteristics are changing the way record label's perceptions about their customers are translated into marketing tactics. Although external factors such as new platforms like Spotify and new user behaviors have also independently affected listening behavior, we examined whether marketing tactics themselves are affecting listener behavior in any way.

Per Sundin, MD of Universal Music Sweden says, "Spotify was a revolutionary service, and with more and more people signing up for it, we started to see people asking. 'I am here, now what do I listen to?' That's when we had the idea for Digster, a way that we could use playlists to break hits." The idea is simple – create playlists for different occasions and in different genres, advertise and market them all over the country to increase their subscriber base, and then seed them with your own songs. Adding a new song to a playlist with 100.000 daily users means that 100.000 people will instantly check out your song due to an asset you have full control over, instead of a third party blogger or a journalist, who has much different motives than making a new song famous on the record label's behalf. As Sony Music Sweden's MD, Mark Dennis said, "It is becoming much easier for us today to get our music in front of people – to make them sample it". The barrier to finding new music is now very low.

As we saw above, the other two major record labels, Sony Music and Warner Music soon followed Universal with their own playlisting services – Sony with Filtr and Warner with Topsify.

The issue of appearing credible to the consumer has been the subject of much research in advertising, as well as marketing, with the verdict being that credibility has a favorable impact on consumer perceptions. (Goldberg and Hartwick 1990, Goldsmith et al 2000, Choi and Rifon 2002) According to Product Manager at Virgin Records, Nora Bellil, this used to be done with television ads, appearances on late-night talk shows all over the world, magazine interviews, and various other promotion methods.

From the researcher's own experience, we can see that today more and more marketing dollars are being spent in to growing a service like Digster (instead of individual artists) and establishing it as a credible, and reliable service to provide playlists for all occasions. This has had a significant impact on the long tail. Instead of smaller Swedish artists having their own miniscule budgets to play around within, services like Digster are making it possible to combine the spending power of the budgets of five to ten different artists, and promote them all at the same time, by promoting a playlist like Digster.

Thus, instead of building a credibility campaign from the ground up for every individual artist, the music company now simply has to drop the song in to an existing, popular, owned playlist, and put the new song on the playlist with already famous, credible music, which then makes the new song credible by association also. We will revisit Digster in discussing the marketing tactics case.

8.1.4 Relationship between Listening Behavior and Data About Listening Behavior

According to Product Manager at Polydor Sweden, Love Appelgren, in terms of marketing tactics, this area still leaves a lot to be desired. While it is true that new representational practices and platforms are allowing music labels and marketers for music labels to see exactly who is streaming what song, the reporting and analytics for the marketing tactics themselves are quite limited.

From the researcher's own experience, we can see that the majority of this challenge comes down to the fact that most of the time, the platform on which the consumer is marketed to (for example, Google's Display Network, Google Search, Facebook, Instagram), and the platform on which the consumer actually listens to the music (Spotify), are completely different. Thus, it is very difficult to get deeper insights on advertising effectiveness, other than just figures for how many users were driven from the marketing platform to the listening platform – referred to as click-through rates.

However, this can be a potential pitfall. Echoing the words of Godin (2012), "When we are unable to easily measure things, we start to use proxies for them. TV advertisers, for example, could never measure how many people were impacted by their ad, so they measured how many people saw them instead…a non-profit may use money raised as a proxy for the difference they made…When we fall in love with a proxy, we spend our time improving the proxy, instead of focusing on our original (more important) goal instead."

One example is the issue of click-through rates. According to Nora Bellil, Product Manager at Virgin Records, "There was one week when we were having great

success with our banner ads on Google, and thought our advertising was very effective. However, we realized that it was not translating to an increase in streaming for the artist. When we clicked on the banner ad ourselves, we realized that Spotify asked the user to sign in to their account every time, and this just drove people away. We stopped using that channel after that."

Increasing a proxy (click through rates on Google) only works up until the point that the original goal (increase in streaming) is also increasing. Thus, from a marketing tactics point of view, the relationship between listening behavior and data about listening behavior has not strengthened much.

8.1.5 Empirical Case – How Changing Marketing Tactics Improved Universal Music's Marketing Effectiveness by up to 600%

According to Universal Music Sweden MD, Per Sundin, the Swedish music industry is perhaps the most advanced in the world. "You have to remember, Sweden was the birthplace of The Pirate Bay. By 2008, music sales in Sweden had become almost half of what they were just a few years ago (Resnikoff 2015). It was just brutal. What did we do wrong? We became fat cats – tried to defend our business model at a time when clearly the customer wanted something else."

That something else turned out to be Spotify – the streaming service has helped music sales climb to reach levels of the CD-heydays of the early 2000s. It was perhaps this brush with danger that has now made Universal Music Sweden – and arguably the music industry as a whole – much more open to new ways of thinking, even going as far as disrupting its own business model. Per Sundin, in fact, is highly sought after on the speaking circuit, where he addresses top executives on the lessons the music business has learned through this digital transformation. His talks are, rather aptly, titled 'Disrupt or Die'.

In June 2014, when I joined Universal Music, it was a company whose marketing department was open to change, that wanted to change, but had not yet figured out how to get there. Of course, as Sony MD Mark Dennis stated above, the toolbox used for marketing had changed, but it was often still being used in the old way. To

draw an extreme example, it was like upgrading from a horse-cart to a motorcar, but still using a horse to pull the car.

According to Andreas Hindenäs, product manager at Polydor Records, "The thought process often was – we used to spend this much on buying ads on TV4 earlier, so let's take all of that money, and now spend it on Google instead." There was, in some cases, very little thought put in to harnessing the possibilities that these new platforms opened – such as narrower, interest-based targeting, or real-time analytics.

Hindenäs continued, "There were several direct-marketing campaigns where the company was paying more money per click than it would have cost to hire a full-time employee to just go out in the streets and tell people to check out the new song."

When faced with this challenge, the first thing that we decided to work on, was how we translated the data we received about listening behavior, into how the record label interpreted it. We identified that the main problem in this case was that the feedback cycle was too long.

We asked what the process was for launching a new artist project, from the beginning. According to A&R manager at Svenska Inspelningar, Mikael Wadström, every time a new artist project was launched, the Finance Director would sit down with the artist's team, and approve a budget based on the revenue they believed the project would generate for the company. I was also able to sit in on some of these meetings, and can verify.

Months later, this project would be evaluated to see how much money it ended up bringing in, and marketing spend and effectiveness was simply one of costs addressed in this debriefing. This, as we talked about above, is what we refer to as the 'fire and forget' model of marketing, which meant identifying a target audience and platform early, preparing the marketing communications materials, and buying the media – all before the song has even released. In this way of working, there was very little reporting or analysis done *while* the campaign was running – and since

there was very little reporting, there was very little optimization. Thus, Universal –
and arguably any other company that works on the fire and forget mindset – were
learning very slowly, through trial and error, about what the market wanted. This
is illustrated in Figure 1.

Feedback from previous campaign → Marketing Tactics → Listening Behavior → Feedback

Figure 5 - Linear Model of Thinking about Marketing Campaigns

Changing this mindset was the first priority. This began with my having weekly
meetings with each department, the contents of which ranged from going through
the pros and cons of marketing platforms such as Facebook or Google, to running
live cases with artists that each department was working with. Everyone in the
entire department was invited to these meetings, and I was careful to state at the
beginning of every meeting that all questions were welcome. To further encourage
people to learn, the general manager, Joakim Johansson, sent out an email near the
beginning of my tenure, encouraging everyone in the company to ask questions
"big and small, good and strange". (Translated from Swedish)

The biggest change that these meetings brought about was that now they would
check how their marketing campaigns were running every single day, and if a
certain target group was not responding to the advertising the way they expected it
to, they would pause the campaign, evaluate it on the fly, and optimize it in real
time. The promotion and product managers at Universal Music Sweden became
adept at testing the right pictures, with the right message, to the right audience.
Whenever they were stuck, we would not wait until the weekly meeting to correct
the problem – they would just call me, and we would troubleshoot the problem.

Then, we would go over the entire thing again at the weekly meetings, sharing best practices and key learning for the benefit of the entire department. This change sowed the seeds of the iterative marketing philosophy that is present at Universal Music Sweden today.

Immediately after this change, Universal's marketing metrics started improving. According to General Manager, Joakim Johansson, "We crossed our yearly improvement goal in about two months, and then doubled even that, which is when we had to sit down and evaluate just what a good goal would be in this new environment".

This change in mindset – thinking of marketing campaigns as continuous, fluid, always-optimizable loops alone had brought great improvement within the company. In addition, these results seemed to convince top-management that this was the right way to go, and I was able to get leeway for introducing more changes. Our focus then shifted focus to the next phase in the process – how this interpretation translated into marketing tactics.

The new change initiative began, once again, at the weekly department meetings. Now that we were beginning to think about marketing campaigns as iterative, dynamic, and ongoing (as opposed to something you set in motion and forget); we believed it was time to start using a marketing model that supported this thinking in practice also.

