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The influence of music sharing at work on social relationships between colleagues

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Abstract

This study explores the influence of music sharing at work on social relationships between colleagues. Music sharing has been proven to facilitate friendship and maintenance in various social environments (Brown, Sellen, & Geelhoed, 2001; Volda, Grinter, & Ducheneaut, 2006). However, music sharing at work in its influence on friendships between colleagues has never been explored, even though establishing and strengthening social relationships within the workplace have become increasingly important within organisations (Berman, West, & Richter, 2002). Informal relationships are beneficial for the overall well-being of an organisation as they increase the exchange of resources between colleagues. For the individual workers these relationships satisfy their need for social interaction.

The study applied a mixed methods approach involving quantitative as well as qualitative methods. Twenty-nine employees from design agencies throughout New Zealand participated in an online survey and seven in semi-structured interviews. Both online survey and interviews were used in combination in order to achieve complementarily and triangulation between quantitative and qualitative data.

The results suggest that music sharing contributes to the development of social bonding that occurs in the workplace. On the basis of the music that was shared through various technologies colleagues appeared to form impressions of each other. This involved determining each others' music preferences and associating other personality aspects with those music preferences. It appeared that the more similarly colleagues perceived each others' musical tastes, the more likely they were to become friends and/or to form informal music taste groups at work. The degree of reciprocity of music predicted the degree of intimacy between colleagues. When colleagues who were friends shared music with each other, they were much more concerned about reciprocating the music adequately than when they shared with colleagues they knew only superficially.

The findings of this study are relevant for employers who want to promote relationship development between colleagues in a work environment where employees are passionate about music.

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Chapter 1: Introduction

1.1 Context of the research

Music sharing is a controversial topic which in recent times has become more prominent as the music industry increasingly has blamed its large revenue losses on the millions of people all around the world who illegally share music via online music sharing applications (Boorstin, 2004). During these years the major record companies put pressure on governments with the result that copyright acts in countries around the world were modified or reformulated to provide higher penalties for individuals who illegally shared music for which they did not have copyright ("Copyright Act," 1994; "The Digital Millennium Copyright Act," 1998; "Urhebergesetz," 2008). Moreover, thousands of individuals have been sued for sharing music files (Oberholzer-Gee & Strumpf, 2007).

As a consequence much attention has been paid to political, legal and ethical issues in music sharing in the last ten years (e.g. Alexander, 2002; Bowrey & Rimmer, 2002; Lam & Tan, 2001). These studies reveal that while the record industry was fast to blame music sharing for the decreasing music sales, contrary findings exist regarding the extent to which music sharing and music sales are correlated. Some studies show that music sharing indeed has a negative impact on music sales, as people who obtain music through sharing buy less music (Peitz & Waelbroeck, 2004; Rob & Waldfogel, 2006). Other studies show that music sharing even enhances sales, in that people who share music are also more likely to buy music (Gopal, Bhattacharjee, & Sanders, 2006; Zentner, 2006). One of the most recent studies reveals that it is difficult to correlate music sharing to music sales:

Using detailed records of transfers of digital music files, we find that file sharing has had no statistically significant effect on purchases of the average album in our sample. (Oberholzer-Gee & Strumpf, 2007, p. 38)

As a result of the contrary outcomes of such studies, researchers have started to look for other explanations for decreasing record sales. Walters (2008), for instance, shows that people nowadays consume more music through streaming audio from sites such as myspace.com or youtube.com than through music sharing applications and argues that the revenue losses are a result of the inflexibility of the music industry to adapt to such technological developments.

While the nature of the relationship between music sharing and music sales remains unclear, researchers have noted the link between music sharing and social bonding. Livingstone (2002) states that music sharing has always been an act of friendship and Brown, Sellen, and Geelhoed (2001) found that music sharing can facilitate friendship development. This is confirmed by Volda, Grinter, Ducheneaut, Edwards and Newman (2005) who state that whether via audio cassettes or more modern technologies such as burnable CDs and instant messaging, music sharing has always been “a means of establishing and maintaining social bonds” (p. 193).

Although music sharing has proved to be beneficial for social bonding there seems to be hardly any research on how music sharing influences relationships between colleagues at work. This is surprising considering that friendships between colleagues, or so-called informal relationships, have become increasingly important for organisations. Studies have shown that informal relationships between colleagues are beneficial for the workers as well as for the overall well-being of the organisation (Berman et al., 2002; Biggs & Swailes, 2006; Sias, Heath, Perry, Silva, & Fix, 2004). For the individual, informal relationships satisfy needs for social interaction and support which in turn increases job satisfaction whether a job is perceived in general as satisfying or not (Harter, Schmidt, & Keyes, 2003; Requena, 2003). Informal relationships establish trust, reduce workplace anxiety, provide support for workers when they deal with organisational changes (Eisenberger, Huntington, Hutchison, & Sowa, 2004; Zapf, 2002) and also lower turnover rates (Nielsen, Jex, & Adams, 2000).

Informal relationships are beneficial for the overall well-being of an organisation as they are thought to increase exchange of resources between colleagues (Adler, 2002; Berman et al., 2002). Employees appear to support each other more with necessary work resources, such as work related information, when they have social bonds beyond

formal relationships. In informal relationships colleagues do not support each other solely for rewards such as a pay rise, but are more inclined to do so out of a sense of fairness established through the informal social bond (Morrison, 2004). The available support in turn increases information flow, work quality and productivity (Berman et al., 2002).

There are many ways organisations currently promote relationship development between colleagues. Many provide special training to supervisors in how to build positive relationships with their subordinates (Austin & Hopkins, 2004) or employ counsellors especially trained in solving interpersonal issues between staff members (Armstrong, 2003). Moreover, managers increasingly encourage the exchange of non-work related information between colleagues. Berman et al. (2002) state that

what was once regarded as purely private matter now becomes imported into the workplace [...] such as interest in foreign travel, where one's children go to school and the types of movies that one watches. (p. 227)

Managers create opportunities that allow their subordinates to exchange such leisure information knowing that the resulting relationships have positive outcomes for the organisation (Berman et al., 2002). These include not only social functions outside the work context such as 'work drinks' or staff Christmas parties, but also arrangements such as community rooms within the workplace (Pettinger, 2005).

While music sharing has been identified as beneficial for relationship development outside the workplace, its influence on social bonds between colleagues in the workplace has not been explored. Some researchers have only speculated on music sharing's value to the workplace's social environment. Heald (2006) states that sharing music between colleagues can enhance the social atmosphere between colleagues at work, but she does not provide any further information. Also, Volda, Grinter and Ducheneaut (2006), who studied social practices around music sharing in a workplace, do not go further into detail about music sharing's influence on relationships between colleagues.

1.2 Personal motives for this research

The researcher chose this thesis because of his personal interest in the research topic and in music generally. He is a trained musician, who has played many concerts as part of rock and jazz bands as well as a solo artist throughout Europe and New Zealand. He also has worked in the music industry. Most recently he was employed as a PR manager in an agency that promoted newcomer bands throughout Germany. Three of the organisations he used to work for had computer networks through which not only task-orientated information was shared, but also music. In the researcher's opinion, this often had positive effects on the social environment at work, but the exact outcomes of music sharing were unclear. Yet it was evident to him that people were excited about new music and eager to find out who the owner of the music was. This led to social talk about the music and the personalities represented by their music preferences. Those personal experiences led to the decision to further explore social practices of music sharing in the work context.

1.3 Research question and objectives

There seems to be evidence that music sharing has always been deeply embedded in establishing and maintaining friendships outside the workplace (Brown & Sellen, 2006; Livingstone, 2002; Volda et al., 2005). Informal relationships or friendships are increasingly important in the workplace, in that they allow organisations to realise synergies that provide competitive advantages in their markets (Cohen & Prusak, 2001; Loermans, 2002). However, the extent to which music sharing may have a similar positive effect on workplace relationships as it appears to have on relationships outside the workplace has been unexplored up to now. This study seeks to address this apparent gap in the research.

Consequently, the research question for this study is:

How does music sharing at work influence social relationships between colleagues?

In order to find answers to this research question certain factors that may help to indicate how music sharing and relationships in the workplace are related need to be examined. First of all, it appears to be important to consider how the participants actually share music at their workplaces, as different studies based on different music sharing technologies have come to different conclusions on how music sharing influences social bonding between their users (Brown & Sellen, 2006; Ebare, 2004; Pearson, 2007).

It is also important to study how the impressions colleagues form of each other through music sharing influence their relationships in development. Volda et al. (2006) show that workers try to influence the image they give to others through the music they share (impression management) as they think that others form impressions of them through their shared music (impression formation), and studies in areas other than music sharing have shown that people engage in impression formation and management mainly for building and maintaining favourable relationships (Berger, 2000; Berger, 1986; Leary & Kowalski, 1990).

Besides the perceptions of each other through music sharing, reciprocity is another factor that appears to be significant when determining the influence of music sharing on relationships between colleagues. Volda et al. (2006) indicate that it might be important to explore music sharing through the lens of gift giving theory in order to determine social motivations for music exchange. Gift giving, in general, implies reciprocity which means that people tend to give back what they have received to create and maintain social bonds (Mauss, 1954; Sherry, 1983). Other studies have found that reciprocity plays a role in music sharing outside the workplace, in that received music is perceived as a gift which then has to be returned in some way (Ebare, 2004; McGee & Skågeby, 2004; Pearson, 2007). How music is reciprocated then seems to indicate the nature of the social bonds between giver and receiver (Ebare, 2004; McGee & Skågeby, 2004; Pearson, 2007).

Hence, the objectives of this study are:

- To describe how colleagues share music with each other at work

- To establish how music sharing influences the way colleagues perceive each other's personality
- To verify how employees try to influence perceptions colleagues have of them by sharing certain kinds of music
- To describe how impressions that colleagues form of each other through the music they share impacts their relationships in development
- To determine the impact of reciprocity in music sharing on relationships between colleagues.

The next chapter will discuss the existing literature on these matters and identify gaps within the literature.

Chapter 2: Literature Review

The aim of the present study was to find out how music sharing influences social relationships between colleagues at work. The objectives were (1) to describe how colleagues share music with each other at their workplace, (2) to establish how music sharing influences the way colleagues perceive each others' personality, (3) to verify how people try to influence perceptions others have of them by sharing certain kinds of music (4) to describe how impressions that colleagues form of each other through the music they share impacts their relationships in development and (5) to determine the impact of reciprocity in music sharing on relationships between colleagues.

This section reviews the literature that relates to this study's research question and objectives, in order to get an insight on the research that has been conducted and to locate existing gaps that justify the current research. In general, there seemed to be hardly any literature specifically on music sharing's influence on relationships between colleagues. However, studies were identified from fields other than music sharing that appeared to give indications as to how music sharing in the workplace might influence social relationships between colleagues.

In order to get an overview of how music in the workplace is listened to and socially shared the first section (section 2.1) will examine the literature about the historical use of music in work settings that differ in technology, work processes and managerial attitudes. This information frames the way people have shared music historically and establishes the foundation for the social practices of music sharing in today's workplaces.

In section 2.2 the literature on music sharing at work and how it influences relationships between colleagues will be reviewed. The first part of this section (2.2.1) considers the literature pertaining to how music sharing results in impression formation and how people try to influence the image they give to others through the music they share. These processes are important to consider because on the basis of how people perceive each other through music the nature of relationships between them can be predicted (Knoblauch, Vorderer, & Zillmann, 1999).

The second part of section 2.2 examines the literature on perceptions of colleagues through music sharing and how similarities in music preferences that are revealed through music sharing create common ground as a basis for close relationships.

The third part of section 2.2 deals with the literature on music sharing and the tendency of people “to reward kind actions and punish unkind ones” (Falk & Fischbacher, 2006, p. 295). The importance of reciprocity for developing relationships through music sharing will be discussed.

In the final part of the second section work relationships with different degrees of intimacy as proposed by Henderson and Argyle (1985) will be related to the findings of the literature about music sharing and relationship development and maintenance as discussed in section 2.2.

2.1 Social bonding through music between colleagues in different work settings

The literature on music in its function to create social bonds between colleagues in the three dominant work settings of the last two-hundred years will be reviewed here. The primary work settings that have been discussed in the literature are (a) non-industrial work settings that are dominated by repetitive and manual labour, (b) industrial work settings, and (c) office environments.

2.1.1 Music in non-industrial repetitive and manual work

This section provides an insight into the literature on social bonding through music in non-industrialized work settings. The term non-industrialized work settings refers to workplaces such as sailing ships as well as agricultural and forest work sites where people undertake physical and repetitive work without the help of industrial machines (Gioia, 2006). Non-industrialised work songs were common in the developed world before the industrial revolution started in the late 18th century (Korczynski & Jones, 2006), and can still be found in many regions of the undeveloped world (Coleman,

Grant, & Josling, 2004). In such work settings songs were and are still sung by the workers themselves as a means to synchronize their individual work efforts (Styns, van Noorden, Moelants, & Leman, 2007).

The synchronization of pace and movement is essential in non-industrialized work settings to successfully complete communal work tasks. The pace and rhythm of songs workers sing together coordinate the work processes. Tree fellers, for instance, sang work songs to control the speed and movement of their axes so that they would work more efficiently in unison (Gioia, 2006). In this work environment music as a synchroniser was crucial to ensure that tree fellers lifted their axes together at the same time; to do otherwise could result in serious injuries (Titon & Fujie, 1992). In this case, work songs functioned socially to unify individual work efforts and were considered an important part of the working process. Gorski (2003) refers to work songs as a tool in that they are as important for the work process as a fish-knife is for a sailor or an axe for a tree feller. Management, aware of music's crucial role in the work process, not only tolerated music, but often actively encouraged work songs to be sung. Supervisors on farms in the West Indies, for instance, even punished workers that did not sing for interrupting the work rhythm (Cooper, 2001).

Work songs also allowed the workers to express their feelings about their working conditions. Ramswamy (1993) describes how agricultural workers used work songs to comment on unfair treatment by their supervisors. Singing together about unfair treatment when their supervisors were around was considered as more effective than complaints by individual worker and made their supervisor think twice before treating their workers unfairly again (Ramswamy, 1993).

While work songs helped to coordinate communal work efforts and were used as a means to complain about work conditions, there seem to be no further indications in the literature about how work songs might influence relationship development between colleagues in non-industrialized settings.

2.1.2 Music in industrial settings that are dominated by machines

In this section the literature on the social bonding between colleagues in industrial settings will be reviewed. An industrial setting is defined as a factory where most of the manufacturing processes are machine-based. The main body of literature on the role of music in such work settings concentrates on the period from the advent of industrialization in the late 18th century until the second world war years in the 1940s (e.g. BBC, 2002; Jones, 2005; Korczynski & Jones, 2006). However, a limited amount of studies also examine the social meaning of music in factories after the second world war (Korczynski, 2007; Seashore, 2003).

In industrial work settings music's function to create social bonds at work is limited due to the domination of machines. Machines pace the work processes and, hence, social singing as a synchroniser of individual work processes (see previous section) is not necessary. Even if workers try to sing for other purposes the noise of machines prevents them from doing so (Deem, 1988). Given the dominance of the machines managers appear to deal with music in industrial settings in two ways: either music is totally banned from the workplace or technology is introduced which allows factory workers to listen to music via loudspeakers or headphones

The banning of music appears in the literature mainly in regards to the factory settings of the late 18th century to the 1940s (Korczynski & Jones, 2006), although one can imagine that such work situations might still exist today. Between the late 18th century and the 1940s music, including singing, whistling or tapping a rhythm, has been stated as being simply not allowed in the workplace. Spinners in Manchester in the mills of the late 18th century would be fined with one shilling for whistling (Hammond, 2007) and in the factories of Crawley Iron, the time workers spent on whistling or singing in the beginning of the 20th century was added to the length of their work day (Williams, 1995).

One of the reasons for the strict ban in factories was that the management considered music to be out of place at work. Music was considered as a leisure activity that stood in contrast to managerial efforts to strive for the greatest possible output and workers' efficiency (Korczynski, 2003). Moreover, factory management was concerned that work

songs used for complaining about supervisors and work conditions in large factory communities could incite workers to riots (Frith, 1981). Factories unified formerly separated workforces in larger communal establishments (Calhoun, 1983), and communal singing in factories was considered as far more threatening for the supervisors than it was the case in pre-industrialization where small workforces addressed unfair treatment by their supervisors in work songs (see previous section) (Frith, 1981). Some employers encouraged musical activities of their employees in the early industrialized workplaces through the sponsoring of work choirs, bands and singing classes, but always with the premise that such activities should be undertaken outside working hours (Russell 1997).

Music was widely introduced into factories in the 1940s (Roux, 2004). However, while one might think that this was a result of a shift in managerial attitudes, when looking at the reasons for introducing music in the factories it becomes clear that still only one overall goal was pursued - increased productivity. Music was simply not considered as an issue of leisure anymore as it was the case in early industrialization, but had been proved to further increase productivity in studies of the 1940s.

One of those studies was conducted by Wyatt, Rangoon and Stock (1937) for the Industrial Health Research Board, a British governmental body. The study showed that certain music played at certain times in factories was highly beneficial for productivity. More than anything else this study informed the decision of the British government to introduce music in all its war factories in 1940 (Antrim, 1943). An American study by Burris-Meyer and Cardinell (1947) revealed similar results and was often referred to by American factory owners when introducing music in their factories. Those studies had a clear focus on productivity and workers' well-being was only considered a stimulus to create more output (Korczynski & Jones, 2006). Also, workers were never asked when they liked to listen to music or what types of music they preferred (Korczynski & Jones, 2006). The researchers behind these studies simply assumed that workers should be happy about any kind of music played at any time at work. Studies such as the ones of Wyatt, Rangoon and Stock (1937) and Antrim (1943) tested various kinds of music at different times of the working day, and if those attempts showed an increase in productivity, music was considered beneficial for both workers' well being and productivity (Korczynski & Jones, 2006).

Music in factories is different to music in non-industrialized settings. The workers do not sing work songs, but rather listen to music via loudspeakers (e.g. factory loudspeakers with imposed music or radios for each group of workers) or via headphones (either via their own personal stereos or via company owned headphones with build in radios) (Furnham, Jackson, & Miller, 1999; Korczynski, 2007).

Music in factories also has certain implications for social bonding among colleagues. Headphone use has been proved non-beneficial for social bonding among colleagues and is often only introduced in factories where conversations between workers cannot take place because of the noise of the machines, to cover up the machine noise and to create a more pleasant aural atmosphere (Huber, 1984; Oldham, 1995). However, research has shown that listening together via loudspeakers can be beneficial for social bonding. The only identifiable study which explores socialising through transmitted music in factory settings was conducted by Korczynski (2007) who found that communal listening to music can build social bonds between colleagues in factory settings. Moreover, this study has shown that the positive impact of social listening on the workplace environment depends on the degree to which strong social bonds already exist and whether music is imposed or selected by the listeners themselves (Korczynski, 2007).

