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Changing Gender Dynamics in EDM Culture: The Impact of Digital Music Technologies

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*Changing Gender Dynamics in EDM Culture: The Impact of Digital Music Technologies*

Research Introduction

The gender imbalance in Electronic Dance Music (EDM) is a frequently discussed problem. There is a need for the presence of women in EDM to add representation and other perspectives on the current niche of artists and producers. Women still encounter difficulties to position themselves equally to the DJ career of their male counterparts. However, the awareness of gender equality is growing and many key factors in EDM culture have shifted since the rise of the digital age, which can contribute to an EDM culture that is more accessible for women.

This thesis aims to capture the dynamics of gender inclusivity that correlate with the developments in digital technologies in EDM culture. As suggested by philosopher Judith Butler, gender is about the characteristics that a given culture understands as masculine or feminine (Walton 173). It is dependent on social interactions and the assimilation of social norms, which means that the understanding of gender within certain cultural groups is fluid (Walton 173). Gender imbalance or gender inequality here implies a “system of social practices that constitutes men and women as different in socially significant ways and organizes relations of inequality on the bases of these differences” (Berkers et al. 29). The usage of the term or concept of EDM culture in this research indicates the people and

practices within the music that is performed by DJs and digital producers. The term limits itself to electronic sound production and performative consumption through dance (Rietveld 163). EDM is extremely dynamic as a consequence of the continuous technical inventions that the genre depends on. Both gender and EDM culture are constantly in flux and interact with each other, therefore it is relevant to research contemporary digital developments that result in shifting gender dynamics. This thesis achieves this by identifying patterns in recorded information such as books, articles, and interviews with people who are active in the field of EDM. By interpreting this information from a more philosophical perspective, this research creates a deeper understanding of gender dynamics in EDM culture.

This research focuses on the ever-changing position of female DJs and producers by observing the technological discourse within EDM culture. In the first chapter, the history of the role of women within music and technology serves to describe the context of EDM being a male dominated artform and to stress what is problematic in that. It starts with an introduction to EDM culture by describing the key developments in the act of DJing, substantiated by the research of Kate R. Levitt on nightlife, DJing, and digital DJ developments. The research from Professor Rebekah Farrugia that she conducted from 2004 to 2018 describes the context of gender in EDM culture at large. Farrugia's research shows how historical, discursive, material, and social practices have contributed to the male-centricity of EDM culture and the marginalization of women in these spaces.

The technological discourse is further investigated by applying the gender performativity theory by Judith Butler to clarify how gender and technology are socially constructed through everyday practices which distance women from cultivating interest in the assumed 'masculine' technologies. The examination and critical analysis of the key concepts and process of Butler's ideas by Moya Lloyd will be used to make an overview of Butler's ideas. Gender is hierarchically organized by humanity that is mistaking culture for nature –

the idea that it is objective instead of subjective (Lloyd 4). As described by Lloyd, society tends to be “conceived of in terms of men and the male prerogative, while woman was, quite simply, the ‘second sex’: weaker and essentially other to man” (4). Therefore, women are disqualified for certain aspects of life based on masculinist conceptions (4). Butler questions how gender and sex are positioned within a specific framework – so in a certain social context. Her answer to the question how gender needs to be reformulated to declare the hierarchical power relations between male and female, is that gender is performative (36). She characterizes gender performativity not as an essence, but as a series of acts: “Social agents constitute social reality through language, gesture and all manner of symbolic social sign” (41). David Walton’s book *Doing Cultural Theory* describes Butler’s theory as well, but it moreover shows how cultural analyses like the gender performativity theory are constantly open to new possibilities (Walton 4). His approaches will be used to apply Butler’s theory to this specific cultural field.