One side effect of Universal shifting its marketing dollars to online was that the cost for testing new ideas and theories on the user base fell exponentially. By June 2014, Universal Music Sweden had over 65.000 fans on its Facebook page. It was practically free to test ideas, targeting methods, and customer segmentations with these users, something that would have taken several time-consuming surveys and focus groups to do before.

Thus, we came up with the idea of using the data we have, to come up with as many different theories as possible about who our target audience is; and then test these theories as cheaply as possible. In the case of Swedish rapper, Kitok, his

promotion manager, Christoffer Silverberg says, "In his case, we started out advertising to anyone who was young, was listening to related artists, who showed an interest on Facebook in snowboarding, lived in the Swedish countryside, and was interested in snowboarding – related brands."

After testing all of those theories, it turned out that advertising around related artists and people living in the countryside performed best, so that was where Universal Music concentrated its spending, considerably improving the efficiency of the media spend, since the big money was now only spent where it was most effective.

This thought-process has spawned a new marketing model within Universal Music's marketing department. The marketing funnel metaphor is familiar to most people working within the marketing field. However, given the social web allows content to spread virally and how it has become possible to target consumers individually based on their tastes and interests, Universal Music decided to try an alternative marketing approach, to 'flip the funnel' (Jaffe, 2010).

The idea behind 'flipping the funnel' is simple – Jaffe says, "The traditional business funnel, with its emphasis on using marketing to attract new consumers, is outmoded. Businesses need to emphasize on keeping their consumers happy, so they will bring in new customers." At Universal Music, this translated into using testing to identify an artist's core audience, and using media spend to reach this core audience first. According to Christoffer Silverberg, "These users are already fans. They are the ones most likely to talk about the artist, write about the artist, and create buzz about the artist."

Since they are probably already fans on the artist's Facebook page or Instagram page, they are also the cheapest to reach. These 'core fans' are then encouraged to be evangelists for the artist, and through their 'liking, sharing, commenting, and tagging, we are able to reach their friends, and the friends of their friends too; according to Josefin Bergquist. When asked to provide an example, she shared one from May 2015, of how they were able to target fans of American singer Ariana Grande so well, that even though the Universal Music Facebook page only had

about 71.000 fans, they targeted Ariana Grande's fans so well, that the post ended up being seen over 3 and a half million times. This is a great example of inverted-funnel marketing in action.

As a result of working on the way Universal Music's marketing teams interpret listening data, and then working on the way this interpretation is translated into marketing tactics, over the last 12 months, we have seen a significant decrease in the number of times an ad has to be shown to the average user before they click on it. To Universal Music Sweden MD Per Sundin, "This shows that we are using data in the right way. We are showing our ads to people who find them relevant. Not only that, our advertising effectiveness in November 2014 was over 600% higher than it was at the same time last year."

8.1.6 Summary Analysis

The beginning of the shift in marketing effectiveness for Universal Music can be pinpointed to two things – first, the emergence of representational practices such as real time marketing analytics and user listening data. Second, and perhaps equally important, was the organization-wide willingness of Universal Music to engage double-loop learning (Argyris, 1976). This was characterized by their bringing in new competence to lead the change (me) and their openness to un-learn old habits, and re-learn new mindsets such as the iterative marketing model. This iterative marketing model also raises questions relation to March (1991) and O'Reilly and Tushman's (2004) papers about ambidextrous organizations, which we will address in the discussion later on.

8.2 Big Data's Effect on Artist Brand Positioning

"Just as important as the music, are the people that you direct the music towards. You could have an incredible song, but if it doesn't reach the right people, you might as well give up on it." – Robert Olausson, Marketing Director, Capitol Music Group Sweden.

In our interviews, we have identified that an artist's brand positioning is gathering more and more importance. Since the access based model has now given the consumer an almost unlimited selection of music to choose from, and artists now have an almost unlimited number of touch points where they can get exposure to

the consumer, creating a relevant, integrated, and compelling brand around the artist is now more important than ever. The feedback loop model we presented earlier, adjusted to branding, appears like the following –
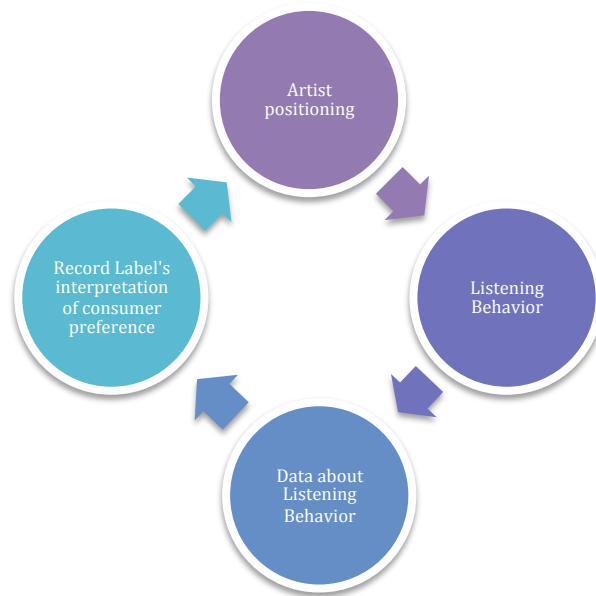
Figure 6 - The Feedback Loop, adjusted to Artist Positioning

8.2.1 Relationship between Data About Listening Behavior and Record Label's Interpretation

In the same vein, now that the actual listening data has changed, we can also naturally expect it to change the way that listening behavior is interpreted and how it colors a music marketer's perception about what users are listening to. According to Per Sundin, the Managing Director of Universal Music Sweden, "We are now moving from big data to smart data. We are getting all this information about how people are consuming our music, but a lot of it can be noise. We used to look for people with charisma, but now we look to hire people who are more analytical".

As we discussed earlier, the arrival of Internet tracking technologies, and the transformation of the industry's business model from transactional to access-based has generated much more raw data, which is mandating companies such as Universal Music to hire people capable of turning this data into more actionable insights.

Anand and Peterson (2000) showed that originally, the key metric that a record company had to rely on was chart movement. With the advent of point-of-sale barcode scanners in the late 1980s, the key metric became sales figures. If the sales figures were going up, the artist was doing well. If the sales were going down, the artist was eventually dropped.

Today, the data about how listeners are reacting to an artist's positioning helps music companies such as Universal Music make much deeper analyses. For example, Mikael Wadström, talent scout at Universal Music, says – "Today, we are able to target people on a much deeper level. Instead of just sales figures, we can look also at what kinds of music our users listen to. Do they listen to mostly house? Mostly hip-hop? Then based on that, we see whether there are any discrepancies between how we are branding the artist, and what kinds of people are actually listening to the artist. Using this listener data about how our users are segmented, we are able to much more easily find a fan base for the artist".

Start-ups in the likes of Silicon Valley have already figured this out a long time ago. They are always talking about the product/market fit. (Andreesen 2007) This is defined as "being in a good market, with a product that satisfies that market." Companies are often actively encouraged to keep testing and tweaking all parts of their offering until their product finds a 'fit' with a specific and large enough user base.

In the same way, instead of deciding on a specific angle, budget, and message around an artist from the beginning and sticking with it, we are now seeing music companies experimenting with whom they advertise their music to, and how they brand their artists, and then looking at listening patterns on the music to designate the most profitable niche for a particular artist. We will see an example of this when we discuss the case of the Swedish rap artist, Kitok, later on.

8.2.2 Relationship between Record Label's Interpretation and Artist Positioning

According to A&R manager and talent scout at Svenska Inspelningar, Mikael Wadström, historically the label's interpretation of how an artist's should be

positioned has been driven by a mixture of the musician's appearance itself, the musical genre, and the talent scout's own experience and judgment, which was often the most important.

This interpretation by the talent scout was performative in a way, because then, the artist was pitched to radio stations that fit this 'brand', the artist was booked at shows catering to an audience that generally liked a similar 'brand', and the artist would be encouraged to act and talk and adopt the persona of such a 'brand'. Just as before, if all of these things did not translate into sales, the project was considered to have failed. Since it was difficult to get scalable, mass, actionable feedback from the listeners, the question of a product/market fit in terms of artist positioning was rarely brought up.

However, new representational practices such as Spotify analytics tools and Universal Music's own tool called 'Artist Portal' allow marketers to micro-segment music listeners. According to Nora Bellil, Product Manager at Virgin Music Sweden, "Tools like Spotify Analytics and the Artist Portal give us insights as to which groups of users are streaming the song, what other artists they usually listen to, and what demographics are the most profitable for us." This data is then used to 'micro-segment' listener groups on marketing platforms such as Facebook or Google. Examples of micro-segments for a totally new artist could be 19-24-year old girls in Stockholm who are fans of the P3 radio show, 'Musikguiden', since Musikguiden listeners tend to have a more 'avant-garde' taste in music, "and it's important to show the song to the right people first", says Bellil.

Due to this ability to micro-segment and target users, music companies are becoming less and less reliant on the hunches of talent scouts and A&R managers, and are actually able to change artist positioning to cater to a profitable niche of users, if something is not working the way it should.