According to Korczynski (2007) in parts of a factory where working processes take place that require communication, workers are also more likely to socially bond with each other, in other words, they are more friendly to each other and more often engage in conversations than those who work independently or in isolation. In such parts group music listening results in more positive social interaction by prompting workers to sing along and exchange information about the music being played, while in parts where no or negative social bonds exist music does not have an impact on the social atmosphere at all.

Moreover, according to Korczynski (2007) there are more positive social bonds between workers who listen to their own radios than between those who consume music selected by factory management. Workers often engaged in conversations about the radio stations to be selected and also more often collectively sang along with the music as

they could choose the stations that were most likely to play the songs they knew and liked. Korzynski (2007) observed in his study that in a part of a factory where workers initially listened to imposed music, the introduction of a radio which allowed them to select their music significantly improved social bonds between workers.

2.1.3 Music in office settings

In this section the literature that deals with music in its function of creating social bonds in office environments where more mental than physical work is required will be reviewed. In such environments workers nowadays have a variety of technologies that can be used to consume music.

There are increasing opportunities for office workers to control the music at work today. Personal stereos such as iPods or other Mp3 players used with headphones, or music listened to via personal computers give the individual worker various opportunities to create their own personal work soundtrack (Bull, 2000). DeNora (2003) states that headphones allow music to be used as a regulator of the self, in that individuals influence their emotional state by listening to their own music. Consequently, workers have greater opportunities to choose the music which suits a certain task they have to undertake.

The idea of individual listening in the workplace is supported by studies that reveal that music is especially beneficial for workers' well being and work performance when self-selected (Haake, 2006; Lesiuk, 2005; Oldham, 1995). This conclusion is backed up by studies which show that there are strong correlations between individual character traits and the perception of music. For instance, Haake (2006) found that workers with a low stress level are more likely to use music for its energising and stimulating effect than workers with a high stress level, while the study of Furnham and Strbac (2002) reveals that introverted people are more easily distracted by music than extroverted people.

While the opportunities and the benefits of individual listening might suggest that personal stereo use should be a standard practice in today's office environments, there are also certain social implications of personal stereo use that have to be considered. Elmore and Crane (2005) state that workers are often put off from making conversation

with headphone users and that headphone users deliberately use headphones to separate themselves from others as they are aware of this reaction. Bull (2000) offers a possible reason for this phenomenon:

Personal stereo users move through these spaces [physical places such as the working environment], either by withdrawing themselves or by aesthetically recreating their experience whereby a personalized fiction is created from the environment. (p. 25)

This implies that personal stereo use can change an individual's phenomenological perception of the working environment and that this effect could limit the individual's ability to socially interact within the working environment. DeNora (2003) explains:

One is able to change the nature of the spatial and scenic terrain within which one must function [when using headphones]- at least until one needs to interact with others and thus the headphones come off. (p. 3)

Consequently, it is not hard to imagine that in jobs that require communication with others, headphones or personal stereos often do not make much sense at all and, hence, are not used. Here also another factor comes into play – the restructuring of the office space. Over the last 40 years many compartmentalized office environments in companies like IBM, HP, BMW were changed into open plan offices in a managerial effort to improve face-to-face communication between employees (Boutellier, Gassmann, & von Zedtwitz, 2008). In these integrated environments, personal stereo use seems to be counterproductive. However, while offices increasingly turned into open plan environments the number of people who worked from home or in other contexts more or less isolated from others also increased (Burke & Cooper, 2000). Hence, in such contexts communication with others might only play a subordinate role and personal stereos can be used with all their benefits.

However, office workers nowadays have more technological opportunities not only to create their own aural space at work, but also to copy and share music in private. From the compact cassette in 1964 to more sophisticated current technologies such as computer networks or P2P (peer-to-peer) software that allows private users to share

their files with others via the internet, music-sharing technologies have come a long way (Lubar, 1993b). While P2P applications help to obtain a nearly unlimited number of songs, they do not seem to be used as a means to build social bonds as built-in chat functions and search capabilities that allow users to find people with similar music interests via the internet, in practice are hardly ever used (Pouwelse et al., 2008). However, in a work context where people know each other and share music in ways other than with P2P software, social bonding between colleagues through music sharing can be anticipated. Volda et al. (2006) found that workers share certain music with colleagues in order to impress them. While Volda et al. (2006) did not further pursue the idea of relationship development, related studies have shown that people try to impress others mainly for building favourable relationships (Leary & Kowalski, 1990; Metts & Grohskopf, 2003).

Music sharing seems to have become especially important in creative workplaces such as design agencies (Shaughnessy, 2008). It seems that designers are very interested in music and music sharing as an important cultural phenomenon they have to interact with on a daily basis to design effective cultural goods (Shaughnessy, 2008). Research then is needed regarding how music sharing at work as an important part of the social corporate culture influences the process of socialising within design agencies. Such research is valuable especially considering the fact that work relationships become increasingly important for creating synergies that allow organisations to have competitive advantages in their markets. In the following sections the findings of the literature that relate to how music sharing influences relationships between colleagues are further discussed.

2.2 The influence of music sharing in the workplace on relationships between colleagues

Relationships between colleagues in the workplace are essential for both organizational and workers' well-being (Berman et al., 2002). Organizations are only able to realize synergies that guarantee their survival through good relationships between their workers (Cohen & Prusak, 2001; Loermans, 2002) and workers meet their needs for social

interaction as an important ingredient for their well-being at work by engaging in social relationships with colleagues (Eisenberger, Huntington et al., 2004; Zapf, 2002).

The literature mainly focuses on relationship development between colleagues in relation to workplace characteristics. There has been research on the impact of aspects such as the work environment in regard to separated office environments vs. open plan offices (Penn, Desyllas, & Vaughan, 1999), the hierarchical structures in the workplace (Boyd & Taylor, 1998; Graen & Uhl-Bien, 1995), and the corporate culture (Ouchi & Wilkins, 1985) on relationship building and maintenance in the workplace. Only recently researchers have seemed to incorporate non-workplace related characteristics in their research on relationship development at work. This research is informed by evidence that friendships that also incorporate shared leisure activities between colleagues can enhance the workplace atmosphere (Rotemberg, 1994), decrease stress and allow staff members to better cope with organizational change (Riordan & Griffeth, 1995).

One of those non-work related characteristics that potentially influences how relationships are built is music sharing. The only study which could be identified that explored music sharing in the workplace was conducted by Volda, Grinter and Ducheneaut (2006). Volda et al. (2006) found that colleagues form impressions of others on the basis of shared music, but this study does not further explore music sharing as a potential way to build and maintain relationships among staff members. However, it is possible to make certain assumptions on the basis of findings from related literature as to how music sharing in the workplace might influence relationship development and maintenance at work.

First, this overview will discuss the literature on impression formation and management through music sharing in regard to relationship development and maintenance. Then the literature which deals with relationship development and maintenance based on similarities in music taste and reciprocity will be discussed. Finally, the findings from a study on relationships at work identifying three possible types of relationships with different degrees of intimacy in relation to music sharing in the workplace will be reviewed.

2.2.1 Impressing colleagues with shared music

This section gives an overview of the literature on how people form their impressions of others on the basis of the music they share (impression formation) and how people deliberately choose the music they share with others to influence the impressions others form of them (impression management). Both processes are important to be considered when exploring relationship development through music sharing as how someone is perceived through the music this person shares potentially influences the way others engage in conversations with this person (Knoblauch et al., 1999). Berger (1986) describes the process of relationship development in two subsequent steps: in the first place people observe others passively, and then use the information they have gathered in their observations to start subsequent conversations. Hence, people might observe the music others share and then use this music as talking points in conversations to build relationships.

2.2.1.1 Impression formation through shared music

When people share music, research suggests that their music is communicating more than just musical taste. Vaida et. al (2006) found that people clearly form impressions of someone else's music preferences on the basis of the music this person shares and a study by Rentfrow (2006) reveals that people intuitively link other personality aspects, such as emotional stability, to someone's music preferences.

Why people link music preferences to other personality aspects has not been fully answered in the literature. However, there are three mechanisms people might be aware of and intuitively draw on when linking music preferences to other personality aspects. Firstly, Schwartz and Fouts (2003) have found that people like to listen to music that reflects their attitudes, beliefs or traits (Schwartz & Fouts, 2003). Their study, for instance, shows that extraverted people prefer music that is dominated by singing as they like the sound of human voices and religious people prefer music with lyrics dealing with their religious beliefs (Schwartz & Fouts, 2003). Secondly, people can

control their emotions by means of music (McCaffrey & Loecin, 2002). For instance, people who have tendencies to lose their temper like to listen to relaxed types of music as it helps them to stay calm (Bruner, 1990). Thirdly, people like to people like to broadcast an idea they have about themselves through their music choices (Chamorro-Premuzic & Furnham, 2007). “For instance, individuals who listen to heavy metal music [...] [often try] to convey a ‘tough’ image to others” (Rentfrow & Gosling, 2003, p. 1251).

When people form impressions of others they engage in two cognitive processes - stereotyping and individuating. Stereotyping refers to the process of categorizing a person as a member of a certain social group on the basis of the available information (Fiske & Neuberg, 1990). People stereotype others in the impression formation process for the following reason:

As a person's motivation or ability to process information systematically is diminished, the person may rely to an increasing extent on stereotypes, when available, as a way of simplifying the task of generating a response.
(Bodenhausen, 1990, p. 319)

Rentfrow (2006) shows that people stereotype others on the basis of their shared music taste. For instance, people who share a lot of Heavy Metal music are usually stereotyped as Heavy Metal fans who, according to Fried (2003), are associated with a lot of other traits such as being tough, reckless or disagreeable.

Individuating in the process of impression formation is described as gradually re-categorising, sub-categorising by heavily utilizing an individual's characteristics (Devine, 1989) to form impressions of someone that are “relatively uncontaminated by category-based generalizations” (Fiske & Neuberg, 1990, p. 8). In terms of music sharing what is described as the individuating process means that the impressions people have of others based on music taste and associated character traits change over time as people share more music. Gradually, their unique traits emerge and they are distinguished from others. However, no studies could be found which looked at stereotyping and individuating resulting from impression formation through music sharing in a social environment such as an office workplace.

In an office environment it is important to consider that people might form impressions of each other through the music they share but also through other social interactions. According to Taylor (2000) people form an overall impression of someone by integrating information gathered from different signifiers. Such signifiers can be outward appearance (Guy & Banim, 2000) , body language (Weiss, 1979), facial features (Rhodes, 1988) conversations (Hancock & Dunham, 2001) and shared music (Voida et al., 2006). Each of those signifiers can reveal different personality aspects of someone. Rentfrow (2006) states that, for instance, personality aspects perceived through shared music can be very different than the ones perceived through shared photos and/or face-to-face conversations. The impact of each signifier on the overall impression is determined through the personal value and weight of the information gathered through each signifier for the perceiver (Anderson, 1981). The value refers to how favourable and the weight to how important the information is perceived to be (Anderson, 1981). Information that is high in value, in that it is perceived highly favourable , and/or high in weight , that is, considered by the perceiver to be very important, will have more influence on the perceiver's overall impression of others than information low in value and/or weight (Anderson, 1996). While Anderson's theory has not been applied to music sharing, it is possible to assume that impressions that are formed of someone through the music this person shares are shaped by impressions that are formed through conversations and/or other social interactions with this person and vice versa.

2.2.1.2 Impression management through shared music

A number of studies (Hakansson, Rost, Jacobsson, & Holmquist, 2007; Östergren & Juhlin, 2006; Voida et al., 2006) have shown that people are aware that others form impressions of them through the music they share, and they often intentionally choose music that creates a particular image of themselves.

The “process by which individuals attempt to control the impressions others form of them” is termed impression management (Leary & Kowalski, 1990, p. 36). The degree to which the individual is trying to control these impressions lies between two extremes.

Schlenker (1980) uses the concepts of objective and subjective self-awareness to distinguish those extremes. In situations where people do not seem to worry about the impression others form of them at all, subjective self awareness dominates, in that all attention of the individual is directed at something other than self presentation (Schlenker, 1980). The domination of subjective self awareness in music sharing would mean that individuals only share music that they have not chosen themselves, in order to avoid any self identification with the shared music. In other situations where people might be very conscious and concerned about how their persona is perceived by others, objective self-awareness dominates, in that the individual is totally the object of his/her own thought processes (Schlenker, 1980). In the case of music sharing that would mean that people focus all their attention when they choose music on how this music create an image of them that they intended without any other factors influencing their music choice. In the study of Rentfrow (2003), for instance, the participants faced the following situation. They were given one week to find music that reflected their personality, but they neither met the person who they gave their music to nor were influenced by any other factors when they chose the music to share.

However, most of the time people tend to engage in impression management somewhere in between those extremes. Vaida et. al (2006) found that most of the study's participants varied in their efforts to find music that reflected their intended impression between those two extremes. One of the participants in the study of Vaida et. al (2006) stated that he added a lot of new music to his original library, in order to be considered more favourably by others once he started to share music with his colleagues. Another participant liked to experiment with the music he shared, but was less concerned with what some colleagues thought about him on the basis of the music he shared in the process of adding and deleting music.

In general, people often tend to engage in impression management more or less unconsciously. Without continuously thinking how they are perceived by others, they constantly gather information on how others regard them by scanning their social environment (Metts & Grohskopf, 2003) and even when focusing all their attention on one particular event, they are still able to screen other events that are happening around them on an unconscious level (Robinson, 1998). In relation to music sharing this would mean that people most of the time do not explicitly think about how the music they

share reflects an image of them that they intend to give, but choose music that reflects themselves more or less subconsciously.

Technology for music sharing can sometimes limit the users' control over the music they share and, hence, their ability to form intended identities. Hakansson, Rost, Jacobsson and Holmquist (2007) describe how a music sharing technology called Push! Music often added songs automatically to the users' play lists. Vaida et al. (Vaida et al., 2006) report how participants in their study on the use of the music sharing function of iTunes sometimes also had problems of being in control of their shared libraries. One of the participants in their study, for instance, reported obtaining music for others online which then was automatically added to the play list he shared (Vaida et al., 2006). There is then the question of how people overcome those problems in an environment such as offices where more than one music sharing technology might be used, which has not been answered fully yet.

Many people try to control the impressions others form of them in order to be considered favourably and to build and maintain beneficial relations (Tedeschi, 1981). In situations where people focus on building and maintaining as many favourable relationships with as many different people as possible, individuals may become like a 'chameleon', in that they try to reflect all the different interests of the ones they like to have favourable relationships with in their personality (Bedeian & Day, 2004). However, when people are less concerned with having positive relationships with many different people, impression management efforts are not reflected in a variety of shown interests (Bedeian & Day, 2004). Vaida et al. (2006) as well as Hakansson et. al (2007) observed that some people try to increase the variety of their music collections to reflect a more "flexible" image of themselves, by adding new music to their library. Others, however, liked to share only limited types of music to show their expertise in musical areas (Vaida et al., 2006). However, no studies could be found that draw further links between impression management in music sharing and the purpose of creating favourable social relations.

2.2.2 The impact of perceived similarities in music taste through music sharing on relationships between colleagues

Relationships are developed and maintained through similarities in values, attitudes or experiences (Hardin & Conley, 2001). For a justification of this phenomenon it is helpful to take a closer look at the use of communication in everyday life.

Communication is essential for building and maintaining relationships (Griffin & McClish, 1991; Liebling, 1984; Miller, 2005; Wood, 2000). Miller (2005) states:

It is through communication that our relationships are forged, and it is within the context of relationships that the conversations of our lives – both mundane and profound – are played out. (p. 166)

Communication serves the purpose of exchanging information, but entails common ground between the communication partners to be effective and efficient (Coiera, 2000). Common ground refers to the context, knowledge and beliefs that the conversational participants share which allow them to understand each other (e.g. Greenspan, Goldberg, Weimer, & Basso, 2000; Lin, Harwood, & Bonnesen, 2002). For instance, the use of typical phrases such as ‘that car’, ‘the mess I made’ or ‘what a beautiful experience’ in a conversation would be impossible to understand without common ground. Without common ground time consuming cognitive references to an uncountable number of events would be required. However, by establishing a common ground either prior to the conversation or in the conversation itself, people are able to react to those kind of phrases within seconds as they know what those phrases refer to (Clark, 1992).

People are considered to like to put as little effort as possible in establishing common ground in communication as it requires effort to do so:

It costs time and effort to formulate and reformulate utterances. It costs [...] more to retrieve uncommon than common words, and more to create descriptions for unfamiliar than familiar objects (Clark & Brennan, 1991, p. 142).

Consequently, it is thought that people prefer to communicate with those with whom they already share common knowledge, interests or values and, hence, little effort is needed in establishing common ground (Clark & Brennan, 1991). Considering the importance of communication in relationships, the following appears to be supported: The more people have in common, the more likely they communicate with each other on a regular basis and the more likely they become friends (Johnson & Indvik, 1999; Weinberg & Gould, 2006).

Music, in general, seems to be a commonly shared experience and, as such, becomes a common interest. Music in social situations is often present either in the foreground with people paying their full attention to it or in the background while people pursue other activities (Brown et al., 2001). In such situations people often tend to inform themselves about new music and swap music with each other (Brown & Sellen, 2006). Music sharing among friends seems to be strongly embedded in existing social networks in this form, or as Jackson, Singh, Beekhuyzen and Waycott (2005) put it “sharing music [as a common interest] among friends has always been a core part of friendship” (p. 14).

However, to find an answer to the question as to how music sharing might facilitate relationship development, or, in other words, why some people might become closer to each other through music sharing, it is important to look at how people’s music tastes are revealed through their shared music (Voida et al., 2006). Studies have shown that having similar music tastes is an important unifier of people (e.g. Bourdieu, 1984; Bryson, 1996; Sonnett, 2004). Selfhout, Branje, Bogt and Meeus (2007) show that the likelihood of similar music preferences is much higher between friends than between random acquaintances. Moreover, their study indicates that relationships are more likely to develop between people with similar music preferences than between people with contrary music tastes and that common music preferences have a much greater influence on friendship development than other personal aspects such as gender or educational level. A study by Knoblauch, Vorderer, and Zillmann (1999) reveals similar results, in that high perceived similarities in music preferences are also related to higher aspirations to become close friends. These studies refer to adolescents, who in contrast to most adults are more engaged in music culture since adolescents are in a time of their

life in which “music enables them to define themselves in relation to others, their friends, colleagues, social networks and to the cultures in which they live” (Qualifications and Curriculum Authority, 1999, p. 162). However, these findings can apply to some adults as well. While many adults have a decreased interest in music in general as they use other aspects such as family life or job satisfaction to define themselves (Boller, 2006), people who were always deeply interested in music, such as musicians or others who work in cultural areas such as designers, remain so into their adulthood (Boller, 2006). Hence, while there seems to be no literature on the role of music sharing and music preferences in relationship development among adults, it is possible to assume that at least for adults who are highly interested in music such as musicians and designers music sharing can influence relationship development between colleagues when they perceive the music they share with each other as similar. (See Methodology section for discussion of designers’ involvement with music)

Similarities in music taste not only function as a means to regulate interpersonal relationships between two individuals, but also have an impact on group development. Brown and Sellen (2006) found that for adolescent as well as adult participants similar music taste is an important bond for group development. Adults, in particular, frequently discuss and swap music in groups (Brown & Sellen, 2006). Research by Brown and Volgsten (2006, p. 6) also found that “people not only sort into groups based on their musical tastes but also use musical taste as an important criterion for membership in certain groups”.