The second chapter focuses on the developments in the digitalization of music technologies that changed the accessibility in EDM culture for women. It firstly dives deeper into the material changes that occurred with the rise of the digital age which impacted the production and consumption of music. This will be introduced with existing research on how gender and technology interact by the Technology Acceptance Model (TAM) by Davis (1989). The TAM analyses the success of a system by determining the user’s acceptance of it (Goswami and Dutta 52). This is measured by the perceived usefulness, the perceived ease of use, and the attitude towards the system (52). As will be disclosed in the first chapter, the acceptance of certain technologies differs between men and women by the technological discourse. Considering the size of this thesis the TAM will not be applied to new DJ tools. Instead, the findings from former research on gender as a moderator within the TAM on other

technological systems will be used to clarify the dynamics between women and their acceptance of new technologies.

Besides the material changes, the internet had a great impact on the networking potential and overall visibility of women in EDM. Sarah Thornton and Barbara Bradby have written about the interaction between these practices in their research, which serves as the foundation of this chapter. Their research highlights the gender hierarchy within EDM culture by linking social discourses with digital music developments, which are still applicable to today's practices. It builds on what Sarah Thornton called "subcultural capital", which indicates the social status of a person by the expressions persons position themselves in within a certain cultural group. Because the internet and social media are constantly developing, more recent studies on social media today are applied to this subject as well.

This thesis forms a concise overview of changes in EDM culture regarding the position of female DJs in relation to developments in digital technologies. It aims to conclude with suggestions for further investigations that can contribute to supporting future practices for female artists in the field of EDM.

## 1. EDM: A Male Dominated Artform

Academic researchers in the field of music and technology have increasingly been giving attention to the gender gap in DJing and producing EDM. The gender imbalance in EDM culture is based on the assumption that DJing is mainly a masculine activity. That assumption is rooted in everyday practices since the invention of sound recording. This chapter describes how the role of women in EDM culture became restricted by looking at the beginnings of developments in turntablism that emerged in the 1960s. Since EDM culture is very dynamic as it depends on the technological innovations that develop at an increasingly fast tempo, it is useful to get an overview of the historical changes in EDM and how those contributed to the contemporary position of women in EDM culture.

### THE TECHNOLOGICAL DISCOURSE IN MUSIC

The exclusion of women in innovation, sound media, and technology can be traced back to the 19<sup>th</sup> century. During the Industrial Revolution, the term technology became a signifier for the machines and industrial inventions that were seen as extremely important for the developments in the modernization of western society (Farrugia, *Spin-sters* 4). According to Judy Wajcman, the binary oppositions in western culture constructed masculine prerogatives – for example prioritizing reason over emotion and hard over soft – which are reflected in the idea of the term technology (144). Technology became constructed as a social medium of power, and it originated with men. Men were in the position to access intellectual and physical mobility in technology in contrast to women, whose social position was expected to be responsible for the household (Farrugia, *Spin-sters* 5). The framing of interest in technology became socially constructed through everyday practices. For instance, the framing of interest in technology already starts by raising children with certain toys. What is seen as a

'girl toy' falls outside of the purview of technology and is directed to the socially assumed feminine way of living. Technology in the industrial field consulted patriarchal characteristics (Wajcman 147). Thus, technology was from its beginning already associated with men by the perceived important role of men in society during the industrial revolution, as opposed to the roles that women fulfilled.

Technology is inseparable from music. As Cultural Sociologist Nick Prior argues, all music is mediated by technological materials in its forces and processes (Prior 3). The invention of sound recording which dates to the 1930s was a turning point in this, for music was formerly something only to be listened to live. Technological music devices kept innovating through the years up to the point where they became products that people could use at home, for example, the radio or phonograph. These early music technologies were already packaged and advertised from a gendered perspective, where men were viewed as the active users and women as the passive users (Farrugia, *Beyond the Dancefloor* 21). Simone Krüger Bridge confirms this in her article about the role of gender in popular music: "Gender became a marketing variable that reproduced socially constructed gender ideologies" (3). She writes that the creative roles in music around the 1950s were "limited and determined by male notions of female ability" and that music in this period was created for and produced by men (2). These examples of early music devices that are clearly aimed at men show how the association of men with technology is intertwined with products related to music.