8.2.3 Relationship between Artist Positioning and Listening Behavior

Due to the other phases in the brand positioning feedback loop having been strengthened, we have noticed a much more symbiotic relationship between artist

positioning and listening behavior. That is, listening behavior now has the ability (through the way it is translated into data and then feeds into the record label's perceptions) to influence artist positioning to a much greater degree than it did before. According to Mikael Wadström, A&R manager at Svenska Inspelningar, "It was not uncommon in earlier days to see artists get two, even three full albums of disappointing sales before the label stopped investing in them. These days, we are able to find out to an extent what is going wrong, and fix it before we move forward, like in the case of Kitok".

Instead of dropping the artist (or worse, continuing to blindly invest more money) if the listening behavior does not follow through, the emergence of ubiquitous data now allows for micro-segmentation, making it easier to find willing users and fans to consume an artist's music. Furthermore, this is based on personalized, behavioral data of users, and is thus no longer essentially a costly guessing game of trial-and-error on the part of the music company.

8.2.4 Relationship between Listening Behavior and Data About Listening Behavior

With services we discussed above such as Spotify Analytics and Artist Portal, a user's individual listening profile available to the record label is now much richer than just measuring whether or not an album was sold. From the researcher's own experience, we can see that with new state-of-the-art analytics tools, a record company can now measure how many times the average user played a song, how many songs on an album were listened to, and even what time of the day fans prefer to listen to a particular song. As we said in the beginning, relatively cheap analytical software and mobile technology today permit a platform owner to measure and track virtually anything a user does within an app or software.

Thus, whereas earlier the only listening behavior that was translated to data about listening behavior was sales, now it is a whole host of characteristics like personal music tastes, average listening time, and other related artists that the same users search for. This contributes to a much stronger relationship between listening behavior, and data about listening behavior.

8.2.5 Empirical Case: How a Sapmi Rapper Went from Nothing to Famous in 4 Weeks.

In September 2014, Magnus Ekelund, (known by his stage name, Kitok) was a relatively unknown rapper from a town called Jokkmokk, which has a population of less than three thousand people. When we met him, he said his style was inspired growing up listening to hip-hop legends such as the Beastie Boys, which inspired him too, to become a rapper.

The scout who found and signed him, Mikael Wadström, said, "We were working with quite a bit of electronic and dance music at the time, so we wanted to try something new. His manager had pitched him to me a few times before, but we were not sure about the project then".

The first two songs that Kitok released through Svenska Inspelningar, 'STHLM City' and 'Sista Utposten', did not do as well as the record label had hoped, according to Wadström.

When I started working with him, he had recently released his second song, and the number of users streaming this song was dropping significantly week by week. At that point, says Mikael Wadström, "The plan was the get the next single out, release the album, and then see what to do from there."

When I spoke to his promotion manager, Christoffer Silverberg, he said "We were looking for a way to brand Kitok as a more credible hip-hop artist. Seeing as he cited his influences as the likes of the Beastie Boys, who are cited as one of the pioneers of hip hop, we thought that the powerful, suburban hip-hop crowd was a natural fit for his target audience." From the researcher's personal experience, branding tactics for such artists in the past had included activities such as booking these artists for shows with more established performers within the same, identified demographic, ("credible hip-hop fans", as they called it) as well as using a more established artist to release a song, featuring a cameo from the new, unknown artist. Thus, the audience is introduced to this new artist from a credible source.

According to Radio Promotion Manager at Universal Music, Emily Enegren, "Associating a newer artist with a more established one allows us to build credibility in the minds of the fans. We want them to think – 'Oh, Kitok is playing with this established artist. He must be good!' A lot goes in to branding an artist – it is the radio stations that we choose to play him/her on, it is the words and expressions we talk about the artist in, the other performers we associate him/her with, the magazines we book interviews for them with, etc.".

One can see why this would work in many cases – except that in this case, Kitok's already few listeners were decreasing from the first week itself. In the old way of doing things, the problem may have most likely been attributed to bad luck or timing, with the company then moving on to go through the motions and then move on to the next artist.

However, when we looked at the analytics data coming in, the listener breakdown for Kitok showed that most of the users streaming his song were actually also very likely to listen to other 'pop' artists, rather than the pure hip-hop that he was being branded towards. Taking this information to his promotion team, we completely changed the way we branded Kitok, right from the media outlets that he interviewed with, to the brands, interests, and artists around which we advertised his music. For example, instead of targeting suburban hip-hop cultures in Sweden such as Malmö and Stockholm, promotion and advertising was targeted towards the Swedish countryside. The interests and lifestyle brands that we advertised around went from keywords such as 'graffiti', 'hip-hop', and 'hardcore' to keywords such as 'skateboarding' and 'punk'.

His next released song, Paradise Jokkmokk, took off. The number of users streaming it increased significantly every week, until it caught the attention of even national media outlets, and he was featured on TV4, Sweden's biggest commercial TV station.

Kitok's Paradise Jokkmokk song broke into Spotify's top 100 tracks in Sweden within 4 weeks, making him the first Sapmi rapper to be in such a position – and it

may never have happened if the data about user listening behavior hadn't warned us that his listeners were different from the way we were branding him.

8.2.6 Summary Analysis

Looking at the case from a high-level, the most glaring difference between how things used to be done, and how they are done now; is that in the past, there was a very strong, one way relationship between the record label's perception of consumer needs, and artist branding.
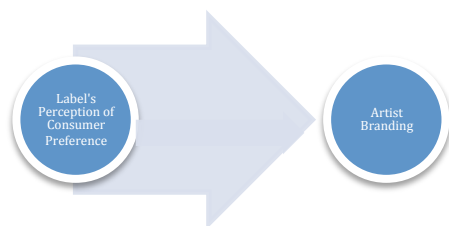
Figure 7 - In the past, there was a heavy one-way relationship between label's perception and artist branding

One can also say that due to the lack of more advanced data feedback systems in place at the time, it was more difficult to pinpoint a problem if sales were not moving in the right direction. According to Love Appelgren, Product Manager at Universal Music, "It was a very discrete method. You trust the decisions your team makes, and either it worked, or it didn't, and you moved on to try something else". Thus, the past was characterized by a very strong relationship between a label's perception of consumer preference, and artist branding, and while the other phases and relationships in the feedback loop existed, the relationships between those phases were weak to non-existent.

Today, the story is changing. Perhaps the biggest change is that a by-product of our music consumption shifting to the digital world means that there is almost automatically a much stronger relationship between a user's listening behavior, and data generated about listening behavior. This has in turn created a demand for analysts to interpret this data, using more and more increasingly advanced statistical methods, which Per Sundin, MD of Universal Music alluded to earlier, when they said that they now prioritize smartness over charisma, unlike in the old

days. Thus, the present situation can be pinpointed down to the evolution of two specific relationships –

- Listener Behavior → Data About Listening Behavior
- Data about Listening Behavior → Record Label's Interpretation

The case brings to the light relevant marketing questions such as those of market orientation, which we will address in the discussion section.

8.3 Big Data's Effect on Product Design

"Artist & repertoire success and talent discovery are at the heart of everything we do."
- Lucian Grainge, CEO of Universal Music Group.

A few months after I had joined Universal Music, Per Sundin, the managing director, asked me if I could recommend someone who was good at mathematics. The problem that Universal Music was facing was that the vast majority of people who applied to work in the music business, wanted to eventually work within A&R (artist and repertoire). In some cases, even people applying to work in completely non-music related jobs such as royalty collectors, wanted to eventually work their way in to one of those coveted A&R positions.

A&Rs are perhaps the most important part of any record label. They are the 'talent scouts'. They are the ones who have the most weight when it comes to whether or not a certain unknown but promising artist will get that big record deal. It is often their judgment and experience that dictates the direction an artist's sound will take, or what their next album should sound like. From an article written by Robert Levine for Billboard magazine, "For decades, the business ran largely on instinct: magic ears, gut feelings, and weird hunches. Success had a thousand fathers, as well as a certain mystery. Label executives knew a hit when they heard one, and they promoted it until the public agreed – or not" (Levine 2015).

It may come as no surprise to learn that an area of the business that has had so much mystery and 'secret sauce' around it for so long, has also remained largely unchanged for so long. According to Anton Ericson, A&R manager at Universal Music Publishing, "It used to be either checking out bands at shows they played, or

listening to demo tapes they sent in. Now, nobody sends demo tapes. It's all online". But still, essentially the same thing. Ericson said that he goes through about 20 music blogs daily, and usually finds one or two promising songs.

A&R Manager at Svenska Inspelningar, Mikael Wadström says that he has a trusted network of people whose musical opinions he respects, and they always recommend him new music to sign. "This is why most of my acts are connected in some way to one another", he says.

Even in this realm, things are changing. In 2013, Universal Music launched a service called Spinnup, which let unsigned artists release their music on Spotify and iTunes for a small yearly fee. Spinnup's unique selling point however, was the promise that Universal Music's own talent scouts would listen to, and critique the music.