Groups formed around certain interests at work such as music taste are called informal groups. Many studies (e.g. Agervold & Mikkelsen, 2004; Vartia, 1996) have found that informal work groups are often considered rather unbeneficial for organisations as they are associated with potential oppositional behaviour of their members towards organisational goals. However, social groups formed around music taste can be considered less harmful for an organisation because informal oppositional works groups are formed on the basis of common dissatisfaction with work conditions or disrespect towards supervisors, (Delbridge, Turnbull, & Wilkinson, 1992; Greenhaus, Parasuraman, & Wormley, 1990), while workplace groups formed around music taste are concerned with leisure activities. According to George and Jones (2005) workers

who are brought together through similar leisure interests help meet employees' needs for social interaction, can be an important source of social support, and can contribute to employees' positive moods at work and satisfaction with their jobs. Hence, we can assume that in a work environment music sharing among people who have similar music tastes benefit participants, although no evidence could be found for this in the literature.

2.2.3 The impact of reciprocity in music sharing on relationships between colleagues

Besides common interest, another aspect which is essential in relationships is reciprocity (Altman, 1973; Grundy, 2005; King, Carlson, & Moran, 1996). Reciprocity refers to the tendency of people "to reward kind actions and punish unkind ones" that have been done to them as a desire to create fairness on which every healthy relationship should rest (Falk & Fischbacher, 2006, p. 295). Reciprocity is an ongoing concern in relationships. A person anticipates being surprised by the one he or she surprised before (Eisenberger, Lynch, Aselage, & Rohdieck, 2004) Someone who gives a gift to someone else expects to be reciprocated with a gift in return (Ruffle, 1999; Ruth, Otnes, & Brunel, 1999), and those who feel that they have not been adequately reciprocated feel frustrated and angry (Guerrero & Burgoon, 1996; Reuben & Van Winden, 2006). Moreover, research has shown that being in someone's debt creates displeasure because of pressure to reciprocate and insecurity about if, when, and how the debt can be paid off (Adloff & Mau, 2006; Ernst & Simon, 2000).

Adequate reciprocity is especially important in workplace relationships as these often "have inequality built into the relationship, particularly when the friendship spans over organisational hierarchical boundaries" (Morrison, 2004, p. 115). In these cases, it is important that reciprocity occurs on the formal level; in other words, the one who is higher up in the organisation should put as much effort in the informal relationship as the one who is lower in the organisational hierarchy. Otherwise, the inequality in the formal relationship can be perceived as having a negative impact on the informal relationship which leads to frustration and anger (Morrison, 2004). While Volda et al.

(2006) did not explore relationships and reciprocity through music sharing further they point out that hierarchical differences impact the music people like to share.

Voida et al. (2006) indicate that in order to find possible answers to the question as to why shared music might influence relationships at work, the concept of reciprocity through the lens of gift giving theory might be useful. According to Mauss (1954), the recipient of a gift receives not only an object but also the association with the giver as a person who creates a social bond with the receiver and an obligation to reciprocate:

What imposes obligation in the [gift] received and exchanged, is the fact that the thing received is not inactive. Even when it has been abandoned by the giver, it still possesses something of him. [...] to make a gift of something to someone is to make a present of some part of oneself [and] to accept something from someone is to accept some part of his spiritual essence, his soul (pp. 11-12).

However, while there is the obligation to return a gift people do not seem to negotiate when or how to return a gift. Adloff (2006) states:

The evolving obligation is not specified in advance and there is only a generalized expectation of reciprocation, which rests on the necessity to trust other persons. Furthermore, the nature of the return cannot be negotiated; it must be left to the discretion of the one who does the returning. (p. 411)

Giving as the first step establishes the social relationship, receiving as the second step means accepting the social bond and reciprocating as the third step is essential to demonstrate social integrity (Mauss, 1954). Hence, music sharing considered through the lens of gift giving theory means that people who share music with others create social bonds with others with the obligation to reciprocate with music. The nature of the reciprocation, in other words when, what kind of music and how many tunes, is not negotiated.

While gift exchange, according to the gift giving theory of Mauss (1954), brings people together through simple obligation cycles of reciprocity, music sharing today also has to be considered in relation to more complex social structures in virtual networks such

as peer-to-peer music sharing applications that allow people to share music via the internet. According to Pearson (2007) cycles of reciprocity may become confused and more complex in virtual networks “as the gifts move through the overlapping rhizomic webs of connection between participants” (p. 6). The complexity of relationships in virtual networks is even further increased through the fact that people often share their material in virtual networks with many people at the same time which has different social outcomes than sharing between only two individuals. Pearson (2007) observes that

by making the gift itself available to all in the [virtual] community, the gifts acts to bond together participants, making the individuals feel connected and linked into something larger than their own immediate social (internodal) connections (p. 6)

As a result of this ‘one-to-many’ sharing process, giving music as a gift is often more focused on the overall well-being of the sharing community than on actually creating friendships between two individuals (McGee & Skågeby, 2004). Reciprocity is then no longer understood in terms of give and take processes between individuals but rather “as a reciprocal giving to and receiving from the community” (Giesler & Pohlmann, 2003, p. 7). People then also give music as a gift for the overall well-being of the community rather than for building relationships with other individuals. Some people give their files for free in a virtual network, in order “to ensure the continued participation of other users” (Pearson, 2007, p. 4). Others share files in virtual communities so that as many people as possible can benefit from the files as much as they have (Ripeanu et al., 2006) and/or because they felt obliged to spread rare material among all members of a network (McGee & Skågeby, 2004).

While sharing via the internet might play a subordinate role when considering music sharing between colleagues at work, the ‘one-to-many’ aspect in music sharing can also be found in offline music sharing between colleagues in a single office environment. Volda et al. (2006) describe in their study on music sharing via the local network between colleagues that people automatically shared their music with all others in the same network and were not able to share different music with different people. Hence,

while Voida et al. (2006) did not further explore gift giving in the context of music sharing between colleagues, it could be assumed that music sharing via ‘one-to-many’ sharing applications might also be predominantly used to connect to a wider work community of people and less for building actual relationships with individual colleagues.

However, music sharing in an office environment such as a design agency differs from sharing music via virtual networks online in two aspects. Firstly, it is important to consider that even while people might share their music in a ‘one-to-many’ approach in an office environment as is was the case in the study of Voida et al. (2006), people usually like to identify the individual who contributed the music. Secondly, it can be assumed that people share music not only in a ‘one-to-many’ approach, but also only with others individually in a one-to-one approach. Madden and Rainie (2005) state that people, despite decreasing opportunities to share music in virtual networks on the internet, still like to share music on an individual level. While in the past people liked to exchange cassettes with their colleagues at work (Jennings, 2005), nowadays individuals copy music from each other’s MP3 players or share music via email or instant messaging (Madden & Rainie, 2005). Consequently, it can be assumed that in an office environment the individual and his/her music are closely linked. In workplace environments these overt connections between individuals and their music make relationships between two individuals through shared music with obligations to reciprocate much more likely than among members of virtual online networks.

If the theory of gift giving can be applied to relationships through music sharing in the workplace as shown above, it is possible to make further assumptions about the nature of reciprocity in relationships of different degrees of intimacy. Tsui, Pearce, Porter, and Tripoli, (1997) state that close relationships are linked to more intensive give and take processes than more casual relationships. Hence, it is possible to assume when relationships around music sharing become closer we might also see more music sharing activities between the individuals involved in the relationships. Moreover, Chung and Hamilton (2001) found that the closer a relationship is, the higher are the expectations to be reciprocated adequately and the higher is the pressure to reciprocate. Consequently, it can be assumed that in closer relationships that are formed around

shared music the expectations on the one side to receive and the pressures on the other side to reciprocate with music that is adequate are higher than in looser relationships.

2.2.4 Relationships of different degrees of intimacy at work through music sharing

From the previous discussion (section 2.2) it is possible to make assumptions about types of relationships with different degrees of intimacy formed around music sharing at work that are related to three types of relationships among colleagues at work as described by Henderson and Argyle (1985). Henderson and Argyle (1985) identify three different relationships between colleagues: work acquaintances, work friends and social friends. The researchers define work acquaintances as those who mainly engage in formal and task orientated social exchange and do not particularly like or dislike each other. Colleagues who are work friends are closer to each other, in that they exchange work-related as well as non-work related information, but do not engage in joint social activities outside the workplace. Finally, when colleagues engage in work as well as non-work related conversations at work, and also meet socially outside of the workplace then they are classified as social friends (Henderson & Argyle, 1985, p. 230)

Based on the previous discussion in sections 2.2.1-2.2.3, it can be assumed that work acquaintances are unlikely to share music with each other in a one-to-one approach. If they do share music with a colleague, they are more likely than work friends or social friends to perceive each other's music tastes as contrary and to be disinclined to talk about their own music preferences.

Work friends are more likely than those who are only 'work acquaintances' to perceive each others' music taste as similar through the music they share. They also are more likely to frequently engage in conversations with each other about shared music than people who are only work acquaintances. However, they might not tend to engage in music activities outside the workplace such as going to a concert together.

Social friends in such relationships are more likely than work acquaintances and work friends to share similar music and often engage in conversations on shared music.

Social friends are also likely to have a relatively high pressure and expectation of reciprocating music adequately. Moreover, social friends are more likely to engage in joint musical activities outside the workplace such as attending concerts.

2.3 Summary

This chapter reviewed the literature that exists in relation to the research objectives of this study (1) to describe how colleagues share music with each other at their workplace, (2) to establish how music sharing influences the way colleagues perceive each other's personality, (3) to verify how people try to influence perceptions others have of them by sharing certain kinds of music (4) to describe how impressions that colleagues form of each other through the music they share impacts their relationships in development and (5) to determine the impact of reciprocity in music sharing on relationships between colleagues.

Only one study could be identified that explored music sharing in the workplace. While this study indicated that people form impressions of others on the basis of the music that they share, it did not further explore the potential influence of music sharing on relationships between colleagues.

However, on the basis of related research it has been shown in this chapter that the influence of music sharing on relationships between colleagues might depend on certain factors. First of all, it appears that music-sharing technology depends on the work environment which then, in turn, influences how people relate to each other. Another factor to consider in the formation of social bonds between individuals as well as among groups in the workplace is the degree of similarity of music taste that colleagues perceive they share. Those who identify similar music tastes through music sharing are more likely to develop a closer relationship. Furthermore, reciprocity in music sharing might play a role in determining the closeness of the social bonds between colleagues, in that the closer people are to each other the stronger is their sense of obligation to reciprocate. From these findings it has been assumed that three different relationships with different degrees of intimacy between colleagues at work in relation to music sharing can be described.

Research is now needed to confirm or disprove the assumptions on how social relationships are influenced through music sharing at work. The present study seeks to address these assumptions. In the next chapter the methods that were used in this study will be discussed.

Chapter 3: Methodology

3.1 Mixed methods approach

This research applied a mixed methods approach in that it employs quantitative as well as qualitative methods. This research is exploratory, but also aims at verification to some extent. It was conducted to answer the question as to how music sharing at work influences social relationships between colleagues. Its objectives were (1) to describe how colleagues share music with each other at their workplace, (2) to establish how music sharing influences the way colleagues perceive each other's personality, (3) to verify how people try to influence perceptions others have of them by sharing certain kinds of music, (4) to describe how impressions that colleagues form of each other through the music they share impacts their relationships in development and (5) to determine the impact of reciprocity in music sharing on relationships between colleagues.

Traditionally, exploratory research applied qualitative methods in order to “build rich descriptions of complex circumstances that are unexplored in the literature” (Marshall & Rossman, 2006, p. 33). Consequently, many exploratory studies of the past solely relied on qualitative methods such as focus groups or interviews (Krueger & Casey, 2008; Vaughn, Schumm, & Sinagub, 1996). While qualitative methods can provide in-depth description of an issue, they often fail to provide clear answers concerning how variables are related (Johnson & Onwuegbuzie, 2004). Consequently, contemporary mixed methods research involving both qualitative and quantitative methods is increasingly applied to studies (Creswell, 2003; Tashakkori & Teddlie, 2003) such as the current one. A major advantage of this approach combining both methods is to

- (a) demonstrate that a particular variable will have a predicted relationship with another variable and (b) answer question about how that predicted (or some other related) relationship actually happens. (Teddlie & Tashakkori, 2003, p. 15)

Symon, McStea and Murphy-Black (2006), for instance, appeared to successfully apply mixed methods for their exploratory study on “midwives’ understandings and perceptions of clinical near misses in maternity care” (p. 125). They conducted a survey as a quantitative method. The quantitative data from the survey helped to predict, for instance, the relationship between workload and perceptions of stress levels among the participants. After the survey interviews were conducted to confirm such relationships and elaborate how they actually work.

The current research applied mixed methods the way Symon, McStea and Murphy-Black (2006) did, in that it also involved a survey that was conducted online and follow-up interviews. Mixed methods in the current research then were aimed at what Erzberger and Kelle (2003) call complementarity, in that one method seeks to complement and elaborate the other method used. For the purposes of this study, qualitative data from the online survey and from the follow-up interviews were meant to complement the quantitative data from the online survey. For example, qualitative data from an open question, which asked why certain software was used, complemented and elaborated quantitative findings from a closed question, which asked which software was used for music sharing. Moreover, using a mixed methods approach in the current study, to a certain extent, also was aimed at triangulation, which is described by Creswell, Fetters, and Ivankova (2004) as searching for convergence by using both methods to study the same phenomenon. In this study, convergence was sought by comparing the quantitative data of the online survey and the qualitative data from the semi-structured interviews.

3.2 The recruitment process of the participants

The target population of this research project were employees of design companies in New Zealand who were working in an environment where music sharing potentially takes place. As music sharing refers to the exchange of music between colleagues at work in this study, only those companies were taken into account which employed more than one person.

Designers were chosen as a target population because of their strong affiliation with music listening and sharing at work (Wohlfarth, 2008). In fact, there seems to be hardly any design company where music does not play a role in the working environment (Shaughnessy, 2008). According to CIMI, a New Jersey-based research and technology assessment firm, 80% of the employees who work in creative industries listen to music more than 20% of their working time (cited in Armour, 2006).

All participants were recruited via convenience sampling which means that as many participants as possible were generated on the basis of availability and willingness (Kemper, Stringfield, & Teddlie, 2003). Convenience sampling is based on a non-random sample which has the disadvantage that the researcher has no control over biases as he cannot predict if the participants represent the target population (Frey, Botan, & Kreps, 2000). However, the big advantage of convenience sampling is that it allows low cost access to contexts where researchers have to rely on volunteers who are willing to give information on issues that posed some risk to the participants (Frey et al., 2000). As there was the danger of reporting potentially illegal music sharing practices, convenience sampling allowed the researcher to rely on organisations and individual employees from the design industry who were willing to take this risk (see section 3.6 for further information on ethical issues). Also, convenience sampling helped to keep the costs and efforts in accordance with the available time and funds. It was not necessary to introduce costly incentives as people participated voluntarily.

Fifty-five companies in the design sector were located throughout New Zealand with between 5 – 20 employees potentially sharing music at work. This number was determined by looking up companies from the Yellow Pages and gathering information about them by searching their websites and related sources. The employers of these companies were invited via e-mail to pass on information sheets to their employees about the online survey. Employees who wished to participate could then access the online survey and complete it anonymously. At the end of the survey period, information sheets about the interviews were distributed to the same employers who again were asked to pass them on to their employees. Employees then contacted the researcher directly regarding participation in interviews. Twenty-nine participants completed the online survey, and seven participated in the follow-up interviews. The online survey revealed that the participants were between 20 and 70 years old with

around the same number of participants indicating to companies those participants worked employed between 5-15 employers and the

3.3 The application of the online survey in this research

An online survey was conducted for this study. After the invitation e-mails were sent out to the employers (for further details see section 3.2), the participants had four weeks to complete the online survey. Online surveys are questionnaires that reside on a website (Evans & Mathur, 2005). Participants access an online survey by clicking on a link to the website or by typing the URL of the website into their browser. Graphic buttons, drop down menus and links lead the participants through the completion process.

An online survey was chosen because of its several advantages. Firstly, it allowed access to geographically wide-spread participants via the internet. Access to geographically dispersed participants was important for this research project in the sense that addressing participants throughout all parts of New Zealand enhanced the chance to gain a higher number of participants who were willing to take the risk of reporting potentially illegal issues involved in this project (see section 3.6). Secondly, online surveys hardly require any resources. The only resource which was needed for the creation and distribution of the online survey was a computer with internet access which was provided by Massey University to the researcher. Thirdly, most online surveys such as the one used for this research allow a direct transmission of data into external software for the purpose of further analysis. This facilitated keeping the process of analysing in time and prevented from manual data input errors in this research project.

Studies identified further advantages of conducting online surveys which benefited this research. While most effective for closed questions, researchers found online surveys also allow for gathering valuable data through open-ended questions (Cobanoglu, Warde, & Moreo, 2001; McDonald & Adam, 2003). Open-ended questions were necessary to gather basic information on the relatively unexplored field of music sharing in the workplace (see Literature Review for the limited number of studies

identified that were specifically focused on music sharing in the workplace). Other studies also showed that the response rate as well as the response speed is relatively high for online surveys (Perkins, 2004). A high response rate was desirable for this research, in order ideally to get a variety of insights into how music was shared. Meanwhile, the high response speed helped to gather data within the limited time frame of this research project.