Around the 1960s the traditional formats of pre-recorded music started to transform when DJs began to play records for a live audience. The former purpose of the turntable that was initiated for music consumption was now reimagined into production by utilizing it as a performance tool (Chew and McPherson 304). Beat mixing emerged in this period when technological inventions, like playing with two turntables, made a song sound like it did not stop but fluently merged with the next song (Levitt 73). This enabled keeping the audience

dancing without any stops in between tracks. Disco exalted the role of the DJ to a higher level, but since the emergence of hip-hop in the 1970s the abilities of DJs became even broader. DJs started to fulfill an important role in hip-hop, creating pleasure and leisure through dance entertainment that represented a form of liberation from authority, for example in sexual, ethnic, and racial practices (Levitt 75). Though this description suggests that the boundaries of social hierarchies that include gender inequalities would be blurred, women were marginalized in hip-hop. In “Men, Women, and Turntables: Gender and the DJ Battle”, Mark Katz argues that the fact that the vast majority of hip-hop DJs exists of men has been a topic of conversation for a long time amongst hip-hop DJs (580). He gives three reasons why women are marginalized in hip-hop DJ culture, even though male HipHop DJs welcome women and want more female DJs in their community. First, the environment of hip-hop tolerates sexism and homophobia, which is one of the reasons for women not feeling welcome in these places (583). Second, turntablism, like the production of music since the invention of sound recording, is something technical (584). He mentions that the phonograph is thereby seen as something masculine, which creates stereotypes about male technological mastery and “female technological anxiety” (584). Third, record collecting and crate-digging – the act of checking and collecting records in stores – is an activity that requires physical activities. This too makes turntablism an activity that is strongly associated with men (Katz 592). These three arguments substantiate how technology is assumed to be something masculine, and since technology and music are inseparable, producing music like turntablism in HipHop is perceived as something masculine too.

#### THE ACT OF DJING AND THE EMERGENCE OF EDM CULTURE

In the 1980s the MIDI controller was invented: a device that made connections between electronic musical instruments, a variety of audio devices, and computers possible for editing



and recording music. It was one of the key developments that made the production of electronic music possible. Other hardware developments enabled beatmatching, which made it easier for a DJ to flow from one song to the other (Farrugia, *Beyond the Dancefloor* 26). Around this time, house and techno music originated in Detroit and Chicago where innovation and transformation formed new subgenres of electronic music (Egolf 205). A whole new community formed around the new musical sounds. Like both hip-hop and punk were, EDM culture too was a countermovement that expressed itself in a whole new subculture. According to Sarah Thornton, club culture is “concerned with the attitudes and ideals of the youthful insiders whose social lives revolve around clubs and raves” (2). Nightlife in clubbing was a setting where fears, dreams, and desires came to life through the practices of a DJ, forming a community that created a freer way for people to be social. It was a space where people could escape from social obligations, something that was difficult to fulfill elsewhere (Levitt 58). The whole setting that took place at night was representing what the youth culture wanted to feel and celebrate. “It helps to create a journey, an escape where everyone gets to create their own pure expression”, as Kate R. Levitt writes about the sonic and spatial mechanisms in nightclubs – for example, the strobe lights and repetitive beats – that create the setting of nightclubbing (64).

The DJ has an essential role in creating this atmosphere on the dancefloor, functioning as a leader amongst youthful crowds. The DJ needs to build a reputation upon collection, connoisseurship, and performance (Thornton 60). In contrast with the inclusive cultural values in EDM culture – peace, love, unity, and respect (PLUR) –, these practices were not as accessible for women as for men. Even though EDM culture was known as a place to break with the conventional and conservative ways of living, the traditional gender roles developed along in the industry (Farrugia, *Spin-sters* 15). Gender inclusivity was in reality only seen on the dancefloor, but not behind the scenes: girls still fulfilled the stereotypical image of women

(Farrugia, *Spin-sters* 16). Tami Gadir argues that the “communitarian ideologies” of non-discrimination and non-patriarchal gender relations are rather exceptional than typical (115). Gadir critiques the idea of EDM culture being an environment that opens gender boundaries. She argues that women are categorically positioned and “commercially and socially separate from the reigning male DJ image”, also in their symbolic representation in for example photos, logos, and fashion (118). According to Barbara Bradby, these paradoxes are typical in the discourses of dance music (166). Social, racial, and gender equality are seen as the hallmark of EDM culture, but this is not reproduced in the dominant and more powerful roles of the industry, such as the representation of female DJs.