Sweden was the first country to pilot-test Spinnup, and begin marketing the service. In a little over a year since January 2014, 7 Spinnup artists have signed record deals with Universal Music Sweden. Out of those, two of them reached the top position on the Spotify charts, while another reached the top 2. One of the songs, Din Soldat, was Sweden's most streamed song of 2014. According to Erik Bengtson, Project Manager at Spinnup in Sweden, "The Spinnup model is simple. Once an unsigned artist releases a song through the service, we monitor to see if it is picking up any traction. If we see that the number of users streaming it is increasing every week, we show it to our A&R managers, who decide whether or not they want to sign the artist."

As we can see in the Spinnup case, even in an occupation that has largely been driven on gut-feelings and connections for decades, we are now starting to see these talent scouts take the help of data to validate their assumptions and theories. Adjusting the feedback loop model to product design, it looks like the following –
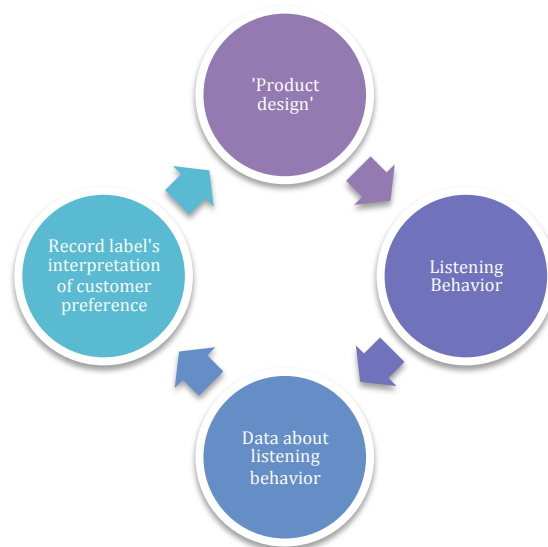
We will now explore the product design feedback loop in more depth.

8.3.1 Relationship between Data About Listening Behavior and Record Label's Interpretation of User Preference

How have the record labels – and more specifically the talent scouts, whose jobs have been shrouded in mystery for so long – reacted to machines entering their realm? The 'Artist Portal' tool that Universal Music has built has helped talent scouts identify exactly what kind of sound a certain artist's audience prefers, what other artists share a similar sound, and which of a specific artists' songs appeals most to the early adopters, or to the mainstream audience, or to the hip-hop fanatics, and so on. The tool is designed to allow talent scouts and A&R managers to mimic the kind of sound a specific target demographic has been proven to enjoy.

The big picture in this narrative, is the fact that a record label's interpretation of what people think about a specific song or artist is now not limited to being physically present at concerts and asking people in the audience. On the contrary, now so much data is generated about every song, that there is almost an overabundance of data, from which gleaning insights might actually be *more difficult* for those people who were used to so much of their job being based on instinct and gut feelings. As Universal Music Sweden MD Per Sundin said, they are after smart data, not big data.

8.3.2 Relationship between Record Label's Interpretation of User Preference and Product Design

Armed with this new data and instant feedback about how the listeners feel about a certain song or artist, what does a record label actually do with this information? How far can it be taken?

All the three areas we have examined so far (marketing tactics, branding, and product design) have been mainly characterized by shorter feedback cycles due to the prevalence of new technologies, and new representational practices of data. In marketing tactics, for example, months-long marketing campaign debrief cycles have been shortened to real-time reporting and corrective action. There has not yet been such a large change in feedback cycle of the product design aspect of things. We will see in the empirical case study that the biggest impact that data-driven insights have had on product design is to increase the likelihood of success of the next song a record label releases.

However, in our experience, artists – especially the older ones – have been reluctant to let data impede on their creativity. Joakim Johansson, General Manager at Universal Music Sweden, backs up this view. He says, "Data tells us where we are now, but we have to remember that artists are living beings who have their own ideas of where they want to go with their music and what the next big thing is going to be. This is a question we have been asking in the industry ever since we started seeing these insights – now that we seem to know what people want, how far can we influence the product?" However, he thinks this is as far as data can be expected to go in the field of product design in the near future. "It's a great help, but I don't think we can ever completely rely on data [to drive product design]". Still, the empirical case will prove that even going this far in terms of product design is often enough to give a company an advantage over the competition.

8.3.3 Relationship between Product Design and Listening Behavior

The basic premise is that as a result of being able to analyze everything from a song's structure and instrumentation on a massive scale, to the musical preferences of that song's listeners, music companies are now able to be much more clued in to

what the audience wants to hear, by looking at what the audience is already listening to.

The goal behind this, according to Per Sundin, has always been to break more hits. "It's very simple - music is a hits-driven business. This is why we're asking our talent scouts to take more risks, why we're trying to grow our own playlist services, and why we're asking our employees to try new things". At the end of the day, data-driven insights fall into the same plan – it is Universal Music's hope that pre-empting what the listener wants with insights gleaned from data will give the songs they release a higher chance of success compared to songs others release – and they are not just competing against other record labels anymore. Per Sundin says, "Since everyone is able to release music online now, the record labels are not the gatekeepers anymore. As a result, our offering needs to now shift to helping our artist cut through the clutter and really reach their fans."

8.3.4 Relationship between Listening Behavior and Data About Listening Behavior

An effect of music shifting from analog to digital in the last few decades has been that in addition to measuring and gauging the behavior of music listeners, companies are now able to even take apart the actual structure and rhythm of individual songs. Doing this across 20 million songs, companies like EchoNest have been able to glean some interesting insights.

In an interview with TechCrunch (Constine 2014), EchoNest CEO Jim Luchesse said that his company helped Spotify maintain 'taste profiles' on all users. Some parameters in these profiles included 'acousticness', 'speechiness', and 'loudness'. Whether or not a computer passing judgment on the 'acousticness' of four guitarists getting together in a studio and improvising on a track together with their creativity is a good thing or a bad is a totally different question.

8.3.5 Empirical Case – Finding World-Superstar Tove Lo's Swedish Fans

We discussed earlier how in the past there were very few sources available for music marketers to easily identify what they were doing right and what they were doing wrong – essentially, it was mostly weekly sales data that they had to dig

through and see how things were working. A more ambitious marketer might try to break down sales by geography and try to optimize that way, but that was as deep as segmentation often went.

By July 2014, although record label executives had much more advanced tools at their disposal such as the demographic characteristics of their listeners, and real-time sales and streaming data, there was considerable friction among the more technology-oriented of Universal's employees, because they thought the company had moved from just monitoring whether sales were going up or down – to monitoring whether streaming was going up or down. If streams for a specific artist were going up, something was going right – but what was that something? It was a source of frustration, that with all these metrics available, Universal Music was not looking deep enough into debriefing its own campaigns, to glean insights of which specific tactics worked and which didn't.

That was the catalyst that led to the development of the Universal Music Artist Portal, discussed above. The 'artist portal' not only allows a user to see a detailed demographic breakdown of the users streaming a specific song, but also predicts those users' music tastes, what other artists they are likely to listen to, and even whether or not they are early adopters. This tool was put to the test in the case of Tove Lo, one of Sweden's hottest new pop stars.

We noticed that Tove Lo was doing very well in some specific countries (like the Netherlands and France) more than in others, including her home country, Sweden. We also noticed that Tove Lo was being discovered and played by the same group of early adopters that listened to other successful artists, such as Lana del Rey and Lorde. We noticed also, that this group of early adopters didn't exist in Sweden, so we would have to launch her in some other way. That other way was through fans of electronic and dance music. Mid-way through 2014, Tove Lo started getting more and more fans who otherwise mainly listened to house and electronic music, which was a subculture very different from where she was being marketed at then.

Seeing an opportunity, we recommended her A&R team to focus her next song in

Sweden towards electronic and dance music fans, and not towards the 'Lana del Rey audience', as they had done earlier. Sure enough, her next single was titled 'Heroes', which she sang with Alesso, a Swedish DJ who attracted exactly the electronic crowd we were looking for. The 'Heroes' track went on to be Tove Lo's highest charting track in Sweden after her original Habits, and did better in Sweden than in any other country.

According to Tove Lo's A&R Manager, Peter Hart, "This research definitely brought something new to the table, and opened our eyes to something we did not know before. From that point on, we started looking at it from a different angle, and as such, this was part of the conversation when we were deciding on her next release."

The case of Tove Lo in Sweden is a classic example of the effects of having a finger on the pulse of your customers. A lot of the time, if the company does not know why a song is not working as well as it is in other parts of the world; the default reaction is to throw more money at it, or try to imitate what the other, more successful territories are doing. According to Universal Music data scientist Paul Smith, however, "The reason we believe Tove Lo did not catch on as fast in Sweden initially was likely the very reason she did so well in those other countries – Tove Lo's music initially appealed to a very specific set of early adopters who just did not exist in Sweden".

Thus, it comes as no surprise that the two songs that really shot her to stardom in Sweden, 'Habits', and 'Heroes', which were also her top two charting songs in the country, were both in the electronic category. As Robert Levine said in his online article on Billboard magazine, data is taking the guesswork out of music. (Levine 2015)

8.3.6 Summary Analysis

A key part of how data has impacted product design seems to be in terms of the market orientation concept as defined by Deshpande et al (1993) – a continuous assessment of what the consumer needs, and then making the satisfaction of those

needs as the priority of the business. Universal Music seems to do this by using tools such as the artist portal and Spotify analytics to gauge changing patterns in listening behavior, tweak the product, and increase the likelihood of the next release being even more in-tune with what the user wants.