Disadvantages of online surveys are biases inherent in the data collection process, a problem that potentially impacted on this study. Firstly, the researcher has no control over location and time of the completion process, and, therefore, it is not possible to determine if the target population completed the survey or if someone else did (Evans & Mathur, 2005). Hence, the online survey for this project, in theory, could have been completed by anyone such as relatives or friends of the addressed designers, which might have impacted the result. Secondly, people often employ more than one e-mail address and also change their e-mail addresses more often than their home address (Cobanoglu et al., 2001). Sometimes it was hard to deliver invitation e-mails to the e-mail address which was still in use and also frequently accessed by the potential participant as e-mails bounced back. Nine of the 55 e-mails that were initially sent to the employers bounced back. However, subsequently sending those e-mails via other e-mail addresses of the employers that were indicated on their websites solved this problem.

The online survey for this study was created and published by means of the provider Esurveypro which is hosted on www.esurveyspro.com. Online survey providers such as Esurveypro offer tools that allow the user to build an online survey from predefined templates, question types and other graphical accessories via a conventional Internet browser. The participants also only needed a conventional internet browser for completing the online survey. Esurveypro.com was identified as the best provider for launching the online survey, because unlike others, such as www.surveymonkey.com or www.zoomerang.com, it allows an unlimited number of survey questions and responses to be created without charge.

The online survey contained closed questions as well as open questions. Most of the closed questions were linked to open questions. Depending on the answer to a closed question a participant then was automatically linked to a predefined open question. For example, depending on the answer to the questions whether they predominantly used headphones or speakers for listening to music at work, the participants were automatically referred to one of two open questions: either why they used headphones at work or why they used speakers at work.

3.4 The application of the interviews in this research

In order to elaborate, complement and triangulate the findings of the online survey, seven semi-structured interviews were conducted. All of the participants contacted the researcher via e-mail to arrange the interviews (see section 3.2). Those interviews were held over a timeframe of three weeks. There were two face-to-face interviews and five telephone interviews. Both face-to-face interviews were held in different cafes in the Central Business District of Wellington with the participants after working hours. One of the face-to-face interviews took 50 minutes and the other 40 minutes.

The telephone interviews were conducted with participants outside working hours. The researcher called the participants on their home landline from his office at Massey University at Wellington (New Zealand) and carried out the interviews. Two of the telephone interviews took 30 minutes, one 45 minutes, another 80 minutes and another one 90 minutes. All of the interviews were recorded with a Sony tape recorder and then transcribed for analysis in Microsoft Word.

Both face-to-face and telephone interviews were semi-structured and based on the same open-ended questions that were outlined in an interview guide. The semi-structured nature of the interview ensured that similar types of data were collected from all participants, while, depending on the reactions of the interviewees, the researcher was able to change the formulation of questions, give background information and ask follow up questions to “gather specific details or more complete answers” while interviewing (Frey et al., 2000, p. 101).

In combination with the online survey, semi-structured interviews were suitable for this research. Having the opportunity to adjust the questions to the individual situation of a participant in semi-structured interviews helped the researcher to find out details about music sharing practices that could not be anticipated when planning the online survey or outlining the questions for the interview guide. This facilitated establishing a more complete picture of the relatively unexplored music sharing practices at work (see Literature Review for the limited number of studies identified that were specifically focused on music sharing in the workplace). Moreover, as research showed that participants are willing to express their views in their own terms more completely in semi-structured interviews than in online surveys (Fricker, Galesic, Tourangeau, & Yan, 2005), semi-structured interviews also helped to complete, elaborate and confirm/contradict the data gathered through the online survey.

Semi-structured interviews have certain limitations and disadvantages which potentially influenced this research. Interviewees can digress when answering open questions and focus can be lost as tangents and subtopics are introduced and discussed (Yourell, 2006). Moreover, semi-structured interviews can be very time-consuming (Cooper & Fairburn, 1987). Even short interview guides can result in long interviews as interviewees are different in their willingness and ability to talk about certain issues.

Some studies have suggested that face-to-face interviews have certain advantages over telephone interviews both of which were applied in the current study. Gubrium and Holstein (2001) found that the likelihood of recognizing whether participants have problems understanding questions are uncertain about their responses, or are providing false or misleading information is higher in face-to-face interviews than telephone interviews because of the body language which acts as an indicator of those issues. Moreover, according to Seale (2004) it is also possible to ask more unstructured questions in a face-to-face interview than in telephone interviews as non-verbal body language cues can indicate possible deeper meaning of the questions and information given by the interviewer.

Other studies have identified certain advantages of telephone interviews over face-to-face interviews. The social desirability effect which is the interviewees' desire to overstate or understate issues in order to be viewed as favourable by others is more

likely to appear in face-to-face interviews than in telephone interviews (Frey et al., 2000). Face-to-face interviews are also perceived as less anonymous and private than telephone interviews because of the physical presence of the interviewer (Holbrook, Green, & Krosnick, 2003). Face-to-face interviews then can “make it more difficult to gather valid data about personal, risky, or embarrassing topics” (Frey et al., 2000, p. 219). Conducting telephone interviews instead of face-to-face interviews can also reduce the costs and time for travelling, if the participants are geographically dispersed (Sturges & Hanrahan, 2004).

Still another study has revealed that the quality of data often does not differ between telephone and face-to-face interviews (Fenig, 1993). By using both interview techniques in the current study the information gathering process was enhanced since each approach compensated for the potential short-comings of the other. In addition, using both face-to-face and telephone interviews for this research made it possible to gather a large amount of data from participants located throughout New Zealand at their convenience and in a short period.

3.5 Content of the online survey and interviews

The online survey and the interviews incorporated the following question areas. Firstly, the participants were asked questions about how they technically share and listen to music, in order to describe how colleagues share music with each other at their workplaces. Secondly, the participants were asked questions regarding the connection between their personality and the music they share, to establish how music sharing influences the way colleagues perceive each other’s personality. Thirdly, they were asked questions on how they influence the image they give to others through the selected music they shared, in order to verify how people try to influence the perceptions others have of them by sharing certain kinds of music. Fourthly, the participants were asked questions about music sharing and its influence on spoken communication and relationships between colleagues at work, to identify how the impressions that colleagues form of each other through the music they share impacts their relationships in development. Finally, the participants were asked additional

questions concerning reciprocity in music sharing, in order to determine the impact of mutual music sharing on relationships between colleagues.

3.6 Ethical considerations taken into account for this research

Ethical approval, which is required for any researcher of the University who is involved in research with humans, was sought from the Massey University Human Ethics Committee (MUHEC) for this study. This is necessary in order to conduct the research in accordance with the Code of Ethical Conduct for Research, Teaching and Evaluations involving Human Participants established by Massey University in 2004.

MUHEC did not categorise this study as low risk since it requests information on potentially illegal activities of music sharing and on computer use for non work-related activities which may be in breach of the participants' employment conditions.

Under the copyright act of New Zealand, the owner of a sound recording copyright has the exclusive right to copy the recording and to authorise any other person to do so (New Zealand Government, 1994). When the participants shared music at work they potentially copied music for which they did not have copyright or authorised others to do so and, thereby, rendering themselves liable to prosecution in terms of the Copyright Act 1994. Moreover, when they used company facilities such as the company network, company computers and/or company stereos to share non work-related music they were potentially breaking their employment contracts. As it was anticipated that the participants would in fact be prepared to report on these problematic issues, it was important to protect their anonymity in strict accordance with the Code of Ethical Conduct for Research of Massey University.

In order to protect the participants' anonymity and, therefore to get approval by MUHEC, the following comprehensive process had to be followed:

- The 55 employers (design agencies) that were identified via the Yellow Pages (for further details see section 3.2) were invited via e-mail to pass on information sheets to their employees about the online survey.

- The information sheet contained details about the research and specific conditions for participation in the online survey (see Appendix D).
- By passing this information on to their employees these employers consented to the participation of their employees in accordance with the outlined conditions in the information sheet.
- Employees who wished to participate could then access the online survey and complete it anonymously.
- Participants gave their consent to the conditions of participating in the online survey as outlined in the information sheet by completing and returning it as it included the phrase “Completion and return of the survey implies consent to participate”.
- At the end of the survey period, information sheets about the interviews were distributed to the same employers who again were asked to pass them on to their employees. The information sheet contained details about the research and specific conditions for participation in the interviews (see Appendix F)
- Employees then contacted the researcher directly within two weeks after they completed the online survey regarding participation in interviews. The seven interviews were arranged to accommodate the participants’ schedules and held away from the organisation (for further details see section 3.4) so that participants’ privacy could be maintained.
- Participants gave their consent to the conditions of participating in the interviews as outlined in the information sheet by signing a consent form (see Appendix G)
- Also, once the interviews were transcribed the participants approved their transcript and signed an “Authority for Release of Transcript” form before any extracts were used in this study (see Appendix H).

The information sheets for the online survey and interviews guaranteed the potential participants that they were under no obligation to accept the invitation to participate. If they decided to participate, the information sheets guaranteed them the right to:

- decline to answer any particular question,
- ask for the recorder to be turned off at any time during the interview,
- withdraw from the study whenever they wanted,

- ask any questions about the study at any time during participation,
- provide information on the understanding that their name will not be used unless they give permission to the researcher,
- be given access to a summary of the project findings from the completed research report. Everyone received a summary of the findings of this research via e-mail.

Confidentiality agreements between the researcher and his supervisors were signed to assure that they were the only persons who had access to raw data (see Appendices I and J). Recorded interview tapes, transcriptions and other kinds of data in paper form were kept in the researcher's locked file cabinet at Massey University. Electronic data was stored on the researcher's password-protected online account at the university. After the minimum storage period of five years, the researcher will delete all electronic data and recordings and will make sure that paper based documents are shredded through the university's document destruction service.

3.7 The pilot study: The process to pretest survey and interview questions

The online survey and interviews were trialled before actual data were gathered. It was important to do so in order to reduce potential biases and errors to a minimum and make those methods as effective as possible (Punch, 2005). The participants for the pilot study were three designers. One of them was known to one of the researcher's supervisors as someone who shares music on a regular basis at work. This designer was asked to participate in the pilot study by the supervisor. When he consented to participate he also recommended others who worked with him and shared music. Those were then contacted by the researcher via telephone and two of them agreed to participate in the pilot study.

All of the participants in the pilot study were males between 20 and 50 years old. All of them engaged in a wide spectrum of design work. They designed print as well as online and film media. These seemed to be ideal participants for a pilot study because of their

age difference and the wide spectrum of interest in design which reflected the variety of designers as the anticipated participants for the actual study. The three designers completed the online survey and participated in the interviews. Their feedback was analysed and the online survey as well as interviews were reconsidered and revised.

The feedback revealed that the online survey had to be much shorter than originally planned as the participants perceived it took too much time to complete. Some of the questions referring to subtopics of less importance were removed and others that were intended to gather in-depth information were moved to the interviews. For instance, the question as to how music sharing influences the mood of the participants was deleted because it was perceived as too time-consuming by the pilot study participants and did not seem to be important in relation to this study's research objectives. The question, for instance, "could you characterise two of your colleagues just by knowing which music they share?", however, was moved to the interview, as it allowed the participants to more fully express themselves on an issue that was important to ask to reach the research objectives.

It also became clear that the participants in the pilot study had very different ideas of what music sharing meant as a result of varied experiences in different work places in terms of the technology they used. Therefore, questions in the online survey as well as the interviews had to be adjusted in order to take many different ways of music sharing into account. For instance, initially the participants were meant to choose between sharing via iTunes, a company server or an online server to describe how they technically shared music. However, through the pilot study it became obvious that the way music is shared might be more complex than initially anticipated. Consequently, other questions were added to the survey pertaining to how the research participants shared music in their specific working environment, whether they shared in an open plan or separated office environment and which listening devices they used.

3.8 Analysis of online survey and interview data

For this research a parallel mixed analysis was applied, meaning that quantitative and qualitative data were analysed separately and then interpreted and presented in an

integrated manner (Onwuegbuzie & Teddlie, 2003). This analysing technique is appropriate and widely used when mixed methods are applied for the purpose of complementarity and triangulation (Onwuegbuzie, Slate, Leech, & Collins, 2007), as it was the case in this research. Parallel mixed analysis was applied to this study, in that the answers of closed questions were analysed in quantitative terms and answers to open questions were analysed with qualitative methods. Mixing in terms of complementarity and triangulation then took place when quantitative findings and qualitative findings were interpreted and presented in relation to each other.

The quantitative data within the survey was analysed by means of the analysing tool which the online survey provider esurveyspro.com provides. This tool displayed the frequencies of the results for each question in its absolute values as well as in percentages throughout the research process automatically.

Qualitative techniques were employed with the aid of the freeware software Weft QDA. Weft QDA is a freeware tool which is available for download on <http://www.pressure.to/qda/>. It is software that assists in the process of qualitative analysis of interview transcripts as well as other textual data. Textual documents are imported into Weft QDA. The software then allows text searches as well as Boolean queries across the textual documents. Moreover, Weft QDA allows categorizing passages from the imported textual documents. Firstly, categories as well as subcategories are established. Then passages within the textual documents can be marked relating to those categories and subcategories. When clicking on a category or subcategory, all passages which were marked as related are displayed in one window in which they can be identified in terms of the textual document they are taken from.

The qualitative data analysis followed the grounded theory approach as provided by Corbin and Strauss (1990). The basic idea of this approach is that theory emerges from the data through systematically reading, re-reading and categorising the data (Polit & Beck, 2005). Hence, it concludes general theory by moving from specific cases to broader generalizations.

The grounded theory approach is appropriate when social interactions or experiences are aimed to be described and explained for which no, or very few, theories exist against

which those can be tested (Stern, 1980). It is especially useful when researching unexplored fields (Stern, 1980) such as music sharing in the workplace (see Literature Review for the limited number of studies identified that were specifically focused on music sharing in the workplace) and, therefore, seemed ideal for this research.

The data analysis of the grounded theory approach, proposed by Corbin and Strauss (1990), is a three step coding process. To ensure that a different coder understands the data in relation to the research question in the same way and, to enhance reliability, the researcher's first supervisor reviewed the coding throughout the coding process.

The first step, which is referred to as 'open coding', involves finding key phrases within the qualitative data and assigning them to categories (Corbin & Strauss, 1990). For this study the researcher read the interview transcripts as well as answers to open questions within the online survey data several times and marked key phrases as they related to the research question. Within this process passages emerged which were linked to similar ideas. Those passages then were assigned to categories which captured the essence of what was said in the passages within Weft QDA. For instance, passages from two interviews where two different participants described their colleagues in relation to the music they shared were put under the category 'perceptions of colleagues through music sharing'.

The second step which is referred to as 'axial coding' involves refining the initial list of categories as well as creating subcategories (Corbin & Strauss, 1990). For this research, categories which were only of minor importance in relation to the research question were deleted within Weft QDA. For instance, 'music listening habits outside the workplace' as an initial category was removed as it seemed to be unrelated to this study's research objectives. Other categories which were similar in their ideas were amalgamated as, for instance, the initial categories 'perceived music taste of colleagues' and 'music preferences revealed through music sharing' were both combined under the category 'perceptions of music taste of colleagues through music sharing'. Moreover, where dependencies between data existed within the categories, subcategories were established. For example, the category 'perception of music taste' and 'perception of personality aspects of colleagues' became subcategories of the category 'perceptions of others through music sharing'.

The third and last step which is referred to as 'selective coding' involves filling gaps within categories that are still poorly developed and unifying all categories around a core category or overall idea (Corbin & Strauss, 1990). Poorly developed categories are those that either lack clarifying properties in the assigned data or for which a subcategory contains only a few explanatory concepts (Corbin & Strauss, 1990). In order to fill those gaps, it is important to go back to the original sources of the data (Corbin & Strauss, 1990). In this research where poorly developed categories were present, the researcher read through the interview transcripts as well as the answers to the open-ended questions within the survey again, and tried to uncover data to fill the gaps.

Committing to a core category or an idea which captures the essence of what the research is about is one of the hardest tasks within the analysing process and even very experienced researchers sometimes have problems committing to one or another overall idea of the research (Corbin & Strauss, 1990). Researchers have determined that certain procedures help with finding the overall idea (Goulding, 2002; Miller & Yang, 2007). For this research two procedures in particular were applied. Firstly, the different categories were graphically displayed as suggested by Miller and Yang (2007). For this purpose the mind map software (see Literature Review for the very limited amount of studies on music sharing in the workplace Mindjet was used. This software allowed the researcher to put different categories and subcategories in text boxes which then could be virtually connected with lines and arrows and also commented on. The virtual overview helped to find the central idea which connects all of the established categories. Secondly, as suggested by Goulding (2002) the researcher outlined the main ideas of the established categories in a short summary which helped to find focus within the data.

After quantitative and qualitative analyses were undertaken both types of data were interpreted and integrated. Relations between data gathered through quantitative and qualitative methods were established in terms of complementarity. For example, the number of participants who answered 'yes' to the question whether there is certain music they did not like to share (quantitative) was presented together with the variety of answers to the open question as to why participants did not share certain music at the workplace (qualitative). Moreover, quantitative and qualitative findings from the online

survey and the interviews were compared and checked for their convergence in terms of triangulation.

3.9 Summary and outcomes of applied methods

This research applied mixed methods involving quantitative data and qualitative data gathered through an online survey as well as semi-structured follow-up interviews. The participants of this research were employees from different design agencies throughout New Zealand. All of the survey participants answered all of the survey questions. As anticipated, however, some open questions did lack clarity and depth, which appeared to be compensated for through the rich data of the interviews. These appeared to elaborate and triangulate the findings of the online survey. The quantitative data analysed by means of the built-in analysing tool of the provider Esurveyspro where the survey was hosted together with the qualitative data which was analysed in a grounded theory approach appeared to provide rich insight into how music sharing at work influences social relationships between colleagues. In the next chapter the results as they were revealed through these methods will be further described.

Chapter 4: Results

This chapter presents the findings from the surveys and the interviews as they relate to this thesis's research question: How does music sharing at work influence social relationships between colleagues?

First, the music sharing technologies that were used by the participants will be identified in relation to technological developments and workplace environment. Then this chapter will present the findings on how music sharing influences the way colleagues perceive each other's personality and how people try to influence the perceptions others have of them by sharing certain kinds of music. Next, the findings as they describe how impressions that colleagues form of each other through the music they share influences their relationships in development will be presented. Finally, the findings on the impact of reciprocity in music sharing on relationships between colleagues will be described.

Each survey answer within the results section is labelled with an S and each interview response with an I. The numbers indicate the specific Survey (1-29) or Interview (1-7) from which the quotes are taken. This means that, for instance, a comment marked as I2 refers to a statement taken from the second interview conducted for this research, while S3, for instance, means that a comment is taken from the third survey that was filled out for this research.