From 1990 to 2000 the tools for DJing transformed rapidly into countless digital programs and devices by new digital inventions (Levitt 8). EDM emerged again in the 2000s during the post-feminist age. Post-feminists refused to identify themselves with the image of feminists dressed in dungarees with long armpit hair (Van Linge 32). Instead, they embraced their girliness by dressing up with lipstick and high heels to stress that femininity in their opinion should not be associated with oppression (Van Linge 32). Individualism and ambition were important for post-feminism. Female DJs showed they were fully in control of their persona on stage and the identity they carried out (Farrugia, *Beyond the Dancefloor* 62). Nevertheless, this still shows that there was an ongoing objectification of female DJs. “The most problematic of women’s DJs’ identities is the need to constantly monitor the extent to which sexuality reflects their image” (Farrugia, *Beyond the Dancefloor* 62). In addition to this, Gadir mentions that appearance and desirability are aspects that need to be constantly monitored by female DJs, similar to what Bridge says about female artists that are “expected to be beautiful and sexy marketed by attractiveness and sexuality, regardless of their musical capabilities” (Gadir 119; Bridge 7). Summing up, female EDM artists wanted a loosening of gender constraints, but because they had to negotiate their stage personas their representations

are still generalized by patriarchal organizations within EDM culture and its male-centricity.

This is what Barbara Bradby in 1993 wrote about the “utopianism” in EDM culture that claims to be post-feminist and move beyond sexism (156).

#### GENDER PERFORMATIVITY IN EDM CULTURE

It is remarkable that academic research such as the discussed above describes EDM culture as a safe space for people to be who they want to be, feel how they want to feel, and act how they want to act, regardless of what is expected from them in the classes of their ‘normal’ social lives. As described by Gadir, club scenes were “welcoming spaces for people who otherwise encountered prejudice for their gender identities and sexual orientation”, but she stresses that this idea is in fact exceptional (115). Despite the assumed social equality amongst people in EDM culture, this inclusivity is not represented in the number of female DJs, which is contradictory. Just like Katz wrote about male HipHop DJs, Farrugia claims that male EDM DJs have been introducing new possibilities for women to become DJs (*Beyond the Dancefloor*, 27). The only thing problematic in this is that the discussion seems to end there while the reasons for gender imbalances are rooted deeper. Women in the music industry are primarily active in roles that are related to care, personal relationships, and social interaction, as Berkers et al. state in their research about music creators and gender inequality in the Dutch music sector (29).

To understand the complexity of gender inequality in EDM culture, the theories of Judith Butler about gender can be adjusted to what scholars write about “stereotypes about male technological mastery and female technological anxiety”, “to feel technical is to feel manly”, “the role of technology signifies the masculine”, and “masculinity is still strongly associated with technical prowess and power”(Katz 584; Farrugia, *Beyond the Dancefloor* 20; Amico 265; Born and Devine 147). What does it mean that technology signifies the masculine

and how does that relate to the marginalization of female DJs in EDM culture? As mentioned earlier, gender is fluid and always in flux since it depends on social interactions that shift within a certain culture (Walton 173). It is distinguishable from sex, for the term sex means the differences between the male and female based on biological differences (Walton 173). The roles in gender performances are thus taken unconsciously and are determined by external factors that humans might not have a direct influence on. But when a DJ is performing on stage, the performer chooses consciously to perform. This is what Farrugia reports about EDM artists in her research from 2004 about EDM artists:

“They may or may not be aware of the unconscious performance of gender that they carry out in their everyday lives. Thus, prior to taking up roles that require them to be on stage, both women and men are engaged in an intense level of gender performativity” (*Sisterdjs in the House* 238).