9. Analysis

9.1 How have market practices changed as a result of more up-to-date information about the market?

As we observed, the changing representational practices have been the catalyst to kick starting tighter feedback loops in all 3 business areas that we examined. This is very interesting when we re-present the research by Anand and Peterson (2000) about sensemaking of markets. They looked at the case of Billboard magazine, which in the late 1980s went from sampling-based approach to gauge which songs were doing well and which weren't, to being able to measure sales data at the point of sale from nearly every outlet, and being able to update their charts based on actual album sales – a much more reliable measure. As we saw in the literature review, the authors noted that changing the scope and methodology of how market information was presented to players led to 3 trends: 1. Higher frequency of reporting allowed record labels to establish causality between newsmaking events (such as a TV appearance) and album sales. 2. It enabled the larger conglomerates to more efficiently interpret and exploit the data, resulting in an ever larger market share for the larger players. 3. Companies that had the means to interpret the new information were able to see opportunities in new niches and exploit them, creating a much more fragmented industry.

Anand and Peterson stated that this change gave a jolt to market actors on their understanding of their field. Comparing the results from this shift, which happened over 25 years ago to today, we see some interesting parallels. Once again, The music business' de-facto image of the market has shifted once again from weekly album sales, to daily streaming figures, accompanied with all sorts of demographic and listenership data. The trends it has created however, remain the same. Similarly to how music executives tried to draw causality between album success

and newsmaking events, we saw in the artist branding case-study of Kitok, that music companies are now trying to draw correlations between brands (and therefore type of lifestyle) a user likes, and the music he/she is likely to be interested in.

Similarly to how independent labels lost a large portion of their market share due to the change in representational practices in the case presented by Anand and Peterson, we saw in the methodology section how now independent record labels account for only 0.5% of the Spotify Top-100 chart. And lastly, similarly to how music companies that made sense of the data coming in were able to find profitable niches, we saw in the case of product design and Tove Lo, that being able to track listening behavior through streaming is allowing music companies to find the best niches for their artists. Another relevant theory is the one proposed by Callon et al (2002). They state, "Economic markets are caught in a reflexive activity. The actors concerned explicitly question their organization, and based on an analysis of their functioning, try to conceive and establish new rules for the game". In our case, actors within the music industry are continuously trying to set new rules for the game based on how they view themselves due to the new representational practices we discussed. The best example of this is the fact that a service like Spotify heavily favors playlists. The favored way of representing music to the consumer is now not just albums, but also playlists. This led to all 3 major record labels launching their own playlist services, Digster, Filtr, and Topsify; in an effort to rewrite the rules in their favor, and launch music through their own assets.

9.2 How do companies 'learn' today as a result of this change and how has it affected feedback loops?

In his paper, 'Single and Double Loop Models of Learning in Decision Making', Chris Argyris (1976) talks about the model of incremental learning presented by Pressman and Wildavsky (1973) who say, "In the real world, actors have a very limited time and scope for analysis. The closest one can come to understanding effectiveness in a fast moving, real world would be to 'define key questions, which, if answered, would make it possible to evaluate effectiveness'. Thus, it is seen as a series of comparisons between actions and feedback from the environment,

providing information to base the next action or decision on. Since the information in the real world is almost always incomplete, feedback is required in order to evaluate whether the actions were effective or not." Argyris thus defines 'learning' in organizations as the detection and correction of errors. (And errors are defined as any feature of knowledge that makes action ineffective).

Argyris goes on to talk about how 2 sets of variables can alter the effectiveness of learning:

1. The degree to which interpersonal, group, and bureaucratic factors produce valid information for decision makers to monitor the effectiveness of their decisions
2. Receptivity to corrective feedback in the decision-making unit.

Our empirical data shows that the biggest variable that has now changed is the temporality of the feedback loops we observed. We saw in the first feedback loop (marketing tactics) that for most marketing tactics, feedback has gone from taking days to weeks for evaluating the effectiveness of marketing campaigns, to being almost immediate and in real-time. Thus, we can say that the degree to which valid information is produced for decision makers has increased significantly. In addition, seeing as companies are now able to make decisions based on real behavioral data as opposed to either surveys or representative samples, the design and methods of production of the data (linguistics.byu.edu, n.d) have changed too, making the data more valid.

Another interesting development is that the rise in computing power and technological platforms such as Facebook and Google that we discussed earlier on, coupled with the tightening of the feedback loops in terms of temporality (which gives us real-time data) is making the actual marketing tactics of companies more and more like the theoretical models of learning presented by Argyris. This means that on one hand, as we saw in the marketing tactics case study, the computing power afforded by marketing platforms like Facebook and Google allows marketers to test a lot of different 'actions' to see what works best, and since the feedback is almost immediate, they are then able to 'correct the errors' exponentially more quickly than they used to before. Repeating this cycle of rapid

testing and rapid feedback is what has allowed Universal Music as a company to accelerate its learning so much that it led to the disproportionate increase of 600% in marketing returns that we saw in the marketing tactics case study.

We can also look at these tighter, more efficient feedback loops based on the *kinds* of marketing practices that they enable. One of the most interesting developments that we see across all 3 empirical cases is a shift from exploitation-dominated marketing practice, towards explorative marketing practices taking greater priority. March (1991) defines exploration as things captured by terms such as search, variation, risk taking, experimentation, discovery, and innovation; and exploitation as things captured by words like refinement, choice, production, efficiency, selection, and execution. He stated that the essence of exploitation is the refinement and extension of already existing competencies, and thus its returns are positive and predictable. Exploration on the other hand, involves the uncertain, distant, and often negative; and thus when a company is in a fiercely competitive environment, a company's adaptive processes are naturally fitted to favor exploitation over exploration.

Judging by the quotes by Mark Dennis, Managing Director at Sony Music Sweden, this held true for a long time in the music business in the past. As he stated in his interview, in the olden days, a marketer's job was largely to get a specific radio station to play the song, a specific TV show for the artist to appear on, and a specific journalist to write about the song; and there was a quite high probability of that song being successful. Essentially, it was an exploitation job – what works and what doesn't was quite clear-cut and identified, and then it was the marketers job to just incrementally improve the efficiency of that job. Now, as Mark Dennis stated, there are almost unlimited opportunities for exposure. Not only that, as we saw in all 3 feedback loops, immediate feedback on streaming data, artist brand positioning (like in the case of Kitok), marketing tactics, and even product design (like in the case of Tove Lo); coupled with companies also able to react to the feedback in real-time with new branding, new target audiences, or a new message, means that companies like Universal Music are now able to be in an almost constant state of exploration, rapidly testing its assumptions to reach exactly the right target group, craft exactly the right message, or increase the chances of the

next song release being more successful than the last. One can reasonably say that these activities correspond to the search, variation, discovery, and experimentation that March (1991) talked about as cornerstones of explorative business practices. However, due to the costs of computers processing data now being cheaper than ever (Paul 2015) and the tightness of feedback loops we discussed earlier, companies are now much more likely to take the best decision. This ability to process the plethora of data at their disposal and act on it, has paradoxically meant that the explorative practices mentioned above have actually *reduced* risk for Universal Music. On a tactical level, in some specific cases, we can see Universal Music being almost completely explorative – like in artist branding where marketers bounce marketing messages off several possible target groups to see which ones reply the best; or like in social media communication, where Josefin Bergquist spoke about trying new things.

This doesn't mean that exploitative marketing practices have taken a back-seat at Universal Music, especially when one looks at the big picture. Refinement, optimization, and execution still hold high importance. In the case of Kitok for example, even when we 'explored' a new niche target group, we still exploited it similarly to before – pitching the song on TV, doing magazine interviews, and advertising on channels like Facebook. Just that now, it was pitching to *different* kinds of magazines, and advertising to a *different* demographic online.

However, looking at the interviews and case studies and seeing how Universal Music now searches for the right audiences for their songs and marketing messages, it is undeniable that explorative marketing practices have become much more important at Universal Music today than they used to be. The reason why that is might actually be explained by March himself. He says, "Compared to results from exploitation, results from exploration are systematically less certain, more remote in time, and organizationally more distant…" Furthermore, "The certainty, speed, proximity, and clarity of feedback ties exploitation to its consequences more quickly and precisely than is the case with exploration". The reason then, that Universal Music may have moved towards a more exploratory stance to marketing practices might be that these shorter, tighter, real-time feedback loops have shortened the distance between the seeing the results of

exploration, and those of exploitation. That is, rich, real-time images of the market, the means to process and analyze those images, and the ability to respond; have added speed, proximity, and clarity of feedback to explorative practices, which make them much more certain, closer in time, and organizationally accessible.

Another way to analyze this shift is to look at the difference between driving markets and being market-driven. (Jaworski et al. 2000). They argue that a company that is market oriented must do both at certain points. Jaworski's framework consists of two dimensions – market structure (the players and their roles in the value chain) and market behavior (customers, competitors, suppliers etc.) When a company accepts both as given, it is being market driven. When it tries to shape them, it becomes market driving.