One question on the survey requested data about regarding the participants' ages. The age ranges of the 29 participants as indicated in the online survey were as follows:

- Six were between 20 to 29 years
- Eight were between 30 to 39 years
- Seven were between 40 to 49 years
- Five were between 50 to 59 years
- Three were 60 years or older

The participants indicated that in the office environments in which they worked their companies employed between 5 and 20 staff. Ten of the participants worked with between 2 to 4 colleagues, seven worked with 5 to 9 colleagues, nine with 10 to 14 colleagues and three worked with 15 to 19 colleagues.

4.1 Music sharing technologies used by the participants

This section describes the major changes in music sharing technology that the participants experienced over the last 40 years and the technology they used in their workplace environments when this research was conducted in 2008.

One of the interview participants indicated that technology that allowed copying music marked the beginning of music sharing at his workplace:

I2: Copying technology for private use had a major impact on the process of music sharing at our workplace. You know we did not have to buy a copy of music and then give it to a colleague anymore. Through copying technology we can just share the music we already possess and pay only the price for the copy itself.

Another interview participant who indicated that he has been in the design industry for 40 years described the first copying technology and its use for music sharing in his workplace:

I7: The first technology which was used at one of my workplaces for copying and sharing music was the cassette. Audio cassettes were used to copy and share music from one source like another audio cassette or a vinyl recording, but we also shared like mix tapes', you know, which contained music from different sources.

One interviewee went further into detail as to how mix tapes in his office environment were shared:

I3: Mix tapes were often used I guess until like around 8 years ago for sharing music in our workplace. You put more effort into producing them than just making one cassette from one album and that's why we often used them mainly for special occasions such as a colleague's birthday.

The same interviewee also indicated that the audio cassette then was displaced by the recordable audio CD as the dominant technology for sharing music at his workplace:

I3: There were other technologies such as the mini disc but the burnable audio CD was the next big thing for sharing music between colleagues at my workplace and I think it became really widely used for doing so around the year 2000.

The interview participants indicated different reasons for the dominance of the recordable audio CD after the audio cassette. One of them considered the time which was needed to produce a recordable audio CD an important advantage over other copying media:

I5: You can make recordable audio CDs so much faster than cassettes or mini discs. When you copy music on cassette or mini disc you always need to wait the same amount of time as like for listening to the music itself, but copying audio on a recordable CD is so much faster because it is in data form.

Another interview participant found that it was an advantage that recordable audio CDs did not require any specific new players:

I2: They [recordable audio CDs] can be played in a standard CD player and also, like, in the CD-Rom drives of our computers at work. You know, even back in the days most standard CD players could play CD-Rs and there seemed to be no workplace without a CD-player. I think that really helped to make recordable audio CDs so much more successful than other formats such as the mini disc.

The most recent technological development which appeared to change how music was shared at the workplaces of the participants was the MP3 technology. One of the interview participants who were asked which technological development most recently had an impact on how they share music with their colleagues said:

I3: Definitely MP3. You know this music file format makes it possible to compress music files, and reduce their size. They can be now 10 times smaller than the music file format used for burnable audio CDs and that really helps when you share.

Another interview participant went further into detail as to how MP3 facilitates music sharing at work:

I7: You can store up to 800 minutes of music on one burnable data with MP3s but you can only put like 80 minutes on a normal burned audio CD. So you can give much more music to your colleagues on a MP3 CD than on a normal burned audio CD. You can also exchange music through LAN [local area network] and with key drives at work, because the files are so small.

How music was shared between the participants and their colleagues in 2008 was determined through variances in (1) the office environment, (2) the physical data medium by which the music was transferred, (3) the physical data medium from which the music was played, (4) the organisation of the shared music in a central music library or in individual libraries, (5) the software which was used to organise and play the music and (6) the degree to which more than one person could hear the listening device at the same time. The findings related to each of the above variables are described further in the following section.

The office environment of the participants differed, in that 16 (55%) of the survey participants appeared to work in open plan offices and 13 (45%) of them in separated office environments.

Both transfer and playback media could be the same, for instance, when music was shared by means of a central network drive. Then the music files were transferred and played via the central network drive as all colleagues usually in this situation could play them directly from there. However, the physical media for transfer and playing the music were different, if a colleague transferred music files to another colleague's internal hard drive via his/her individual external hard drive. The physical data media that were reportedly used to transfer and/or play the music files included the following: central network drives which were accessible and editable by everyone in the local computer network, individual internal hard drives within each personal computer, individual external hard drives of the colleagues, such as USB sticks and MP3 players that were plugged into a pair of speakers. Of the survey participants who indicated they worked in open plan offices, 9 (56%) reported using only a central network drive, 4 (25 %) appeared to use a central network hard drive as well as MP3 players and 3 (19 %) stated they used all of these media to transfer and/or play the music files in their offices. Among the survey participants who indicated they worked in separated office environments, 8 (62 %) used all of these media; 2 (15 %) used individual internal hard drives, individual external hard drives and MP3 players; and 3 (23 %) used only a central network drive.

The results show that the all of the survey participants organised their shared music via a central music library and/or individual music libraries. A central music library or playlist was stored on one central computer in the office. One of the interview participants said about his central library:

I6: We have this central playlist or library or however you wanna call it and it is on one computer, but everyone can go there and put their music into this central library and that's how we share music.

Individual music libraries were further specified by another interview participant:

I2: You know like we share our individual libraries via iTunes. Only the owner can edit his or her library on their own computers, but you know we can make our music libraries available to others to listen to via this audio streaming of music sharing through iTunes software.

Thirteen (24 %) of the survey participants who worked in an open plan office only used a central music library for organising shared music and 3 (19%) indicated using both a central library and individual libraries. All 13 of the survey participants (100%) working in separated office environments indicated they only used individual libraries.

All of the survey participants (100%) regardless of whether they worked in an open plan office or in a separated office environment used the software iTunes for sharing music. One of the interview participants' responses suggested a possible reason why iTunes was predominantly used:

I 4: Somehow all designers really like to work with Apple computers which by default come with iTunes. I don't know anyone of my designer friends, even like in other agencies, who use PCs.

The types of listening devices used also varied among the respondents. All participants indicated they used one of the following listening devices: headphones, individual speakers for each of the staff and/or one pair of speakers shared by the whole office environment. One of the survey participants used headphones. This participant indicated why he did so:

S8: In my current situation there's no way around using headphones because the background noise is too distracting to the backend developers and people who are writing code that also work in our office.

All other participants used either individual speakers or one pair of speakers for the whole office environment. Two of the interview participants explained why they used speakers for listening to shared music:

I3: Using speakers instead of headphones means that you can still hear the phone ring and converse without always taking something on and off your head.

I5: Headphones somehow cut you out from the outside world in which we have to communicate with colleagues, customers and other people of interest to the work we are doing.

While headphones in general were used infrequently among the participants, there were quantitative differences in how speakers were used. Fifteen survey participants of the sixteen who worked in an open plan office indicated only one pair of speakers was used for music listening for the whole office environment. The reason for using only one pair of speakers appeared to be concern among the participants that different sound sources could conflict:

S4: We just have one pair of speakers and if there were more than one pair, different people would play music at the same time and that would be annoying, because we are in a shared environment where everyone can hear what the others are doing at all times.

All of the survey participants who indicated they worked in separated office environments used individual speakers on their own computers to listen to the shared music. The reason for the predominant use of individual speakers in separated offices was addressed by one of the interview participants:

I7: I am in my own office and the others have their office, so I listen to music individually and the others as well. Sometimes I can hear the music of my colleague when he is really cranking it, but usually I can't hear it and it does not distract me

All 16 survey participants (100%) who worked in open plan offices indicated that they and all their colleagues always listened together to the music that was played on one source. Of the 13 survey participants that worked in separated office environments, three (23 %) indicated that they usually listened to shared music alone without being able to hear the music their colleagues played; eight (62 %) indicated that they usually listened to music alone, but often colleagues came into their offices or they went to their

colleagues' offices to listen to music together; and two (15 %) listened to music alone but could often hear the music from colleagues who were working in other offices.

4.2 Personality perception and impression management through selectivity in music sharing

This section describes how music sharing influenced the way the participants perceived their colleagues' personality and how participants tried to influence perceptions colleagues have of them by sharing certain kinds of music.

All 29 of the survey participants (100%) indicated that music sharing provided some insight into their colleagues' musical tastes. All of the interview participants indicated they had broad musical tastes as well as certain musical preferences they were passionate about, and they indicated that their colleagues could be distinguished by those musical passions, too. Two of the interview participants stated:

I5: I really like to listen to a variety of music, but my real passion is rock'n'roll, especially like the one from the 60s.

I6: There are lots of kinds of music that I like. I listen to techno, rock and alternative, but also to like classical music. [...] the music genres that I really love, however, are dub, hiphop and like this old school drum'n'bass.

The type of music a colleague shared very often was perceived by the participants as this person's musical passion:

I2: It is often quite obvious what the others like. There is just music which seems to be dominant in what they share.

I5: Especially like we had this new guy who was also music sharing, and you kind of directly knew that he likes his hiphop, because he shares so much hiphop.

However, one interview participant also admitted that the perception of the music preferences of others might not only come through the music someone shared:

I3: You know like of course you can see what kind of music your colleagues are really passionate about like by looking at the music they share, but I guess sometimes you also find out through talk with them what their music preferences are.

Music preferences also highlighted other personality aspects of their colleagues. The interview respondents stated that they saw personality aspects, such as work ethics or attitudes towards family life, reflected in the musical parameters of the music someone shared and seemed to be passionate about. For instance, one of the interview participants described her boss as follows:

I4: My boss, she is a very hard out person, she is very driven and she listens to a lot of dance and house music, really bumping sort of music. That is really consistent with her personality.

Another interview participant referred to a colleague in a different way on the basis of the music this colleague was sharing:

I1: One of my colleagues he is very laid back and he's got a lot of sort of Fat Freddy's Drop. It's very mellow and that would describe him to me.

Some participants appeared to differ as to how certain types of music and their specific qualities were connected to personality aspects. For example, while for interview participant I4 (see above) dance music was related to being a driven person, for I3 dance music signified a different character trait:

I3: He really likes dance music and he is a guy who is very engaged, very up-to the minute. He is a really interested person.

The initial perceptions of others' personality seemed to be based on stereotypes, but appeared to become based more on unique and personal characteristics the longer participants knew their colleagues. One of the interview participants explicitly described a new colleague who engaged in music sharing as follows:

I5: There was this new guy in our company and he shared a lot of Metal Music and so I thought in the beginning that he is a real bogan.

Later, her description of this colleague appeared to change:

I5: However, you know the longer he was there the more different kind of stuff he shared and like in the end, also through conversations, it turned out that while he likes a bit of metal from time to time, his real love is guitar jazz and he kind of especially likes this guy called Joe Pass which I personally never had heard of before.

Another interview participant seemed to experience a new colleague in a similar way:

I4: In the beginning I really thought my colleague is sort of a classic intellectual kind of guy, but then the more I kind of got to know him, it turned out that he also likes to listen to bands like Deep Purple and The Doors and he told me it is because those bands have kind of adapted classical elements to a certain extent.

Some participants sometimes seemed to experience a contradiction between the way they perceived their colleagues' personalities on the basis of shared music and the way they perceived personality aspects on the basis of other social interactions. The participants appeared to interpret this phenomenon in two ways. One point of view was that the music someone shared was obviously misleading in terms of this person's personality. For example, one interview participant said about a colleague:

I2: He seems like quite a mild-mannered, quite a family man and then he likes this quite outrageous hip-hop which is inconsistent for me.

Another interview participant, however, interpreted such an initial impression in a different way:

I3: I guess sometimes we might find that someone shares music and we think 'hey that music does not really reflect this person', but I guess music is so much part of us that it actually enables us to find out things we wouldn't maybe share with each other otherwise. So then it might point at something like a more complex personality than a real contradiction.

As the participants perceived their colleagues' personalities through their shared music, they also seemed to assume that the music they shared signalled their own personality. Some participants seemed to be very concerned about how the music they shared reflected themselves as the following interview participant explained:

I4: I often go over the music I share and think like what does that music say about me? I really like to give a picture with my music to others which somehow represents me in a great way you know

Other interview participants, however, did not seem to care how others perceive them through the music they share. One participant gave the following answer to whether he likes to choose certain music in order to be perceived by his colleagues in a certain way:

I2: No, not at all. I share everything with everyone. And sometime it might be very weird music, but who cares, either it gets played or not and my colleagues know me, they know where I am coming from.

While those extremes existed it seemed as if most of the participants somehow engaged in impression management in more moderate levels. A majority of the survey participants (85 %) indicated that it is of some importance that their colleagues can relate to the music they share. Most of the interview participants (5 or 72%) stated that they liked when colleagues could relate to their music and appreciate it but they did not

continuously think about how they were perceived. Two interview participants explained how they felt about others' perceptions of their music taste:

I3: I don't select every piece of music that I share just because it somehow reflects me in a certain way, but, you know, I somewhat like when people appreciate my music and when they also think that I am kind of cool because of the music I share.

I6: I somewhat like it when people kind of come to me and say "yeah man that's pretty cool music you have there" and I guess that might even somehow influence my choice of music, but you know it is not always on my mind how others think about me when I share some new music.

There seemed to be two different ways participants liked to be perceived by their colleagues. Four of the interview participants reported sharing a large variety of music types, while also having certain music preferences. Two of them stated:

I2: I really like sort of rock'n'roll music from the 70s, but I share lots of different kinds of music, because I somewhat like that there is something for everyone and then I usually add some pieces here and there from different genres.

I3: I really like to share a lot of different kinds of music so that everyone kind of can find something interesting, although there is still some music I am really passionate about.

The other three of the interview participants, however, had the tendency to present themselves as experts in certain kinds of music genres. Their comments on this matter were similar to the following:

I1: I really think that I know a lot about drum'n'bass and that is my real passion, so I also only share this kind of music and I sometimes even reduce my shared music because there is some drum'n'bass which I don't want to share that is not

really cool. I really like when the others come to me because they know that I know a lot of stuff especially about drum 'n' bass.

Sometimes it seemed to be complicated for some participants to select music that gave their intended impression to other colleagues as outside factors influenced their shared playlists. Two of the survey participants that were in such a situation explained:

S23: I got some teenage kids and they sometimes visit me in my office and then contribute some of their music to my library, even if I might not really like it. I let them do this, because sometimes they also bring very good music. However, if it is too embarrassing I usually tell my colleagues that it is not my music.

S3: I sometimes get music from the iTunes shop for others. Last week, for example, I got some music for my mum's birthday. It was really cheesy music which also ended up in my shared library, so I just had to tell my colleagues that this music is not my taste.

4.3 The impact of colleagues' impressions formed through shared music on relationships in development

4.3.1 The influence of impressions formed through music sharing on conversations between colleagues

This section describes the influence of the impressions that were formed through music sharing on conversations and relationships between colleagues.

Twenty-eight (97%) of the survey participants stated that music sharing helped to build relationships with colleagues. Building relationships was indicated as being especially important for new staff members who were not familiar with their new colleagues. Two

of the survey participants described how these newcomers, more often than already established colleagues, used shared music as a starting point to get to know their colleagues:

S3: Somebody who is new to the office then obviously asks more about the music you share to get to know others and build relationships.

S7: I mean the new colleagues they ask more questions about the music you share in general. I guess that's natural because they want to build relationships.

All 29 of the survey participants (100 %) found that music sharing helped to initiate conversations with colleagues at work. Two interview participants stated that the way they perceived their colleagues through music sharing helped to determine how to talk to them:

I2: Songs that we share somehow create a natural talking point and, music sharing helps to identify each colleague's musical taste, and you know that somehow shows you who to talk to about what kinds of music.

I7: Music sharing helped me to become more familiar with my colleagues' musical interest which is then something you can talk about. You just realise who you can go to when you want to talk about a certain type of music after a while.

Two survey participants described how new colleagues who engaged in music sharing often used impressions formed through music sharing as starting points for conversations:

S7: There is a new colleague and he really seemed to observe what the others share, and then often starts conversations by referring to the impressions he had of us through the music we share.

S10: I had this new colleague and he shared music and often he came around to talk about my music and other stuff with me.

Music the participants were listening to communally with their colleagues was more likely to become a talking point than shared music which existed in a shared playlist but was mainly consumed individually. One of the participants who listened to shared music with other colleagues as well as sometimes alone in his own office, for instance, stated:

S2: I think conversations more often come up when we listen together to music because that has such an immediate impact on the people in the environment. It is a direct shared experience for all listeners.

New music which was added to a shared playlist at work, but not necessarily consumed communally, was often verbally promoted by the colleague who contributed it. This interested others to listen to the music and then could trigger conversations:

I6: When someone puts new music into his shared iTunes [music library], you know, especially when we are not listening to the stuff all together, then this colleague will usually let you know and that can then initiate conversations between colleagues.

Anonymously shared music files through the local computer network rarely appeared to function as a trigger for conversations:

I6: Somebody will always let you know what's happening and then you start talking rather than you sort of looking through some files and then kind of discovering that there's something in there. That doesn't generally happen.

I3: Either it is very obvious where the music is coming from, you know like when someone plays some music we haven't heard before from his own computer. Otherwise, you kind of always let others know if you put some music on the central hard drive, because they are just more likely to listen to the music

then and talk about it. No one just adds something without saying anything. You never really have to ask where the music is coming from.

4.3.2 Impact of perceived similarities in music preferences on relationships between colleagues

How similarly colleagues perceived each other in regard to their musical passions seemed to influence the intensity of conversations about shared music as well as the intimacy of their relationships. Twenty-eight (97%) of the survey participants strongly agreed with the statement ‘the more similar colleagues perceive each other in their musical passions; the more likely they have in-depth conversations on shared music and come closer to each other’. The results from the interviews seem to confirm this impression:

I3: The more I have in common with a colleague in terms of the music we share the deeper are our conversations on shared music and there is this guy and we became very good friends over the last couple of years and I think that was mainly at least in the beginning because we really like to share the same music.

I5: Of course I can somehow better relate to those who share the same kind of music and also like to talk to them more than to others who share different music. My friends at work often seem to have similar music tastes as I have.

In brief conversations that did not require the conversation partners to have similar music taste, colleagues simply expressed likes and dislikes about shared music and briefly discussed shared music in respect to colleagues’ working activities and the working environment:

S6: We briefly talk about if they particularly like it or if they don’t particularly like it and you can talk like this with everyone, you don’t need to share similar music interests with them.

I4: We have conversations around look we need to keep the volume down, because people gotta talk on the phone or gonna have a meeting, but you know it doesn't matter what kind of music you like in this conversation.

Intense conversations appeared when colleagues tried to find out more about each others' music and also used shared music as a starting point for conversations on other personal issues. Such conversations were often triggered by a colleague's questions about someone else's music:

I5: You know when you are interested in someone else's music because you kind of think that this person might like the same kind of music as you do you usually start a conversation by asking "Who is this you're playing. I don't think I have heard this album." Like saying "Is this The Cure?" And then you can start to talk about all sorts of things.