So, the fact that EDM artists are not aware of their gender performances confirms that they are still extending the gender norms despite their pursuit of inclusivity. Farrugia further investigates how the gender performance of female DJs differs from male DJs. The act of DJing is a continuation of male performance, namely being innovative and technical (Farrugia, *Sisterdjs in the House* 238). These cultural assumptions of masculine characteristics are reflected in the above-described history of men’s role in society. Yet when a woman performs as a DJ, the characteristics of the act of DJing are discrepant to the assumed norms of femininity because the technological and innovative skills required to be a DJ are not reproduced in what people assume to be feminine characteristics (Farrugia, *Sisterdjs in the House* 239). Wajcman adds that in technical practices “women are being asked to exchange major aspects of their gender identity for a masculine version, whilst there is no similar

‘degendering’ process for men” (146). This explains the ambiguousness in the constant renegotiation of stage personas of female DJs. Even though women are present in EDM culture, their participation mainly fits into the constructed gender norms of femininity of being passive consumers and functioning in the background. This creates more difficulties for women to deploy themselves as artists within EDM culture.

## CONCLUSION

The act of DJing has been male-centric from its beginnings when it emerged in the 1960s. Historical happenings in society determined the innovative and technical roles of men and with that, the gender norms of masculinity – and consequently those of femininity – became deeply rooted in everyday practices. Women were seen as the passive users or the consumers of EDM, while men took the more dominant role as producers and technical innovators. EDM culture emerged as a space that people searched for in the 1980s to escape from social and cultural restrictions in their lives where they constructed a place to experience a certain freedom from daily obligations. EDM culture stood for inclusivity, but because of the strongly present association of masculinity and technology that was deeply rooted in society, women were still marginalized when it comes down to the number of DJs: a discourse of technology. Judith Butler’s gender performativity theory claims that gender is constructed through daily practices that extend the gender norms in what is masculine or feminine. Gender is fluid and built on social and cultural assumptions – in this case, the idea that practices that have to deal with technicality or innovation are directly associated with men. Yet because this idea is constructed through daily practices, it can also shift again when the idea of technicality and innovation starts to change within society. The way that technological innovations develop interacts with the association certain cultures have with them. The next chapter will focus on

those developments and in what ways they create a shift in the gender dynamics of EDM culture.

## 2. Digital Developments and Gender in EDM

As disclosed in the previous chapter, the technological discourse in EDM culture is formed through social and cultural constructs. These constructs are constantly in flux and transform over time because of a variety of external factors. Technology and digitalization are extremely dynamic external factors which are inseparable from EDM culture. The developments within these factors recently flourished into countless new devices which directly impact social and cultural constructs, resulting in a shift in the technological discourse in EDM culture. This chapter focuses on the material changes in EDM tools, how the perception of technology changed through digitalization, and how the rise of the internet created new possibilities in networking. By researching how these developments resulted in more opportunities for women in EDM culture, a clear interface can be identified from the connection between women and their adaptation to technologies which may be useful for future practices.

### NEW DJ FORMATS AND THE TECHNOLOGY ACCEPTANCE MODEL

One of the biggest turning points in the act of DJing was the shift from analog to digital formats. New systems made DJing easier by automatizing several components of the practice. An enormous industry with numerous gadgets and tools emerged rapidly through which the DJ was allowed to bypass musical training. One striking example is beatmatching, one of the skills that demanded great effort to be learned, now substituted by the 'sync' button that automatically matches a new track's 'beats per minute' to the previous one (Attias et al. 27). It can however be questioned if the effect of digitalization on gender dynamics and technology which is easier to use improved women's position in EDM. This question can be answered with the TAM by Davis which is applied by several academics in other fields that

include analyses of the usage of technological devices. In the research of Aguirre-Urreta and Makas, the underlying aspects that control gender differences in the context of technology acceptance are investigated utilizing the TAM. The results of this research showed that gender effects are complicated by a variety of external influences that operate simultaneously (Aguirre-Urreta and Makas 155). Besides that, the research presents an overview of other investigations that confirm that gender as a moderator should be considered as a psychological construct, meaning it is formed through associations through the development of humanity which is not presented by biological differences (160). This reflects the gender performativity theory by Judith Butler as described in the previous chapter.