Due to the relative lack of feedback mechanisms, it could be argued that the music industry has historically been forced to drive markets. The choices made at the top by promotion managers, talent scouts, and music executives had the performative effect of translating into hits most of the time. The songs or artists that didn't make it, were accepted as part of a 'failure-rate', and the company moved on. Record labels such as Universal Music drove markets in the past through trial and error.

Market structure can be driven mainly by adding or removing players from the value chain, and market behavior is driven by adding or removing customer and competitor constraints. (Jaworski et al, 2000). The music industry did this very successfully for years until one of their own market-driving activities, implementing customer constraints by going from vinyl discs to digital MP3 recordings, set off a wave of piracy and peer-to-peer sharing that all-but-decimated the entire business (Hill 2007) to the point that worldwide the industry was losing 50 billion US dollars per year. In Sweden alone, record sales more than halved over the course of 8 years between 2000 and 2008. (Resnikoff 2015) As we can see then, driving markets comes with a high degree of risk.

On the other hand, being able to constantly be listening, quickly get accurate representations of the market, find out which of your actions are working, companies are able to 'correct errors' in real time. Thus, it does not seem necessary

any more for a large music company to be trial-and-error market driving anymore. Instead, music companies are able to constantly have their finger on the pulse and quickly react to trends and give the market what it wants.

In Colin Strong's 2015 book, 'Humanizing Big Data' (Strong, 2015), he examines a popular concept – that of influencers and creating viral content. It has long been posited, by books such as The Tipping Point (Gladwell, 2000) that trends are created by certain influential subcultures, and reaching these subcultures should be a primary aim of anyone who wants to create a viral hit. What Strong found instead, is that the important variable is not reaching the influencers themselves, but figuring out which networks of influencers are 'ready' for the product or disruption. In other words, there are certain hygiene factors (for example the context of the situation, the group's general feeling towards the content being shared, popular culture etc.) in networks that need to be present for content to spread virally through them.

Drawing the obvious comparison, for us, this means that instead of driving market behavior through the very clear-cut method of finding, reaching, and convincing influencers to spread content, music companies might be better off sensing what subcultures of listeners want, ensuring that they have these hygiene factors in place, and then dropping their music or content into those networks, giving them a greater chance of spreading virally.

Once again, the feedback loops have changed over time to greatly reduce the need for trial-and-error in driving markets. Record labels like Universal Music are now much more comfortable accepting the market structure and market behaviors, until they sense that they can change it in their favor. An example of this is the launch of the playlisting service, Digster, which was designed to be a curator of music, just like radio; (Replacing a market player) or Spinnup, a service to allow unsigned artists to release music through Universal, which was designed to bring musical talent to the talent scouts, instead of them going out and scouring for it. (Changing consumer behavior) Thus, we can see that record companies still drive markets, but are more data-driven, than trial-and-error driven due to being much more tuned to market needs.

9.3 How have these changes affected the market orientation of companies?

For Deshpande et al (1993), market orientation is defined as putting the needs of the consumer first. This is done through constant needs-assessment to ensure that the company is in touch with what the user wants. Kohli and Jaworski (1993) on the other hand, describe market orientation as the gathering of market intelligence, disseminating it across the company, and then acting upon it; and companies that do this well, tend to show comparatively better business performance. In their original paper on defining market orientation concepts (1990), Kohli and Jaworski referred to gathering market intelligence as not only being in touch with a consumer's current needs and preferences, but also anticipating future needs, as well as exogenous factors like governmental regulations and technological change. The authors found that the best companies encouraged all departments to gather this market intelligence. It was collected through sources such as customer surveys, panel discussions first and second hand reports. Interestingly, the days of surveys and customer panel discussions are now long gone. As we have discussed, the ability to see actual, detailed user behavior in real time across vast samples of customers, coupled with the ability to quickly test any assumptions and theories they make about these users' behavior has allowed record companies such as Universal Music to rapidly tighten the feedback loops by which they learn about consumer behavior, and are thus able to generate market intelligence – especially with regards to the customer's current and future needs and preferences – much more quickly and effectively, which manifests itself in empirical case 1, where the company was able to significantly increase results, as well as all three feedback loops, since the relationship through which data about listening behavior is translated into the record label's interpretation of user preferences has significantly been strengthened over the years.

Another important finding by Kohli and Jaworski was also that of the responsiveness of a company. Responsiveness, according to the authors, involves selecting target markets, designing products that cater to their current or anticipated needs, and promoting products in a way that elicits favorable end-customer response. Comparing this to our own empirical findings, we can see an

almost eerie similarity in the undertakings of Universal Music. We see in the case study about Kitok and artist branding how real-time listener behavior was used to identify a suitable target audience for a product. We can see in the case study about Tove Lo and product design, how cluster analyses were used to anticipate a need for an electronic-dance related Tove Lo song, which, when released, went on to be one of her highest charting songs in Sweden. We can see in the case study about marketing tactics how marketers are rapidly testing possible messages and ways of communicating to the audience about music, and then placing bets on the ways that work the best. As we discussed, these are all new initiatives, and have all significantly increased the responsiveness of a label such as Universal Music.

How has Universal Music been able to hit the nail on the head like this? One explanation could come from Kohli and Jaworski (1993). They stated that market orientation is also positively correlated to top management stressing the importance of market orientation through signals, while top managers' risk aversion was shown to affect the responsiveness of a business to market information.

Looking at our empirical data, we can take the example of how Universal Music invested money into building the 'artist portal' to help its employees glean insights. We can also look at our interviews with Per Sundin, MD of Universal Music Sweden, where he talks about 'moving towards a new way of doing promotion', and of him talking about how it was wrong that Universal Music once became 'fat cats, defending their business model when clearly the customer had shown they wanted something else', which demonstrates top management's commitment to market orientation and of 'not being afraid to disrupt his own business model', which shows that the top management is not risk averse.

Digging deeper into the all the empirics and across the first two research questions, it is quite clear that real time charts and instant action feedback have made the gathering of market intelligence much faster and more frequent than it used to be before. In addition, the 'responsiveness' part of Kohli and Jaworski's model has also shifted greatly, meaning that we are seeing key decisions based on feedback being taken on daily data, on a daily basis, as opposed to on a weekly basis. This has led to the 'accelerated learning' feedback loops that we have seen in the case

studies, and thus has allowed Universal Music Sweden to also *act* on its market intelligence very quickly. These factors illustrate how Universal Music has become more market oriented over time.

9.4 Digging Deeper into Observed Patterns – Temporality of Feedback Loops

Now that we have addressed the research questions, in this section, we will try to go even deeper in our analysis, taking a step aside from the empirical data, and tying together a trend we have seen that cut across all our research questions –the temporality of information gathering and ability to act on it. The time taken between an actor committing an action, the environment's feedback to it, and then how this feedback is incorporated into the next action, has shrunk considerably. This changing temporality of feedback loops has led to several other consequences, which we will discuss here.

Setting aside the empirics, we have identified 3 main consequences from the tightening of feedback loops. Firstly, we theorize that it has permitted marketers to actual *think* about marketing activities in terms of on-going, ever-optimizable loops rather than in a linear way. Secondly, it has set the stage for a new marketing paradigm – iterative marketing. Thirdly, we ask what this new way of working means for risk management in companies.

From Linear Thinking to Loop Thinking

As Anand and Peterson (2000) wrote, the methodology or scope in which market information is presented can give a jolt to market actors' perceptions of themselves in the market. We have already observed how the technology-enabled digital music platforms have unleashed a wave of data-mining and data-driven operations from companies such as Universal Music Sweden, contributing to their being more market oriented. We also observed how these feedback loops have changed over time to become tighter and quicker, accelerating the pace of learning in a business.

Even 15 years ago, when the turnaround time for sales or marketing campaign feedback was weeks to months at a time, it was impractical for a music marketer to

take much optimizing or corrective action based while a campaign was running, because it simply took too long to generate market information, and it took too long for companies to act on it. Thus, although a 'feedback loop' of learning always existed in reality, the temporal space between the learning phase and the implementation of the learning into market practice phase was so large, that marketers thought in a linear manner (as we addressed in the marketing tactics empirical case).

The changing temporality of feedback loops has allowed businesses in general (and record labels in particular) to be able to gather market information, and act on it rapidly, such that marketers actually conceive of the process as a loop of constant feedback which feeds their perception of what the user wants, and then optimizing their business practices based on that. The resulting model looks like the feedback loops we have examined throughout this paper.
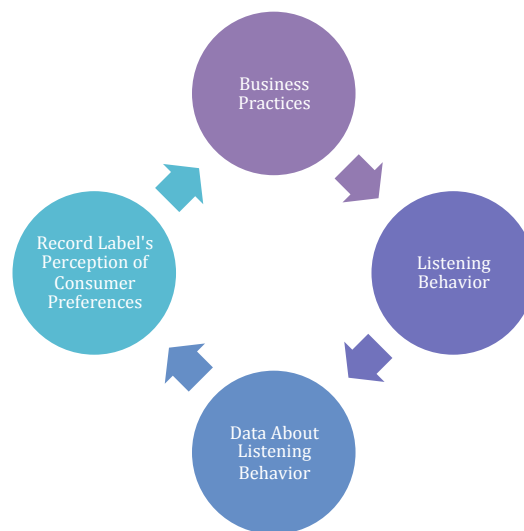
Figure 9 - Loop Thinking Among Universal Employees

This changing temporality of information gathering on one hand, and responsiveness to the information on the other hand has enabled several other interesting practices. Salient among them is the philosophy of iterative marketing.