Giving background information in response to such questions and exchanging knowledge about shared music appeared to be enjoyed by the participants. Sometimes colleagues even challenged each other's knowledge about shared music:

I2: You sometimes kind of play the knowledge game with people and challenge each other in conversations about music.

The way the participants talked to their colleagues about shared music seemed to be connected to the intimacy in their relationships with their colleagues. There appeared to be colleagues who hardly ever really talked about music with each other and only did so in relation to the work they were doing. Two interview participants described this form of relationship at work:

I5: It is like with those guys I don't really have common taste in the music we share and I also don't consider myself as a friend to them. We mostly just briefly talk about music if there is some music which needs to fit into a design concept.

I3: I mean there are some colleagues who share quite different music and I somewhat also don't really talk about music with them except if it has something to do with music and the work we are doing. I never really do something outside the workplace with those either, because we are not really close to each other.

Another, more intimate, form of relationship between colleagues was indicated in the following statement:

I2: We can sometimes talk for days about a music topic when one of us brought some new music to work, you know we are passionate about the same kind of music, but somehow we have a very different lifestyle and never really do much outside the workplace together.

Moreover, a third type of relationship between colleagues, which was characterised by even more intimacy, seemed to exist. Two of the interview participants explicitly described how music sharing helped to establish friendships with colleagues:

I1: We weren't friends before when we began working together. Quite quickly we realised that we were both interested in similar types of music through the music we were sharing and quite quickly we started to talk about the music and then about everything else and so that helped to develop our friendship and sustain it a long way.

I3: We came together through the music we kind of shared. You know there was just so much music we had in common and over the years I think music became a real cornerstone of our friendship. I mean it is just so great because we can visit concerts together or often also listen to music together outside the workplace.

4.3.3 Social groups formed by colleagues with similar shared music taste

This section describes the formation of music taste groups in the workplace and their effects on the workers.

Similar music taste also seemed to bring groups of colleagues together. Two of the survey participants described how they and their colleagues formed groups around music tastes:

S14: There are definitely some subgroups around the sort of music that you like even though all of us have pretty broad taste. People that share the same kind of music also come together more often to exchange information about the music they are passionate about.

S17: There are a couple of people in our office who pretty much share the same music and they also just come together like in a lunch break to talk about their music.

One interview participant also indicated that members of a music taste group sometimes verbally distinguished themselves from other colleagues who had a different music taste:

I5: We refer sometimes to their music as bloody pots and pans music, you know talking about techno, and they call our music old music like referring to our old rock'n'roll.

Another interview participant had similar experiences at his workplace, but also added that this form of addressing another groups' music taste was not meant to discriminate against others:

I6: From time to time we joke about the music of them, because you know they always stick together and talk about this really old rock'n'roll, but I guess that is

quite normal and it is not like we discriminate against them. After all, you know, it is just about music, something everyone likes, but music never really becomes an issue for conflict. Honestly, sometimes I also like to listen to their kind of old Rock'n'Roll.

For the participants belonging to a social subgroup meant that musical passions could be shared with like-minded colleagues in a group. Different colleagues shared different music, perspectives and information which enhanced the variety and made sharing more interesting than sharing between only two individuals:

I6: I mean back in the days there were only two of us who had a passion for dub in the office, but now there are four of us who share the love for this sort of music and that somehow really enriched the sharing, because of the different dub stuff everyone owns, talks about and shares.

I7: I think it is great that we have this little group at work where like everyone kind of has the similar music interests and we also share very much the same music, but you know we still have slightly different views on the music which makes it very interesting for all of us.

Having others who shared the same musical passions also gave the participants the feeling of being supported in their interests and of belonging to a larger idea which in turn made them feel confident about the music they shared. One of the interview participants stated:

I3: Since we have these new guys at work who kind of like the same music as I do, I feel like that my music is much more appreciated and since then I also feel more confident to bring music to work and share it with colleagues and I also like to talk about it more often.

Another interview participant felt that the music he shared was more prominent in the workplace since he belonged to a group of colleagues that supported his music:

I2: I definitely think that it is a real push for my music when there are a lot of people who kind of share the same interest in it. Like you know it is a bit like that the music is actually more likely to be played and shared in the workplace, the more of the colleagues kind of support the same music in our workplace.

4.4 The influence of reciprocity in music sharing on relationships between colleagues

This section deals with the participants' perception of reciprocity in music sharing as an indicator for relationships of different intimacy between colleagues.

Twenty-eight of the survey participants (97%) considered shared music as a gift. Two of the interview participants explained this perspective:

I3: Sharing music is like receiving a gift you know, it is something special but you don't really have to pay for it. [...] However, you also have to provide some music to the others, [...] otherwise it somehow doesn't work, if there are only a couple of guys who just provide their stuff while the others just take.

I4: Yeah I really enjoy music sharing, because you know it is like always having little gifts. It does not cost you anything to share music. [...] somehow when this colleague brings some new music to work I also want to bring some new music he likes.

As the two quotations above indicate, many participants considered receiving music as a gift to be linked to obligations of reciprocating shared music. The form of reciprocation was different depending on how music was shared and how close the colleagues were to each other as explained in the following:

I7: With my friend at work we share music with each other often with a portable HDD or we sent each other MP3s in emails and it is like giving each other a present. I also share music with others in the office, but you know that is more in a communal sense, I give my music more in the sense like making it available to

all of them, but it is not the same. I feel that I have to give something back to my friend, because we are so close, but in the communal thing it is more like participating because you just wanna be part of this kind of community and keep it running.

I3: I more often share like with a key-drive or something music with my colleague who is a good friend and we just swap files with each other, but you know like with the other guys that I am not that close to, we mostly share the music via this central network drive we have, you know, where everyone can kind of contributes music. I just put some music on this hard drive to just let the others listen to my sort of stuff. [...] With my friend it is really that kind of ‘give some music because he gave me some music’-thing.

One of the interview participants also said that he put greater effort into finding music which represents and pleases the receiver when he shared music with a colleague or friend with whom he already had close social bonds:

I4: When I share music with my friend at work I always try to find something new and cool, I don't put so much effort in it when I know it will be consumed by random colleagues, but I also kind of expect more to get something back from my friend because of the effort.

In closer relationships, when music was shared between only two individuals and not in the sense that one colleague made his/her music accessible to many at the same time, there had to be trust that colleagues would reciprocate with music that met the participants' expectations. Three of the interview participants emphasized this issue:

I2: I guess we just have to trust each other in terms of the music we might get back. We have to trust that they find music which is of interest to each other. This is not so much with others, but with my friend, when I swap music with a portable hard drive or something, it plays a major role.

I5: You know because it is like a gift, and my friend I guess trusts me that I come up with some good music for him as well, which is not so much with the

others, you know because I just put my stuff in my iTunes and they can take whatever they like from my shared playlist.

I1: My friend at work he knows much more about the music I like than other colleagues, so I kind of trust him to share music with me. But you know that's not so much important with the others, because everyone can see each other's playlist anyway.

However, while the obligation to reciprocate seemed to play a role in music sharing, when and to what extent music had to be reciprocated appeared not to be negotiated. This could only be decided by the colleague who gave music in return:

I6: When I share new music with him I never go, like, but then tomorrow you have to bring me one new album as well. It is more like a general expectation which everyone seems to have but no one really talks about.

4.5 Summary

The results have shown that music sharing appears to influence relationships between colleagues in the workplace. The participants perceived the personality of their colleagues through the music they shared. They appeared to determine the music taste of their colleagues on the basis of the music they shared and then associated other personality aspects with their music taste. The participants also to a certain extent tried to influence the impressions they gave to their colleagues by selecting certain kinds of music. The impressions their colleagues formed appeared to impact the conversations and relationships the participants developed. While music sharing in general served as an initiator for conversations between colleagues, as shared songs appeared to be a natural 'talking point', when the participants perceived the music they shared to be similar to the music their colleagues shared, it seemed more likely that they would talk more often with each other about music and also become friends. Reciprocity in music sharing appeared to be linked to how close the colleagues were to each other. Colleagues that were only loosely or casually connected appeared to share music only in the sense that they made their music available by contributing to the pool of music

many colleagues had access to. However, in close friendships the participants appeared to not only engage in this form of music sharing, but also in one-to-one sharing in the sense that they would exchange files only with a specific colleague to whom they were close. Also, in close friendships participants appeared to be more often concerned about the problem of reciprocation, that is, exchanging equivalent music. In the next chapter the significance of these findings will be discussed in relation to the existing literature.

Chapter 5: Discussion

The aim of this study was to find out how music sharing at work influences social relationships between colleagues. In order to answer this question the study investigated the research objectives (1) to describe how colleagues share music with each other at their workplace, (2) to establish how music sharing influences the way colleagues perceive each other's personality, (3) to verify how people try to influence perceptions others have of them by sharing certain kinds of music (4) to describe how impressions that colleagues form of each other through the music they share impact their relationships in development and (5) to determine the impact of reciprocity in music sharing on relationships between colleagues. This chapter discusses the findings of this study as described in the previous chapter in relation to these research objectives.

The first section of this chapter will discuss the various music-sharing technologies and their relation to the participants' workplace conditions. This will be followed by an analysis of how music sharing influenced the participants' perceptions of their colleagues. Then this chapter will examine how these perceptions influenced their conversations and relationships. The next section will consider the participants' expectations regarding reciprocity in music sharing and how the mutual exchange of music can serve as an indicator for relationships of different intimacy. Finally, the chapter will propose three types of workplace relationships with different degrees of intimacy relations on the basis of the findings of this study.

5.1 Music sharing technology used by the participants

Technology appeared to impact the way music was shared between the participants and their colleagues. Some of the participants were able to describe how music sharing developed over the last 40 years in their workplaces. The first technology two participants described using for music sharing was the audio cassette. They appeared to share whole albums with others via audio cassettes, but also shared so-called 'mix tapes'. Mix tapes were compilations of music copied from different sources and were often given for special occasions as they required effort to produce. The next copying

technology which displaced the audio cassette, as it made it faster to copy music, was the recordable audio CD according to three participants. They stated that these could be played with standard CD players as well as via the CD-Rom drives which made it more successful than other media like the mini disc. Finally, two of the participants described how the MP3 technology significantly changed the way they shared music at their offices as it allowed them to use the local computer network to exchange music as well as MP3 CDs with a capacity of up to 800 different songs.

While these findings seemed to be unique for music sharing especially in the workplace, the technological developments the participants indicated have been shown to be important milestones in the history of music sharing in other studies. Lubar (1993a), for instance, describes the audio cassette, introduced by Phillips in 1963, as the beginning of music sharing and Bannon, Wagner, Gutwin, Harper and Schmidt (2007) make the distinction between mix tapes and tapes copied from one audio source that were used for sharing. Boorstin (2004) describes how the recordable audio CD had become widely used for sharing music by the mid 90s as CD-burners became affordable and audio cassettes seemed to become displaced. Moreover, he also indicates that MP3 technology marked the last significant innovation in terms of music sharing technologies, which in turn facilitated sharing via the internet and via local area networks.

MP3 technology also seemed to influence the way the participants described the sharing technologies they used at the time of the survey in 2008. All technologies used for sharing music seemed to involve the exchange of MP3 files. While everyone used the software iTunes for sharing as it by default comes with the Apple computers that the design company employees preferred to work on, the majority of the participants used different other technologies in combination with iTunes to share music in their workplace. Music was shared, for instance, via a central network drive everyone in the office had access to and also via portable hard drives when music was exchanged between only two individuals. Some participants also seemed to use many of these technologies more or less at the same time. For instance, they might share their music by providing individual libraries via the iTunes sharing function, using a central library stored on one computer to which many colleagues contributed their music and exchanging music files via individual MP3 players or portable hard drive. Up to now, several researchers have studied the use of music sharing technology by introducing one

technology and then observing the social practices around its use (Brown & Sellen, 2006; Håkansson, Rost, & Holmquist, 2007; Vaida et al., 2006). However, the findings of this study suggest that people that have the choice tend to use the technology which seems to be most convenient for them at a particular time.

However, while most of the participants appeared to use a variety of technologies, there seemed to be tendencies in the listening devices used by the participants. All except one survey participants preferred speakers instead of headphones to listen to shared music because headphones limited their ability to communicate with others. This is consistent with the literature which shows that headphones are often used by people who work on their own, but come off once people need to communicate with others (DeNora, 2003). The participant who listened to shared music via headphones stated that he needed to wear headphones in his workplace as there are colleague who cannot concentrate on their work with music played in the background. This argument seems to be consistent with the findings in the literature that reveal that many people get distracted by music, especially when doing work which requires mental concentration (Benstein, Kennedy, & Wagner, 2000; Furnham & Bradley, 1997; Furnham & Strbac, 2002).

The technology also seemed to differ depending on the work environment of the participants. In an open plan office the majority of the participants usually listened to music via a central pair of speakers while most of the participants working in separated office spaces listened individually via their own computer speakers. The argument of the participants was that in open plan offices many different sound sources would be too distracting; while at the same time headphones appeared to be avoided because they limited communication. The ones who were working in separated office environment, however, did not seem to get distracted by other sound sources as they most of the time were only able to hear their own speakers that were installed at their computers. This finding is unique to this study. While studies have tested personal stereos' influence on workers' office environments in general (Furnham & Bradley, 1997; Haake, 2006; Oldham, 1995), there appears to be no study on differences between separated and open plan office environments in regard to the devices used for listening to shared music.

5.2 Perceptions of people through music sharing and how those were influenced through selectivity in music

5.2.1 How music sharing influences the way people perceive each other

This study shows that most of the participants perceived their colleagues' personalities through the music they shared. The process of perceiving a person on the basis of the available information about this person is called impression formation (Hogg & Vaughan, 2007), as discussed in the literature review. All of the survey participants appeared to perceive the music taste of their colleagues through the music their colleagues shared. All of the interview participants stated that they had a relatively broad music taste and also thought that their colleagues listened to a broad range of music. However, there were also kinds of music they were more passionate about than other kinds and they had the impression that their colleagues also had certain music preferences. Three of the participants indicated that their colleagues shared some kinds of music more often than other kinds, which they then perceived as their colleagues' musical passions or preferences. Also, one of the participants added that certain music passions sometimes were revealed through other social interactions such as conversations. While other studies also reveal that people perceive the music taste of a person through the music this person shares (Hakansson et al., 2007; 2006), this study is unique in the finding that the perceptions of music taste also appeared to be determined through other social interactions in combination with music sharing.

The current study also shows that most of the participants formed impressions of other personality aspects of their colleagues on the basis of their music choices. One participant, for instance, described a colleague as "driven" due to the fast-paced rhythm of the dance music this colleague was listening to. This finding is consistent with the outcomes of the study of Rentfrow (2006), who found that people intuitively associate personality aspects with certain kinds of shared music.

Impression formation through the cognitive processes of stereotyping and individuating, as described by Fiske and Neuberg (1990), was reflected in the way some participants

perceived their colleagues through music sharing. Two of the interview participants reported that they stereotyped new colleagues on the basis of their shared music by categorizing them as members of certain social groups. However, in the process of getting to know their new colleagues the impressions these participants had of their colleagues changed and were formed more on the basis of unique personal characteristics such as their colleagues' specific interest in certain kinds of artists. This is consistent with the findings of Fiske and Neuberg (1990) who state that in the process of individuating, people utilize an individual's personal characteristics for forming their impressions of others as soon as more personal information about a person becomes available.

The impressions that were formed through music sharing and other social interactions such as conversations seemed to be cognitively processed as suggested by Anderson (1996). The basic assumption of Anderson's research was that all available items of information from different sources about a person are integrated into one overall impression (Anderson, 1996). How much each item of information shapes the overall impression then depends on its subjective "value" and its "weight" (Anderson, 1996, p. 58). The value refers to how favourably an item of information is perceived and the weight as to how important an item of information is considered in regard to existing values and attitudes of the perceiver (Anderson, 1996).

Anderson's approach could provide some insights into why participants interpreted the differences between the impressions formed through music sharing and impressions formed through other social interactions sometimes as a contradiction between shared music and 'reality' and sometimes as an indication of a more complex personality. Then, the participant who had the impression that his colleague is a 'family man' (which he might have found out in a conversation) and considered the hiphop music this colleague was sharing as a contradiction to this image might have also valued and/or weighted those impressions differently. The participant might have considered the information that his colleague is family orientated as more favourable than the image of the typical hiphop musician that, according to Rutherford (2001, p. 13), is often associated with sexism and violence. The participants also might have found the information that his colleague is a family orientated person more important in regard to his own values, as he himself may be family orientated and finds it important to be so in

life. Consequently, because of his subjective value and weight judgements, this participant perceived it as a contradiction that his colleague listens to hiphop but seems to be family orientated in reality. When another participant, however, described that such initial contradictions reflect a more complex personality of another colleague information revealed through shared music and information revealed through other social interactions might have been more similar in subjective value and weight judgements.

The outcomes of Anderson's studies (1996) also might shed some light on the finding of this study that participants differed in how they relate personality aspects to certain music preferences as he also states that the perceived value and weight of one item of information in the overall impression is influenced by the perception of other items of information. Hence, it can be assumed that non-music sharing experiences contributed to the impressions that were formed through shared music and vice versa. Then this theory offers a possible explanation as to why, based on the dance music that was shared, one participant described a colleague as being driven and another one referred to a different colleague as always being up-to-date, based on the same music. The participant's perception of his colleague as a driven person on the basis of the dance music might have been shaped through the experience of seeing this colleague being 'driven' in everyday work tasks. The other participant, in contrast, might have perceived his colleague as always being up-to-date as he experienced him in conversations as someone who always knew what was going on which he then connected to the impression his colleague gave through the dance music he shared.

5.2.2 How people try to influence perceptions others have of them by sharing certain kinds of music

The process by which people try to influence perceptions others have of them is termed impression management (Goffinan, 1967; Jones & Pittman, 1982). One of the participants seemed to be very concerned about how he was perceived by others and selected his music very carefully, while another one did not seem to care about how his shared music reflected his persona. However, most of the participants tended to engage in moderate levels of impression management somewhere between those extremes. This

means, while they did not think all the time about how the music they shared reflected who they were, they were often very interested in finding out what others thought about their music and appreciated positive feedback by others.

Voida et al. (2006) also found that people differ in the efforts they put into selecting music that reflects their intended image, but the researchers did not indicate that people in music sharing usually tended to engage in moderate levels of impression management. However, studies have shown that people in most social situations of everyday life tend to moderately manage the impressions others form of them (Mann, 2004; Vohs, Baumeister, & Ciarocco, 2005). This means that they tend to be very concerned in some situations about their given impressions, such as in a job interview, but most of the time without consciously thinking about how they are perceived by others, “appear to process others' impression relevant reactions at a pre-attentive or non-conscious level” (Leary & Kowalski, 1990, p. 36).