The research of Aguirre-Urreta and Makas also includes research findings by Viswanath Venkatesh and Michael G. Morris, who investigated the acceptance of new technologies in the workplace with gender as a moderator within the TAM (Venkatesh and Morris 115). One of the objectives of their research was to “understand gender differences over the long term as it relates to sustained usage of technology with increasing experience” (115). This reflects the technological discourse wherein men are advantaged regarding certain skills and technology. The outcome of the investigation showed that the technology usage decisions of men were heavily impacted by their perceptions of usefulness, and that women were more impacted by their perceptions of ease of use and subjective norm (115). Geraldine Bloustien’s research on recent developments in popular music practices regarding the role of women confirms these findings. She argues that new technologies that are lighter, less expensive, and more user-friendly are attenuating the discriminatory hurdles women are facing (233). Thus, women are more likely to use easy-to-use technology, but they can acquire the same technological knowledge as men over time and become equally competent as their male counterparts.



## REFORMED PERCEPTIONS OF TECHNOLOGY

According to Bernardo Attias in the book *DJ Culture in the Mix: Power, Technology, and Social Change in Electronic Dance Music*, models of DJ formats or tools are not as important as the creative discourses that contextualize them (17). This book, published in 2013, already suggested that the younger generation would be accepting the sync button for example as a conventional tool (28). So, besides the fact that new digital technologies made DJing more accessible for women who were less acquainted with technology than men by the technological discourse, the associations made with technology are changing too because media and technological advances alter social and cultural constructs (Werner and Johansson 180). The importance of digital products has increased rapidly in society since the rise of the internet and the constant innovations of digital systems. The interactions between humans and digital technologies are intertwined in daily activities (Goswami and Dutta 51). Since the younger generation described by Attias has been growing up in an environment where this high frequency of interactions with digital systems is normal, their perception of technology has also shifted. Where technology was mainly associated with masculinity in a context with machines and industrialization, it is now contextualized in everyday practices for all genders. Attias et al. argue that “Obtaining knowledge in the field technology is a precondition to become a successful DJ” (73). This precondition was formerly one of the major struggles for women to cultivate interest in EDM culture by the discourse of technology. However, the new perceptions of technology as described above make this precondition a minor barrier over time. The developments in technology have created shifts in the understanding of DJing (Bloustien 231). Because of these constantly changing technological dynamics, the technological discourse must not be seen as fixed.

Recent studies on EDM culture confirm that innovations in digitalization have blurred the established boundaries between production, consumption, musicians, and fans, which

results in a world that is reforming on a social, aesthetic, and commercial level (Bloustien 228; Choi 474; Cook 10). The changed concept of technology offers new possibilities for artists to extend their talent for producing music with a broader accessibility to tools and consuming music through more open platforms. This presents benefits for women to rectify their position in EDM culture and transcend the male dominated status in technology, yet it also potentially constructs new contradictions. The discourse of authenticity is a frequently discussed subject in music studies. It encompasses the negative effect that less physical engagement with musical tools has on the musical performance, as introduced by Chew and McPherson when questioning the parts virtual instruments fulfill in the digital age (306). According to Cook, “technologies facilitate cultural developments that stand in the way of others” (5). Digital technologies in that sense facilitate the cultural development of a more accessible EDM culture for women, but that consequently changes the way music works and it can push the boundaries to what humans perceive as ‘real’ music (Cook 12). This can retain people’s creativity, talent, experience, and uniqueness.