Shifting to an Iterative Marketing Philosophy

The road to perfection seems to be through iteration for marketers who, before taking a big decision on communication strategy, brand positioning, product

design, or even budget allocation; are able to cheaply and easily test the message/targeting/song in front of a small but representative sample of users on platforms such as Facebook, Google, or Digster. Based on the immediate feedback the marketer receives from these 'micro-tests', he or she is further able to optimize this activity, and 'correct more errors', in terms of Argyris' theory of learning (1976).

The changing temporality of feedback loops coupled with massive strides forward in low-cost computer processing power over the last few years has enabled this sort of iterative marketing to deliver to Universal Music, disproportionately good returns on marketing tactics and has saved money from being wasted on reaching the wrong audiences. (Kitok and Tove Lo) A strategist at Universal Music described this approach as 'dipping your toes in the swimming pool and making sure it's not too cold before you jump in'.

It appears that this iterative approach to marketing is also easily applicable to most other digital businesses – the only hygiene factors that need to be present are that the business must be able to gather market information rapidly, and act on it rapidly as well, which is the trend we have seen in the changing temporality of feedback loops, resulting in the loops becoming much tighter and more efficient.

These tighter feedback loops allow the marketer to use the data at his/her disposal and quickly launch a campaign or a product in the general direction of the goal, and then use the instant environmental feedback to optimize and do rapid course corrections, bringing the campaign or product closer and closer to the goal with each error correction.

The drivers of these tighter feedback loops (as we have seen) have been new, up-to-date, and more detailed images of the market enabled by technology, as well as the ability of digital businesses to quickly respond to these images and other market fluctuations. On the other hand, if we think about Kohli and Jaworski's (1990) pillars of market orientation (intelligence generation, intelligence dissemination, and responsiveness) one can theorize that the tightening of feedback loops enables companies to be much more market oriented. That is, tightening feedback loops

under the right circumstances be correlated to higher market orientation. We will examine this further in the discussion section.

Changes in Risk-Management

Another phenomenon that we have noticed has changed across the breadth of our research is the issue of how record companies can manage risk as a consequence of the temporal effects of feedback loops. We have seen already how record companies are becoming more ambidextrous as a result of their explorative activities being easier to quantify and be more certain. They are also more comfortable being market driven, rather than taking on the risks of driving markets through trial-and-error.

The ability for companies to quickly and cheaply pilot new endeavors – as evidenced by Universal Music with the Digster playlisting service as well as Spinnup, both addressed earlier in this paper – is showing that tighter feedback loops are not only allowing companies to use data to identify potential profitable niches, (like electronic dance music for Tove Lo) and ventures (like Spinnup for Universal Music) but if something goes wrong, they are also well equipped to quickly 'correct the errors' (like in the case of Kitok initially being marketed to the wrong audience). As we can see, record labels – and other digital companies for that matter, who are able to take advantage of shorter feedback loops – are able to be more explorative and do more experiments than ever, doing things such as changing target audiences midway through campaigns, launching ambitious new business departments, piloting new services – while taking on less risk than ever.

10. Concluding Discussion

Given the relative newness of using big-data in the business practices of record labels, there was not a very large body of relevant academic material that adequately described the changes the music industry was going through. The distribution model had changed from physical to digital, and there are a plethora of articles dealing with that, but we saw from experience that the real wave of change the industry is undergoing right now is in terms of marketing. As Joakim Johansson, General Manager of Universal Music Sweden said, "We never saw

ourselves as marketers before. We were basically bookers of media. Now that engagement and cutting through the clutter has become so important, we are having to become marketers". Thus, we set out to paint a picture of this landscape through the eyes of the people living in it, as well as cases of these changes in action.

10.1 Change in Market Practices as a Result of New Images of the Market

We saw that our empirical findings were in line of those of Anand and Peterson (2000), even though their empirical observations were taken almost 25 years ago. The technologically driven shake-up in how market information is presented showed us 3 broad consequent trends – firstly, we found that this new richer data is allowing music companies to compute correlations between brands and other artists a user listens to, and the type of new music a user is likely to enjoy. Secondly, we saw that changing the way market information is presented resulted in a consolidation of power towards the major players in the game – Universal Music Group, Sony Music Entertainment, and Warner Music Group. Thirdly, we saw that this shift better enabled companies like Universal Music to find and explore new niches for their artists.

Looking at our empirical results and comparing them to the case study run by Anand and Peterson (2000), it seems that every time the way market information is presented to the market actors in some significant way, there is a consolidation of power favoring the bigger players. This is in all likelihood, as explained by Anand and Peterson, because the bigger companies often have more resources to process and exploit this new information to their advantage.

If this is the case, it might be beneficial to Universal Music or Sony Music – who have the 2 largest market shares of the music industry – to actively start setting the standard for measurements, analytics, and reporting procedures within the industry. Furthermore, if we go back to Sony Music Sweden MD Mark Dennis saying that there are nearly unlimited opportunities for exposure for an artist today, and Universal Music Sweden MD Per Sundin saying that the job of record labels

today is to help artists break through the clutter, then it is more important than ever to have a loyal niche of fans, just like in the case of Tove Lo finding her electronic and dance music fans in Sweden, and Kitok finding his pop music fans.

Thus, it would be in the interest of a big company such as Universal Music to 'shake up' the way market data is presented to the market actors as often as possible, because the results would seem to favor a large, major record label over anyone else. In the eyes of Anand and Peterson, this can be done through changing the scope, methodology, or political tone of the presentation of the market data.

A company can control this narrative of market information by being the dispenser of market information. This refers to chart makers such as Billboard, iTunes, and Spotify; or influencing the dispenser of market information.

This was what SoundScan did by making exclusive deals with the largest music stores to get access to their sales data, forcing Billboard Inc. to buy the data from SoundScan. (Anand and Peterson 2000)

10.2 Feedback Loops and Learning in Companies
We found that the degree to which valid data is produced for decision makers has been changed significantly, both in terms of the design and collection methods of the data, and the rate at which new, valid data is constantly produced.

We found that this rapidly accelerated learning across the company at Universal Music Sweden, and that it enabled marketers to quickly 'correct errors'. We also found that as a result of this, Universal Music was able to be much more 'explorative' in its business practices, since the uncertainty, investment, and time needed to engage in those practices had come down significantly.

We have seen that the temporality of feedback loops has been a centerpiece of our findings in this paper, allowing companies to do and try new market practices, which have yielded stellar results.

It seems that we are moving towards a new paradigm in the music industry, where speed, flexibility, and responsiveness seem to be the keys to succeed. One thing our empirical data implies is that the line between explorative and exploitative activities within a company is not so clear anymore. The results of most explorative activities such as searching and variation are not as distant and uncertain as they were almost 25 years ago when March studied the concepts.

Approaching the process from an iterative, risk-managing perspective that we discussed above can actually mitigate the drawbacks of explorative activities that March (1991) outlined.

10.3 Market Orientation of Record Companies

We found through applying Kohli and Jaworskiäs (1990) model that Universal Music Sweden as a company had become much more market oriented as a result of the transition towards using big-data. This was because of Universal Music being able to have an insight into real-time consumer behavior through its Artist Portal tool, and is thus able to generate more accurate and quick market intelligence. We also found that the iterative and optimizing activities that Universal Music used to adjust their products, messages, and brands to the their target audiences indicated that they had become much more responsive as an organization as well. Our interviews suggested that this shift towards being more market oriented comes because of top management's commitment to market orientation, as well as the top management not being risk averse when it comes to trying new things.

An important question to ask here is, is it just Universal Music that has become more market oriented? We saw earlier that environmental factors such as the falling costs of processing power and new digital platforms such as Spotify have enabled digital businesses to be able to gather and respond to market information very quickly.

However, Spotify is available to *all* record labels, and the cost of processing power is going down for *everyone.* Thus, it is not unreasonable to expect that the average ability to gather market information and respond to it would increase for all

businesses in an industry undergoing such a shift. Since tightening feedback loops are characterized by quick information gathering and responsiveness and market orientation by Kohli and Jaworski was defined as the generation, dissemination, and responsiveness to market intelligence, we can theorize that the changing temporality of feedback loops in this manner is correlated to market orientation other companies also.

In a competitive market, a company seeing such a shift must endeavor to organize itself internally to take full advantage of this new ease of gathering market information and responding to it – by increasing the speed and effectiveness at which it disseminates market information across the company. This is especially important because a company's market orientation has been tied to business performance (Kohli and Jaworski, 1993) and businesses that do not adapt to this paradigm risk being left behind.

10.4 Managerial Implications

From a management perspective, our results have set up a lot of questions about organizing the company internally to take full advantage of this industry transformation we have examined over the course of this paper.