This study identified two different strategies of impression management through music sharing. Around half of the participants liked to be perceived as experts in specific music fields, while the other half liked to be associated with a variety of music (referred to as ‘all-rounders’ in the following discussion). Experts appeared to enjoy sharing a limited range of music types, while all-rounders shared a lot of different kinds of music. This is consistent with the findings of Voida et al. (2006) as well as Hakansson et al. (2007) who found that there are people who like to be perceived as experts while others like to present a more balanced picture of themselves by sharing a variety of music.

While keeping in mind that most of the participants engaged in moderate levels of impression management (see above), it can be assumed that experts and all-rounders at least to a certain extent intended to impress different audiences. According to Tice et al. (1995), people like to adjust the impression they give to the specific audience they are trying to impress in order to optimise the possibility of having favourable relationships with their audience. Hence, there seems to be some evidence that people who share various kinds of music intend to impress people that have different tastes, while others who like to share very specific music are more concerned about impressing specific people.

At first, the fact that the participants in this study indicated that they were really passionate about specific kinds of music and also perceived their colleagues to be similar in this matter (see section 5.2.1) appears to contradict the idea that all-rounders like to present themselves as people with a broad music taste. Research suggests that in such a situation the impression someone intends to give contradicts the impressions people form of this person (Higgins, 1987; Tice & Wallace, 2003). However, it is important to understand that the music preferences of a participant did not seem to be the same as the music taste. While the participants in general seemed to be very interested in music and liked to listen to all kinds of music, they also had music preferences which encompassed only the music they were extremely passionate about. Consequently, even all-rounders were perceived as people who have certain music they especially liked. Then all-rounders might have shared music people with different music preferences can relate to and liked to consume, but they also revealed certain music preferences by sharing some kinds of music more often than others and/or showing special interest in certain kinds of music through other social interactions with their colleagues. Bedeian and Day (2004) found that some people become like “chameleons” (p. 689) when they manage first impressions, in that they change quickly in different situations depending on their audience, while people who do not demonstrate this skill appear to prefer to stay true to themselves. Hence, those who liked to share different kinds of music as a means to give a good impression to a variety of colleagues might have revealed their true musical passions as their colleagues got to know them better.

Two interview participants also indicated that sometimes certain circumstances prevented them from having control over the music they shared and thereby limited their ability to control the impression they gave to others. One of them described how he had bought music online for his mother’s birthday which then was automatically added to his shared playlist, while the other one described how sometimes his children added some music to his shared playlist when they came to visit him at work. Then, in order not to be considered strange, these two participants told their colleagues that this kind of music was not their choice. This finding was consistent with the study of Voida et al. (2006) who found that people liked to indicate when some of the music they were sharing was not what they had chosen, in order to avoid confusing their colleagues.

5.2.3 Influence of music sharing technology on how people perceive each other through music sharing

In this study, technology influenced the way people perceived each other through music sharing only in that it determined how the participants found out who had contributed music.

In general the participants stated that they usually knew who contributed certain music. Often, it was most obvious when colleagues played music that was unknown to the others in the office from their personal computer or gave music to others on a portable hard drive in person. However, in other situations when the participants shared music anonymously, for instance, by copying their music onto a central network hard drive everyone had access to in the office, other social interactions were required to determine who had contributed the music. In such situations, the participants indicated that they and their colleagues usually verbally announced that they contributed new music. Only very rarely did the participants have to ask others where certain music was coming from. This finding is consistent with the study of Håkansson, Rost and Holmquist (2007) who found that people who used a music sharing application that only allowed music to be shared anonymously usually announced they had provided music which made asking from where the music came unnecessary.

5.3 The impact of impressions formed through music sharing on relationship development

5.3.1 Impressions formed through music sharing as an initiator for conversations between colleagues

How the participants and their colleagues perceived each other through the music they shared impacted the way they engaged in conversations with each other. New staff members who had joined participants' workplaces and also engaged in music sharing often used the impressions that they formed of their colleagues through music sharing as

a means to start conversations. They asked questions about the music their colleagues shared and engaged them in conversations.

This is consistent with the findings by Berger (1986). He found that people usually start off with so-called passive strategies, which means that people simply observe those they intend to build a relationship with. Then they turn to more active strategies and start conversations with others by using the information they gathered through their observations as talking points. This theory reflects the reported experiences the participants in this study had with new colleagues. New colleagues observed the music others shared and then started conversations by using this music as starting points for conversations. Berger (1986) states that people go through such steps in order to reduce uncertainty about others. Hence, it can be assumed that the newcomers talked about the shared music as a way of reducing their uncertainty about their new colleagues.

Music that was simply added to a computer playlist was less likely to serve as a talking point than music that was listened to together. Music that was listened to together appeared to be a shared experience all listeners could relate to and talk about, and, therefore, was more likely to serve as an initiator for talk than music only existing on a computer hard drive which only could become a shared experience once everyone had listened to the music individually. This seems to be consistent with the literature which reports that environmental conditions that people experience together are very likely to serve as a starting point for conversations (Kellermann & Palomares, 2004; Maynard & Zimmerman, 1984; Stokoe, 2000). Stokoe (2000) states that people start conversations about their shared environment as they can rely on it as a shared experience everyone in the environment can relate to and discuss. The most common example is talk about the weather. Many people start to talk about the weather with others as they do not share other experiences with them, but can assume that usually everyone experiences the weather conditions at some stage of the day (Kellermann & Palomares, 2004). Consequently, music that is part of a shared sonic environment is therefore more likely to serve as an initiator for talk than is music which exists only on a computer hard drive.

According to two of the participants in this study, when music was added to a computer hard drive it usually was verbally promoted by someone to encourage others to listen to the music, which in turn could initiate conversations. The face-to-face encouragement,

then, was more likely to lead to talk about the music than music which was just added to a computer hard drive. This seems to be consistent with studies which have shown that face-to-face conversations are often more effective under certain circumstances than computer-mediated communication (Boutellier, Ullman, Schreiber, & Naef, 2008). Nowadays, many organisations create open plan offices and also offer technology to promote face-to-face communication between colleagues. O'Hara and Brown (2001), for instance, describe technology which displays colleagues' interests, photos and contact details on a public screen in the office to encourage colleagues to talk to each other about their traits and interests.

Music was not limited to conversations about leisure activities. Two of this study's participants described that they and their colleagues also engaged in conversations about music in relation to the work they were doing. Music sharing and conversations about shared music played a role when they had to make decisions regarding how certain music fitted with design work they produced. While other studies have shown that music can have a positive influence on creative work (Haake, 2006; Lesiuk, 2005; Wohlfarth, 2008), the finding that talking about shared music can help to make creative decisions is unique to this study.

5.3.2 Influence of perceiving common music preferences through music sharing on relationships between colleagues

Similar music taste as perceived through music sharing appeared to have some impact on relationship development between the participants and their colleagues. Music sharing helped the participants, overall, to determine how similar their colleagues were to them in their music preferences. In turn, this perceived amount of similarity seemed to have an effect on the types of conversations and relationships among colleagues who shared music. The more similar each others' music preferences were perceived to be, the more likely it was that conversations and relationships could become more intimate.

This finding is consistent with communication theories which reveal that common ground is essential for communication and relationships. According to Horton and Keysar (1996), communication requires common ground in order to be effective and

efficient. People who do not establish common ground either prior to the conversation or while talking to each other will not be able to understand each other (Greenspan et al., 2000). However, as establishing common ground requires effort, people prefer to communicate with others who already share similar interests (Clark & Oswald, 1996). Consequently, it seems logical that people are more likely to engage in conversations about shared music and to build relationships with others who have similar music taste, interest and knowledge which then can “provide both the basis for the initial relationship and the glue that holds it together over time”, according to Roberts and Christenson (2001, p. 397).

The current study also reveals that similar interests not only facilitated relationships between individuals, but also brought informal groups together. Informal groups consisted of colleagues with similar music preferences who came together, for instance, in a lunch break and talked about the music they were all passionate about. These informal groups at work formed on the basis of music taste seemed to be less harmful than cliques or music taste groups of adolescents. One participant reported that sometimes people from one group made jokes about the music another group supported. However, this never escalated to forms of discrimination exhibited by music taste groups of adolescents which were explored, for instance, by Spergel (1995). Moreover, while other informal groups at work are often associated with oppositional behaviour towards organisational goals (Agervold, 2007), music taste groups as formed by the participants with their colleagues in the present study seemed rather harmless. Study participants’ descriptions suggest that these groups’ members simply came together to exchange information about music which did not oppose their organisation’s goals in any way that could be observed.

Belonging to an informal group formed around common music preferences was beneficial for the participants. Some participants reported that they liked to share music with others in a group as they appreciated the variety of perspectives represented through the different group members. Moreover, being part of a music taste group also gave others a confidence boost in that they felt they were not alone in their interest. Furthermore, some participants felt that belonging to a music taste group gave them more control over the music which was played in the workplace. The more people supported a certain kind of music, the more likely this music was played.

The benefits of informal groups at work that are formed around similar interests such as shared music are supported by the findings of George and Jones (2005). They found that informal groups help to meet employees' needs for social interaction, can be an important source of social support, and contribute to employees' positive moods at work and satisfaction with their jobs (George & Jones, 2005).

5.4 Reciprocity in music sharing

Reciprocity in music sharing played a role in social relationships. Almost all of the participants considered shared music a gift as they did not have to pay for it when received through music sharing. However, the majority of the interview participants also felt that they have to share their music with colleagues as an obligation to reciprocate that was given through the social bonds they had with their colleagues.

While Volda et al. (2006) assumed that looking at music sharing “through the theoretical lens of Mauss’ theory of gift giving or exchange” (p. 81) might give further indications about the influence of music sharing on relationships in the workplace, they did not further explore this theory. However, Mauss’ theory has explanatory value for the present study. Mauss (1954) indicated that giving a gift to someone automatically creates a social bond between giver and receiver. The giver not only gives an object, but also shares a part of his/her “spiritual essence” with the receiver which then creates a social bond with the obligation to reciprocate (Mauss, 1954, p. 15).

Reciprocity in music sharing was an indicator for the degree of intimacy in the relationships of the participants and their colleagues. The majority of the participants reported they were more likely to share music only in a communal sense, in that they provided their music to a common music pool to which different people had contributed, with colleagues who were not close to them. The pool was either a central network hard drive everyone could edit and had access to or software such as the music sharing function in iTunes which allowed all users to see and play each other’s music.

When music was only shared in a communal sense, the obligation to reciprocate as a representation of a social bond between two individuals played only a minor role. Music

was mainly contributed as an obligation to benefit the whole community of music sharers. Giesler and Pohlmann (2003) describe such a form of gift giving “as a reciprocal giving to and receiving from the community” (p. 7) which can be understood as the typical form of reciprocity in sharing processes where “the gift itself [is made] available to all in the community” (Pearson, 2007, p. 6). Volda et al. (2006) found in their study on music sharing via iTunes at work that music is shared as “something of a civic duty” (p. 80) and studies on online music sharing applications such as Napster where people make their music available to all users also showed that people like to gift their music mainly for communal reasons (Giesler, 2006; McGee & Skågeby, 2004). Some people like to give their music in such online applications to encourage participation which then benefits the whole community of sharers (Pearson, 2007); other people share their files to give their recipients the opportunity to share the experience as well (Ripeanu et al., 2006); and then there are those who feel obliged to make rare material widely available in the sharing community (McGee & Skågeby, 2004). However, built-in features, such as a chat function that theoretically allow communication and relationship development between two individuals, are hardly ever used in such sharing applications (Pouwelse et al., 2008).

According to some interview participants, when they shared music with colleagues they were closer to they were more likely to share music in a communal sense as well as exchange music directly with other individuals. They used not only central network drives and other technology which encompassed communal music sharing but also portable hard drives or MP3 players to swap files from one individual computer to another. The participants also put more effort into finding music which pleased those with whom they shared their music more directly. Moreover, they seemed to have higher expectations to be reciprocated with music they liked. However, they also trusted the colleagues with whom they were closer to reciprocate them adequately with music that they would appreciate.

In the case of individual sharing, reciprocity then was not so much about being concerned with the overall well-being of the sharing community, but rather appeared to imply an obligation to reciprocate in a social bond between two individuals. Consequently, this form of gift giving is closer to the theory of gift giving formulated by Mauss (1954) and further developed by Sherry (1983), which considers gift giving to

be a continuous spiral of reciprocity that connects two people with each other. Moreover, these findings support studies on gift giving in areas other than music sharing that indicate that people not only engage in more individual give and take processes, but are also more concerned about how, when and to what extent to reciprocate the closer they are to each other (Chung & Hamilton, 2001; Tsui et al., 1997).

5.5 Three types of relationship with different degrees of intimacy around music sharing

The results of this study suggest that there are three types of relationships around music sharing at work that differ in their degree of intimacy. These seem to have similar characteristics to the three work relationships proposed by Henderson and Argyle (1985). Henderson and Argyle (1985) found that (a) there are work acquaintances who do not particularly like or dislike each other and also talk almost exclusively about work related issues; (b) there are work friends who are closer to each other and also talk about leisure activities, but do not engage in social activities outside the workplace and; (c) there are social friends who talk about everything and also spend time together outside the workplace (Henderson & Argyle, 1985).

The findings of the current study suggest that there are work acquaintances who perceive their musical preferences as contrary on the basis of the music they exchange, mainly talk about work related issues, and do not feel highly pressured to reciprocate shared music. Then there are work friends who are closer in their musical taste that is revealed through the music they share with each other. Work friends also talk about shared music on a regular basis at work, but do not have closer ties beyond the workplace environment. Finally, there are social friends who have very similar music taste in what they share, talk very often and long about shared music as well as other issues and engage in social activities outside the workplace together such as visiting concerts.

Chapter 6: Conclusion

This study explored how music sharing at work influences social relationships between colleagues. Twenty-nine employees from different design companies throughout New Zealand filled out an online survey and seven of them answered questions in follow-up interviews. The current study explored how music sharing influences the way colleagues seem to perceive each other's personality, and provided some insights into how people try to influence perceptions others have of them by sharing certain kinds of music. It then went on to describe how impressions that colleagues form of each other through the music they share seem to have an effect on their relationships in development. Some insights also emerged into the impact of reciprocity in music sharing on relationships between colleagues. The key findings as they relate to these achieved objectives are summarised below.

6.1 Key findings

Design agency employees that participated in this study seemed to be very interested in music in general and shared their passion for music with their colleagues. They used a variety of sharing technologies from communally listening to music via a central stereo system to sharing music via the local computer network.

These employees formed impressions of their colleagues on the basis of the music their colleagues shared. This involved determining their colleagues' music preferences and associating other personality aspects with those music preferences.

The researched employees of design agencies engaged in moderate levels of impression management, in that they did not always think about how they were perceived by others through the music they shared, but still liked to have positive feedback on their music. They either shared a wide range of different kinds of music in order to be considered favourably by many other colleagues, or a limited number of types of music in order to impress only certain people.

The impressions the researched employees of design agencies formed of their colleagues through music sharing were used as starting points in conversations and to build relationships. While Volda et al. (2006) as well as Hakansson et al. (2007) also found that impression formation and management processes take place in music sharing, the current study indicated that impression formation and management were embedded in the process of relationship development between the employees of the design companies.

The technology used to share music affected the use of shared music as an initiator for conversations according to the researched employees of design companies. Technology that allowed listening together to shared music was a more direct shared experience and, therefore, was considered more likely to initiate a conversation than would music shared via the local computer network but consumed individually.

The music taste or preferences that were perceived through music sharing appeared to have an effect on relationships between employees of the design companies studied. When colleagues perceived each other's music preferences as similar through music sharing, they seemed more likely to become closer than colleagues who perceived each other's music taste as contrary. The more similarly people perceived their musical taste, the more likely they appeared to become friends and/or to form informal music taste groups at work.

Shared music was considered by the employees of the design companies that participated in this research as a gift, in that it did not cost them money to receive and/or share new music. However, as predicted by the gift theory of Mauss (1954) they also felt an obligation to reciprocate the music they received by others, while expecting to be reciprocated by the ones with whom they shared their music. The degree of reciprocity of music predicted the degree of intimacy between colleagues. Participating employees, who had loose relationships, were also more likely only to engage in communal music sharing, which means making music available to all people with whom they shared their music at the same time. Participating employees of design companies who were closer to each other were more likely to engage not only in communal sharing but also in one to one sharing. The obligation to reciprocate was higher the closer colleagues were to each other and the more often they engaged in one-to-one sharing. When they shared

music with colleagues who were friends, they were much more concerned about reciprocating the music adequately than when they shared with colleagues who they only knew superficially.

6.2 Value of this study

The findings of this study may have some value for scholars who pursue research on the social practices of music sharing as some indicators were found that impressions given through music sharing are actively used to start conversations and to build relationships.

The findings of this study may also be relevant for employers who want to promote relationship development between colleagues. This study suggests that music sharing can initiate conversations when colleagues listen together to music and directly converse with each other about the music while they listen. Hence, an open plan office environment which allows colleagues to listen to one pair of speakers together and to converse with each other without walls that limit face-to-face conversation is beneficial for relationship development through music sharing. However, in this environment, people who might perceive music as a distraction to their work must also be considered, which suggests that it might be appropriate to give those individuals office space where music is not played via communal speakers.

Also of potential interest to employers is the finding that people like to use different kinds of technologies for sharing music. This suggests that employees who have the ability to choose their own technology might be more likely to engage in music sharing which then may have a more positive impact on how relationships develop in the workplace.

6.3 Limitations

As this research was conducted only with employees of design companies it is unlikely that the results are transferable to other occupations. For example, designers not only seemed to be very interested in music as a topic of leisure, but also relied on music in

the context of the products they created. In other occupations music might not be important at all for work tasks. Hence, it can be assumed that in other environments music sharing might have varying influences on how music is used in conversations and as a means to create relationships.

Moreover, the participants for this study were recruited on a voluntary basis and overall comprise a convenience sample. Consequently, they may well have accepted the invitation to take part in this research because of their special interest in music sharing. According to Larsson and Martinkauppi (2003, p. 16), “people who have strong opinions [...] are the ones most likely to volunteer their opinions freely”. Hence, the findings of this study have to be considered as limited in their application as they might only reflect those who are especially interested in music sharing and talking about music.

Furthermore, the researcher perceived the design companies the participants were working for as rather small which suggests limits to the application of the findings of this study to larger organisations. There is reason to believe that in companies with more employees and stronger hierarchical structures music sharing’s impact on relationship building may well be different. Voids et al. (2006) indicated that people share different music depending on the hierarchical position of their sharing partners, a finding which has not been identified in the current study.