Again, this forms a paradox since masculinity has always been associated with authenticity and creativity, while the mainstream is signified as feminine (Thornton 103). This is especially conflicting with the ideals, attitudes, and hierarchies within EDM culture. EDM culture especially identifies itself with certain characteristics and values by determining what it does not want to be associated with. One of the cultural hierarchies Thornton distinguishes within EDM culture is the ‘hip’ versus the ‘mainstream’ (3). ‘Hip’ stands for authentic culture and is repelled by superficiality and derivativity. Thornton’s introduction of the term subcultural capital that operates within EDM culture displays how it can function as a currency that authorizes gender imbalances (104). The rejection of the mainstream, imitative and passive can problematize the gender balance because these characteristics are identified as feminine (105). So, the technological discourse might encounter a shift through new digital

developments, however, the discourse of authenticity that is intertwined with the values of EDM culture can still legitimize the marginalization of women.

#### CHANGING GATEKEEPERS BY DIGITALIZATION

Besides the practical side regarding DJ tools and the new perceptions of technology, the industry around EDM culture changed as well. As suggested by Farrugia, the performance and success of a DJ heavily depended on one's record collection (*Beyond the Dancefloor* 29). The connections between a DJ, producer, record label, and record store were all part of a "homogeneous circle of men" (Farrugia, *Beyond the Dancefloor* 30). Collections of records are the database of a DJ, which can be seen as one of the gatekeepers in EDM culture where women were always distanced from. Physical settings like a record shop are gendered and can be conflicting for women by symbolic or material barriers, for instance, the attitude of men in record stores that expresses authority and knowledge (Bloustien 231; Attias et al. 56). As a result of the digitalization music, record collections are not necessarily a gatekeeper anymore because music databases are accessible to everyone (Attias et al. 57). The skills that were required for collecting records were normally associated with men, yet these skills are not mandatory to access music nowadays. Digital environments diminish the effect of former social hierarchies and gatekeepers in music consumption and production (Werner and Johansson 179).

Women can find their networks elsewhere in the digital age where symbolic or material barriers are no longer restricting them because they can connect with each other via online spaces. Attias et al. suggest that virtual networking creates new possibilities for women (73). Farrugia investigated this in her article on the online community "SisterDJs", which was created for women who wanted to participate in the male dominated EDM culture. Via such platforms, women can share their experiences and adopt new knowledge from each other

(Farrugia, *Sister-djs* 258). In her other research on women in EDM and media technologies, Farrugia expands on this and argues that the internet can provide a space for women where they can form communities and create supportive networks (*Spin-sters* 166). The developments in social media kept developing into numerous platforms that can function similarly, for instance, the platforms Twitter and Instagram. Social media platforms like these do not only encompass networking functions to exchange knowledge. For example, activist and social hashtags can create awareness on a certain topic that can move beyond an online platform (De Kosnik 60). Furthermore, recently developed social media can function as a stage to present oneself. Performances of identities are applied within social media because they communicate social traits like political beliefs and cultural status (De Kosnik 21). A recent study by Caldeira et al. investigated the role of the increasingly popular platform Instagram and how it functions for the self-representation of femininity (24). “Self-representation has the potential to create greater visibility for demographics that are usually underrepresented or misrepresented in traditional mainstream media” (Caldeira et al. 25). Female DJs have an underrepresented and overlooked position in EDM culture where social media can offer new possibilities as Caldeira describes here. However, there is a more critical view on social networking sites. It can be seen as a tool to overcome traditional gendered norms, but also as a tool to reflect them (Caldeira et al. 26). Social media can thus be used as a stage, yet it can simultaneously create performances that may be gendered. This paradox of transcending or extending notions of femininity and masculinity can also be applied to the online self-representation of Female DJs when approaching their online performance as gender performative. As highlighted in chapter one, there is a paradoxical relationship between women that perform the assumed masculine characteristics that “belong” to DJing (Farrugia, *Sister-djs in the House* 239). Though social media diminishes the barriers and

boundaries created by male prerogatives in EDM culture, this ambiguousness is still present, for female DJs still adapt characteristics of what are perceived as male identity traits.