As more and more media companies become 'data literate', best practices will emerge as to how a company should position itself for success. Through our research, we have found the concept of iterative marketing to be path breaking. In a highly competitive market like the music business where factors (such as ease of gathering market intelligence and ability to respond) are facilitating market orientation, a company that resists these changes risks getting left behind. Some key takeaways for managers from our findings are –

The ability to undertake explorative activities at a much lower risk and more short-term gain than before demand an ambidextrous organization structure, (O'Reilly and Tushman, 2004) where there are separate departments for exploitative and explorative practices, but they both report to the same top management, who seeks to create synergies and have them work closer together.

The empirical study showed the benefits of an 'inverted marketing funnel' strategy that Universal Music Sweden adopted. Word of mouth marketing is nothing new, but our findings indicate that the social web has the potential to 'supercharge' word of mouth virality, and this is something enough companies are not taking advantage of.

Also, since we have seen that a company that gets good results through testing and experimentation is one that can generate, disseminate, and respond to market information and 'correct errors' quickly - managers need to hire 'translators' who stand at the intersection of disciplines such as data science and marketing, or statistics and finance; to more effectively and efficiently convey the message from the generation to the response phase.

Furthermore, top managers need to decentralize decision-making as much as possible, empowering the people 'closest to the action' to make decisions in real time, further increasing the responsiveness of the organization. The relative risk and inexperience of these decision makers lower in the hierarchy can be overcome due to the risk-mitigating iterative marketing model we discussed earlier.

This study is also interesting to practitioners outside the music industry. A study by Cisco, presented at their annual shareholders meeting in 2010 (Reese 2010) identified the music business as the frontrunner for change, with the likes of news, books, TV, and airlines soon to follow a similar business model disruption. McKinsey and Company released a report in 2013 (Duncan, Hazan, and Roche 2013) illustrating how the newspaper and record industries both saw their best years ever, shortly before their businesses disintegrated rapidly. In Sweden, we are seeing similar signs with TV4, Sweden's biggest commercial television provider recently registering record profits (Helander 2013) yet, on closer inspection, the company seems to be losing viewers rapidly. (Svedjetun 2014) Practitioners would thus do well to learn from the changes the music industry has undergone, and begin organizing their businesses to absorb more market information more quickly, and react to it by virtue of tightening their own feedback loops.

Lastly, in the digital businesses that our study is relevant to, practitioners would do well to understand the way in which we have seen risk management shifting. More managers should now be able to mitigate risks through constant, small, representative pilot tests of new projects to validate that they work, before assigning larger budgets to them.

10.5 Limitations of the Study

It is important to note that the loops that we studied (which are a central part of the thesis) are not closed loops, and they can constantly be influenced by outside forces. These forces can affect the loop at any point, but are strongest at the conversion of the record label's perception of consumer preferences, into marketing tactics or branding or product design. One example of this could be the political will of more powerful actors to simply *want* to push a certain brand, certain message, or certain kind of song onto an audience, even going contrary to data.

Secondly, we were limited to getting deep access only to Universal Music Sweden and its daughter companies, and most of the data that we gleaned is from this group of companies. Although we are able to see that the other two major record labels in Sweden, Sony Music Entertainment and Warner Music, both are relatively similar in size and together they make up a 99.5% market share of the Spotify Top-100 songs, we are unable to verify details of how data is impacting their own businesses. This of course could pose problems about generalizability across the music industry of our study, but it is a question of record labels keeping their cards close to their chest and wishing to keep their proprietary tools in secrecy, rather than a question of methodology of the research.

Another possible criticism of the study could be the seemingly arbitrary timescale that we have used. In our in-depth interviews, our goal was simply to get the respondents themselves to paint a picture of 'then' and 'now'. Although this gives us only two snapshots of how the business was and is today, it can give us an idea of what the respondents saw as the biggest changes that took place.

Lastly, there are certainly likely to be more business areas within the music industry that have been affected by the advent of big data. The ones we studied in

this thesis were identified, defined, and segmented in this way after in-depth interviews with product managers at Universal Music, as well as the previous experience that the researcher himself has in the music industry, as Head of Digital Strategy at Universal Music Sweden.

10.6 Suggestions for Future Research

The drawbacks of doing inductive, qualitative research are well documented in our methodology section. One possible avenue for future research could deal with the generalizability of some of the factors and phenomena we have uncovered in the music industry. Some topics for research interesting to us are to see how changing loop temporality affects market orientation in bigger as opposed to smaller companies. Our findings lead us to suspect that smaller companies would be better at the information dissemination and responsiveness part of market orientation, while larger companies might be able to generate much better and more accurate market intelligence, also suggested by Anand and Peterson's (2000) article.

Other questions that would be interesting for future research include whether shorter feedback loops are correlated to greater market orientation. Is this shrinking temporality a common theme in other businesses?

Moving on from purely the market orientation concept, it would be interesting to see an empirical quantitative study comparing a traditional marketing approach of identifying the 4Ps and sticking to them, versus a more iterative approach to marketing. In several areas, our findings have uncovered some phenomena that have not received enough academic attention yet, and thus a more quantitative study in these areas could make our findings even more robust.

Perhaps most importantly, the study's findings call for more research into how a company must most effectively organize itself to be able to detect, process, and respond to information coming from the market about the company's own activities, and the activities of other market actors. We predict that this will be a central piece of the puzzle a lot of media businesses will struggle with as they undergo their own transformations.

10.7 Pitfalls and Predictions

An interesting question that arises when looking at the accelerated learning facilitated by tighter feedback loops, is at what point will temporality stop being a difference maker? We have seen how weekly updates on sales data, which showed market changes, were seen as revolutionary. Now, we are seeing the same happen with daily streaming data and the ability to gather and respond to data on a daily basis in the music business is referred to as real-time.

However, daily-updated representations of the market would be an eternity in a place like Wall Street. In his book, Flash Boys (Lewis, 2014), Michael Lewis examines how 'high-frequency traders' (middle-men) on Wall Street are able to exploit microseconds (millionths of a second) to buy up the stock you want to buy before your order reaches the stock exchange, and then sell those stocks back to you at a higher price. Algorithms, without human interference, now do over 70% of all trading on Wall Street. At this speed – when millionths of a second matter – it is only computers that are able to compete with each other. Still, it is the computers that are programmed to read market information the quickest and respond the fastest that are the ones that win. Will the music industry also reach such a point, where machines – not human curators – are instantly able to sense your mood, context, and tastes; and play you music you like? Incredibly, this technology already exists in the form of machine learning algorithms such as Spotify Radio, iTunes Radio, and Pandora. There will certainly also be a day when machines will be able to use data to *create* new music instantaneously to match your tastes and play it to you. The real question is, what does that mean for human creativity, and is that a world we want to live in?

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Appendix

1. Interviewee Table

Interviewee	Position
Per Sundin	Managing Director, Universal Music Sweden
Mark Dennis	Managing Director, Sony Music Sweden
Joakim Johansson	General Manager, Universal Music Sweden
Nora Bellil	Product Manager, Virgin Records Sweden
Mikael Wadström	A&R Manager, Svenska Inspelningar
Emily Enegren	Head of Radio, Universal Music Sweden
Christoffer Silverberg	Promotion Manager, Svenska Inspelningar
Love Appelgren	Product Manager, Polydor Sweden
Andreas Hindenäs	Product Manager, Polydor Sweden
Anton Ericson	A&R Manager, Universal Music Publishing
Erik Bengtson	Project Manager, Spinnup
Peter Hart	A&R Manager, Polydor Sweden
Josefin Bergquist	Promotion Manager, Universal Music Sweden

2. Interview Guide

1. Basic Questions

What is your name?

What is your role?

2. Marketing Tactics Related Questions

Do you use any tools to gauge the success of your music today?
How has marketing and promotion of tracks changed in any way since when you started?

What channels do you market your artists on?

How do you target your advertising?

Any success stories? Which is your favorite? What did you do right?

3. Branding Related Questions

What is 'branding an artist' to you?

How would you go about branding a new artist?

There has been a lot of talk about 'finding an audience' for an artist. Has that changed in any way since you started?

4. Product Design Related Questions

How do you discover new music?

Has the way scouts discover new music changed with respect to when you started in the industry?

25 years ago, what would happen if you noticed a record wasn't selling as well as you had hoped. What would you do today?

Do you think data is going to get more and more embedded into product design? How far do you think it will go?

5. Case Related Questions

In your eyes, did Universal Music do anything different over the last 12 months in the way that it does its marketing? Are there any keys to success?

Tell us about the case of Kitok. How did it unfold from your perspective? Tell us as much as you know about the case.

Tell us about the Tove Lo case. How did it unfold from your perspective? Tell us as much as you know about the case.

Tell us about Digster. How did it come about, what was its purpose, and what do you hope to achieve with it? Tell us as much as you know about the case.

6. Strategic, Data Related Questions

Does data play any part in your overall strategy?

What parts of the business has it affected mainly?

How have you seen your responsibilities shifting over time?

What were the most important metrics for gauging success when you started? Have they changed in any way?

Have you had any good results with data?

3. Table of Figures