6.4 Directions for future research

This research has given useful information on how music sharing at work influences relationships between colleagues. Future research might want to build upon the findings of the current study.

In future research it might be useful to combine interview and/or survey data with observations in the workplace. This would give further information on how music sharing is perceived by different people in the same workplace and how it initiates conversations and relationships from an ethnological point of view.

Moreover, future research on music sharing in its social function might want to focus on other organisations besides design agencies. It would be especially interesting to explore workplaces where the employees might not be as affiliated to music as seemed the case with employees of design agencies. It then would be insightful to compare different workplaces in terms of the social implications of music sharing.

Finally, future research might want to explore music sharing and its social function in its impact on job satisfaction and productivity. Such data would give more definitive answers as to why music sharing in the workplace should be promoted from an economically driven managerial point of view.

This suggested future research might provide a deeper insight in how music sharing is positioned in the process of relationship development at work and how this process influences workers' and organisations' well-being. Important when conducting future research is that researchers take into account the mutual adaptation processes that take place between users and their music sharing applications in reality. Only too often it appears that a certain technology is implemented in a social context and then explored over a short period in its social meaning, which seems to be remiss considering that "technology shapes people and people shape technology" (Fountain, 2002). It is important to regard the user as an active person who chooses technology, becomes accustomed to it, changes the way it is used and then tries new technologies in order to make things as easy and convenient for him/her as possible. From this point of view, only future research that considers the research participants and the sharing technology they use as inseparable and interdependent can determine how music sharing really impacts socialising.

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Appendix A: Online Survey

My name is Johannes Nikorowitsch and I am conducting research on music sharing at work. Music in the workplace has proven beneficial to employees' well-being and performance. Music sharing adds a social dimension to this phenomenon. That is particularly interesting considering social contact is one of the key ingredients for overall well-being. Therefore, with this survey I would like to find out how you share music at your workplace and how this affects your communication practices at work. I would be very grateful for your participation.

The survey will cover the following question areas:

Section 1: Your Music Sharing and Listening Habits

Section 2: Music Sharing - Personal Expression and Social Environment

Section 3: Music Sharing - Well-Being and Job Performance

Section 4: Basic Information

If you agree with the conditions outlined in the invitation e-mail please click NEXT at the bottom of the page and you will be directed to the survey. Completion and return of the survey implies consent to participate

If you have any questions concerning the survey do not hesitate to contact me or my supervisors (Johannes Nikorowitsch E-mail:

.nikorowitsch@massey.ac.nz; Phone: +64 4 801 5799, Extension 6182; 1.

Supervisor: Judith Bernanke E-mail: J.Bernanke@massey.ac.nz Phone:

+64 4 801 2794, Extension 6793; 2. Supervisor: Associate Professor

Frank Sligo E-mail: F.Sligo@massey.ac.nz Phone: +64 4 801 5799,

Extension 62281).

Section 1: Music Sharing and Listening Habits

By which of the following means do you transfer shared music between you and your colleagues? (Select all that apply)

Central network drive(s) which is accessible and editable by many colleagues

Individual internal hard drive(s) within your personal computer

Individual external hard drive(s) of the colleagues, such as USB sticks

Other (Please Specify)

A text input field with a light gray background and a checkered border. It contains a small, illegible text entry. The field has a standard Windows-style border with a scroll bar on the right and arrow buttons on the left and right sides.

From which of the following means do you play shared music? (Select all that apply)


Central network drive(s) which is accessible and editable by many colleagues

Individual internal hard drive(s) within your personal computer

Individual external hard drive(s) of the colleagues, such as (an) USB stick(s)

MP3 Player(s)

Other (Please Specify)

A text input field with a light gray background and a checkered border. It contains a small, illegible text entry. The field has a standard Windows-style border with a scroll bar on the right and arrow buttons on the left and right sides.

How do you organise your shared music? (Select all that apply)

In a central music library stored on one central computer or drive in the office

Individual music libraries stored on individual computers

Which software do you use for sharing music? (Select all that apply)

iTunes

Other (Please Specify)

Which of the following do you use most frequently for listening to music shared in your workplace?

Headphones

Individual speakers at your workstation

One pair of speakers shared by the whole office environment

Why do you mostly use headphones for listening to music shared in your workplace?

Why do you mostly use the individual speakers at your workstation for listening to music shared in your workplace?

Why do you mostly use the one pair of speakers shared by the whole office environment for listening to music shared in your workplace?

Section 2: The influence of music sharing on the way colleagues perceive each other

Do you think that the music your colleagues share provides some insight into their music taste?

Yes

No

How important is it for you that your colleagues can somehow relate to the music you share with them?

Not at all important

Of some importance

Important

Very important

Does it happen that you share music that you do not necessarily like to be associated with?

No

Yes, because...

Do you change the music you share at work according to any of the following characteristics of your colleagues? (Select all that apply)

Not applicable

<input type="checkbox"/> Hierarchy level
<input type="checkbox"/> Gender
<input type="checkbox"/> Age
<input type="checkbox"/> Other (Please Specify)
<input type="text"/>

When considering you and your colleagues, do you think the music people share reflects their personality?

<input type="checkbox"/> Yes
<input type="checkbox"/> No

How often is there a mismatch between your idea about a colleague's personality and the music this person shares?

<input type="checkbox"/> Not at all
<input type="checkbox"/> Seldom
<input type="checkbox"/> Sometimes
<input type="checkbox"/> Often
<input type="checkbox"/> Very often

Is there any music you like to listen to that you do not want to share with your colleagues?

<input type="checkbox"/> No, there is no music that I would not share with my colleagues
--

Yes there is music I don't share because



Section 3: The influence of music sharing on spoken conversations and relationships

How often do you try to find out who contributed a certain kind of music by talking to your colleagues?

Not at all

Seldom

Sometimes

Often

Very often

Do you think that music sharing helps to initiate conversations with colleagues at work?

Yes

No

How does music sharing initiate conversations between you and your colleagues?



How do you talk about shared music at work?



Do you think that music sharing helps to build relationships with colleagues?

Yes

No

Why do you think that music sharing helps to build relationships with colleagues?

How strongly do you agree or disagree with the following: "The more similar colleagues perceive each other in their musical passions, the more likely they have in-depth conversations on shared music and come closer to each other"?

Strongly disagree

Disagree

Neither agree or disagree

Agree

Strongly Agree

Are there groups of colleagues who come together through music sharing at your workplace?

Section 4: Music Sharing as gift giving

Do you consider shared music as a gift?



No



Yes, because



Section 5: Basic Information

Please briefly describe what you do in your job.



How old are you?



Under 20



20-29



30-39



40-49



50-59



60 or over

In what kind of office environment do you work?



Open plan office



Separated office

Please feel free to comment on the survey and/or provide information not covered.



If you are happy with your answers, please press FINISH on the bottom of this page. Thank you very much for participating in this survey!

Appendix B: Interview Guide

Section 1: Music Sharing and Listening Habits

- Could you briefly describe your work environment in which music sharing takes place?
- How do you share music at work?
- Did music sharing at work change over the years you have been working?
- Are there any other specific music sharing practices at your workplace?

Section 2: The influence of music sharing on the colleagues' perceptions of each other

- What kind of music do you share with your colleagues?
- Why do you like this kind of music?
- Why do you share this music?
- Do you see a connection between the music you share and your personality?
- Is there music you listen to outside the working place which you do not want to share?
- Do you think that the music your colleagues share reflect their music taste?
- Have you ever been surprised because any of your work colleagues' music tastes didn't match your idea of them?

Section 3: The influence of music sharing on spoken conversations and relationships

- How does music sharing influence communication between you and your colleagues at work?
- How do you talk about shared music at your workplace?
- Does perceived music taste through music sharing play a role in how you relate to your colleagues or did it so in the past?
- Does music sharing bring you and your colleagues closer together?
- Are there groups of colleagues in your workplace that somehow are connected to each other through the music they share?

Section 4: Music sharing as gift giving

- Do you perceive shared music as a process of gift giving between you and your colleagues? Do you feel pressure to reciprocate music once you received some music? Is music sharing as a form of gift giving somehow different depending on how close you are with colleagues?

Appendix C: Invitation e-mail for participation in online survey

Subject line: Possible participation of your employees in online survey on music sharing at work
Dear (Name of employer)

My name is Johannes Nikorowitsch and I am conducting workplace research in which I would like to invite your employees to participate. My research will examine the social practice of music sharing and its effects on workers' well-being and job performance.

The research is part of the Master of Management with a Major in Communication Management which I am completing at the Department of Communication, Journalism and Marketing at Massey University Wellington.

Designers and information technology staff are generally interested in the circulation of contemporary culture, cultural taste and new technologies. Music sharing is an important part of this cultural exchange. Also, because your employees are connected via a local computer network through which they might share music, your staff would be ideal potential participants in this research.

I would like your employees to participate in an online survey on their music sharing practices at work. I have attached an information sheet with more details about the project as well as conditions of participation for your employees. If you are happy with the outlined conditions, I would be very grateful if you could pass this information sheet on to your employees, so that they have the opportunity to participate in my research.

Please feel free to contact me if you have any questions about my research project. E-mail and phone details are provided below.

Yours sincerely,

Johannes Nikorowitsch

Research Student

E-mail: J.Nikorowitsch@massey.ac.nz

Phone: +64 4 801 2794,

Extension 6182

Appendix D: Information sheet for participation in online survey

SUBJECT: Information concerning participation in music sharing at work online survey

Dear potential participant:

My name is Johannes Nikorowitsch and I am conducting workplace research in which you are invited to participate. My thesis will examine the social practice of music sharing and its effects on workers' well-being and job performance. The research is part of the Master of Management with a Major in Communication Management which I am completing at the Department of Communication, Journalism and Marketing at Massey University Wellington. My supervisors are Judith Bernanke and Associate Professor Frank Sligo.

For my research, I would like to invite you to participate in an online survey which asks for information on your music sharing behaviour at work. The online survey will take about 30 minutes. The data from the survey will be analysed and presented in a research report in a summarized form.

Previous research on music's effects on the working environment suggests that listening to music at work potentially correlates to well-being and job performance. Also, while research has been conducted on the use of other communication technologies, such as e-mail, chat and blogs, music sharing at work via servers or iTunes has not been explored in depth, although this seems to have become a common practice in many workplaces.

You have been asked to participate in this research because people like you who work for design and information technology companies are usually very interested in contemporary culture, cultural taste and technology which is a basis for sharing music. Also, you have colleagues to whom you are connected via a local computer network through which you might share music.

The research project requests information on potentially illegal activities of music sharing and on computer use for non work-related activities which may be in breach of your employment conditions. To eliminate this potential risk, the survey will be anonymous. In addition, data gathered through the online survey will be stored on the researcher's password-protected Massey University online account. Any associated paper based documents will be stored in the researcher's locked file cabinet at university to which only the researcher has the key. After the minimum storage period of five years, all raw data on the researcher's Massey online account will be deleted and paper based documents will be shredded through the university's document destruction service.

You are under no obligation to accept this invitation. If you decide to participate, you have the right to:

- decline to answer any particular question,
- ask any questions about the study at any time during participation via telephone or E-mail,
- provide information on the understanding that your name will not be used unless you give permission to the researcher,
- be given access to a summary of the project findings when it is concluded.

Completion and return of the survey implies consent to participate.

This research will contribute to our understanding of current workplace practices and how music listening and sharing affects workers' well-being and output. I hope to encourage as many participants from as many different organisations as possible, in order to obtain a realistic picture of how people share music in the workplace.

I would be very grateful if you could participate. If you like to participate in the online survey and agree with the conditions outlined in this information sheet click on or type the following link in your browser: <http://esurveyspro.com/Survey.aspx?id=1cc31862-0809-4106-bccd-159523b8b642>. Also, please feel free to contact me or my supervisors if you have any questions about my research project. E-mail and phone details are provided below.

Yours sincerely,

Johannes Nikorowitsch

Research Student

E-mail: J.Nikorowitsch@massey.ac.nz

Phone: +64 4 801 2794,

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Supervisors:

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Phone: +64 4 801 2794, Extensic
62281
Fax: +64 4 801 2693

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application 08/22. If you have any concerns about the conduct of this research, please contact Dr Karl Pajo, Chair, Massey University Human Ethics Committee: Southern B, telephone 04 801 5799 x 6929, email humanethicsouthb@massey.ac.nz

Appendix E: Invitation e-mail for participation in the interview

Subject line: Possible participation of your employees in interviews on music sharing at work

Dear (Name of employer)

My name is Johannes Nikorowitsch and I am conducting workplace research in which I would like to invite your employees to participate. My research will examine the social practice of music sharing and its effects on workers' well-being and job performance.

The research is part of the Master of Management with a Major in Communication Management which I am completing at the Department of Communication, Journalism and Marketing at Massey University Wellington.

Designers and information technology staff are generally interested in the circulation of contemporary culture, cultural taste and new technologies. Music sharing is an important part of this cultural exchange. Also, because your employees are connected via a local computer network through which they might share music, your staff would be ideal potential participants in this research.

I would like to interview your employees about their music sharing practices at work. I have attached an information sheet with more details about the project as well as conditions of participation for your employees. If you are happy with the outlined conditions, I would be very grateful if you could pass this information sheet on to your employees, so that they have the opportunity to participate in my research.

Please feel free to contact me if you have any questions about my research project. E-mail and phone details are provided below.

Yours sincerely,

Johannes Nikorowitsch

Research Student

E-mail: J.Nikorowitsch@massey.ac.nz

Phone: +64 4 801 2794,

Extension 6182

Appendix F: Information sheet for participation in the interview

SUBJECT: Information concerning participating in interview about music sharing at work

Dear potential participant:

My name is Johannes Nikorowitsch and I am conducting workplace research in which you are invited to participate. My thesis will examine the social practice of music sharing and its effects on workers' well-being and job performance. The research is part of the Master of Management with a Major in Communication Management which I am completing at the Department of Communication, Journalism and Marketing at Massey University Wellington. My supervisors are Judith Bernanke and Associate Professor Frank Sligo.

For my research, I would like to interview you about your music sharing practices at work. This interview should take no more than 45 minutes. The data from the interview will be transcribed, analysed and presented in a research report in a summarized form.

Previous research on music's effects on the working environment suggests that listening to music at work potentially correlates to well-being and job performance. Also, while research has been conducted on the use of other communication technologies, such as e-mail, chat and blogs, music sharing at work via servers or iTunes has not been explored in depth, although this seems to have become a common practice in many workplaces.

You have been invited to participate in this research because people like you who work for design and information technology companies are usually very interested in contemporary culture, cultural taste and technology which is a basis for sharing music. Also, you have colleagues to whom you are connected via a local computer network through which you might share music.

If you decide to participate, you will be provided a consent form for the interview. Also, once I have finished the transcript of the interview you will have the opportunity to approve it and sign an "Authority for Release of Transcript" form before any extracts will be used in my research.

The research project requests information on potentially illegal activities of music sharing and on computer use for non work-related activities which may be in breach of your employment conditions. To minimize those potential risks anything which could identify you will be kept confidential. This will be assured through confidentiality agreements between the researcher and his supervisors who are the only persons who have access to this data.

Interviews will be arranged to accommodate your schedule and held away from the organisation so that participants' privacy will be maintained.

Recorded interviews and transcriptions or data in paper form will be kept in the researcher's locked file cabinet at Massey University. Electronic data will be stored on the researcher's password-protected online account at the university. After the minimum storage period of five years, all electronic data and recordings will be deleted and paper based documents will be shredded through the university's document destruction service.

You are under no obligation to accept this invitation. If you decide to participate, you have the right to:

- decline to answer any particular question,
- ask for the recorder to be turned off at any time during the interview,
- withdraw from the study whenever you want,
- ask any questions about the study at any time during participation,
- provide information on the understanding that your name will not be used unless you give permission to the researcher,
- be given access to a summary of the project findings when it is concluded.

This research will contribute to our understanding of current workplace practices and how music listening and sharing affects workers' well-being and output. I hope to encourage as many participants from as many different organisations as possible in order to obtain a realistic picture of how people share music in the workplace.

I would be very grateful if you could participate. If you are interested and agree with the conditions outlined in this information sheet, send me an e-mail to arrange time and place of the interview. Also, please feel free to contact me or my supervisors if you have any questions about my research project. E-mail and phone details are provided below. I look forward to hearing from you.

Yours sincerely,

Johannes Nikorowitsch

Research Student

E-mail: J.Nikorowitsch@massey.ac.nz

Phone: +64 4 801 2794,

Extension 6182

Fax: +64 4 801 2693

Supervisors:

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Associate Professor Frank Sligo

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This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application 08/22. If you have any concerns about the conduct of this research, please contact Dr Karl Pajo, Chair, Massey University Human Ethics Committee: Southern B, telephone 04 801 5799 x 6929, email humanethicsouthb@massey.ac.nz

Appendix G: Interview participant consent form

The influence of music sharing at work on social relationships between colleagues

INTERVIEW PARTICIPANT CONSENT FORM

This consent form will be held for a period of five (5) years

I have read the Information Sheet and have had the details of the study explained to me.

My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I agree to the interview being digitally recorded.

I agree to participate in this study under the conditions set out in the Information Sheet.

Signature:

Date:

.....

Full Name - printed

.....

Appendix H: Authority for the release of transcripts form

The influence of music sharing at work on social relationships between colleagues

AUTHORITY FOR THE RELEASE OF TRANSCRIPTS

This form will be held for a period of five (5) years

I confirm that I have had the opportunity to read and amend the transcript of the interview/s conducted with me.

I agree that the edited transcript and extracts from this may be used by the researcher, *Johannes Nikorowitsch* (**E-mail:** johannesniko@gmx.de **Phone:** +64 4 801 2794, Extension 6182), in reports and publications arising from the research.

Signature:

Date:

.....

Full Name - printed

.....

Appendix I: Confidentiality Agreement with 1. Supervisor

The influence of music sharing at work on social relationships between colleagues

CONFIDENTIALITY AGREEMENT

I, **Judith Bernanke**, agree to keep confidential all information concerning the project: **The social communication of music sharing and its effects on workers' well-being and job performance.**

I will not retain or copy any information involving the project.

Signature:

Date:

.....

Full Name - printed

.....

Appendix J: Confidentiality Agreement with 2. Supervisor

The influence of music sharing at work on social relationships between colleagues

CONFIDENTIALITY AGREEMENT

I, **Associate Professor Frank Sligo**, agree to keep confidential all information concerning the project: **The social communication of music sharing and its effects on workers' well-being and job performance.**

I will not retain or copy any information involving the project.

Signature:

Date:

.....

.....