## CONCLUSION

The TAM shows the Importance of the conceptualization of gender in fields of research, especially how gender as a moderator can be complicated by the external factors that affect it. With the findings of the TAM research, this chapter displays how the technological discourse must not be seen as fixed. As suggested in chapter one, social and cultural constructs are in flux by external factors that affect them. The developments in digitalization are the external factors that have changed the perception of what technology is and what it is associated with, namely that digital systems along with technicality are used by all genders in daily practices today. For a younger generation this can contribute to reforming stereotypes that lead to male domination in EDM culture. However, social and cultural developments can stand in the way of other developments. While the shift in the technological discourse can result in a broader accessibility to EDM culture for women, it directly impacts values, beliefs, and hierarchies in EDM culture that are based on authenticity, which can be perceived to be lost. Via the internet and through social networks, female DJs can connect with each other and gain knowledge in DJing. Social media offers possibilities to create awareness of women's position in EDM, but also showcase their individual talent. It opens a new stage where they can avoid the gendered barriers that oppress female DJs in real life, creating greater visibility. Paradoxically, this can again fall into an extension of the notions of femininity and masculinity, since gender performativity is something that can be applied online as well. This can create struggles for female DJs, for they constantly need to renegotiate their online personas.

## Conclusion

The marginalization of women in EDM culture has always been present. Because EDM is strongly dependent on technology, this research aimed to answer the question how recent digital developments impacted the gender dynamics in EDM culture. The first chapter of this thesis investigated how these dynamics are determined by the historically established gender norms of masculinity and femininity that relate to technology. Whereas EDM culture originated as an inclusive space where society sought an escape from social obligations, it was still affected by the technological discourse wherein technology has always been associated with masculinity. The gender performativity theory by Judith Butler shows that gender roles are assumed unconsciously by the socially formed gender norms. However, DJing is an extension of masculine traits for male artists, namely being technical, but for female artists it is a conscious choice to perform an act that requires an exchange of their gender identity. This disqualified women from cultivating interest and knowledge in this specific field, especially in positions like DJing and producing, for they constantly need to negotiate their stage personas.

However, gender norms are fluid at the hand of constantly changing external factors in society. Firstly, recent research on technology usage with the TAM shows that gender as a moderator is in flux because its meaning is not fixed due to social and cultural constructs, which confirms the gender performativity theory. Moreover, results from these investigations show that though women are more likely to approach easier to use technologies, they can become equally competent as men are with technologies over time. Secondly, the frequency of digital technology usage in everyday activities has grown enormously and new generations are getting more acquainted with technology from a young age regardless of their gender. Technicality might not be seen as something exclusively masculine anymore, which can

reform the stereotypes that have led to problematic gender imbalances in EDM culture.

Although digitalization in this case might have a positive effect on the position of women in EDM culture in the future, this development conflicts with the discourse of authenticity. It forms a paradox since masculinity has always been associated with authenticity and creativity, while the mainstream is signified as feminine. Authenticity is one of the core values in EDM culture, which is why it can still legitimize the marginalization of women. Thirdly, the internet has substituted certain roles of several gatekeepers that formerly caused the exclusion of female DJs. Learning skills in DJing and building a music collection became accessible to everyone who had access to the internet. Social media created more accessible spaces for female DJs to network and a stage to gain greater visibility. However social media can function as a platform to reform stereotypes of gender, it can also create new ones. Women still need to renegotiate their stage personas on certain levels.

This thesis shows that social and cultural developments do change the perception of gender over time: just as it was formed by developments in the 19<sup>th</sup> century already, it can now be reformed again by the rapidly developing technological inventions that affect our daily lives. However, that process might have to cope with countermovements that arise with this shift in the technological discourse. Although digital developments have introduced many possibilities for female DJs, gender performativity is still present in EDM culture. The shifts created by digital developments might clash with authenticity and the rejection of the mainstream in EDM culture, because these core values are associated with masculinity. Besides, the aim for an equal division of male and female DJs can encounter new problems. For example, if events want to book more female DJs, the minor group of female DJs can ask higher demands for there still is a scarcity of female DJs. This and other aspects, like the TAM and new DJ tools or the experiences of female DJs and other players in the EDM field can be researched in further investigations. Gender and technology will keep changing and

developing, and the mapping of these processes like this thesis can help to create a clearer view of them that will support future practices for female DJs in EDM culture.



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