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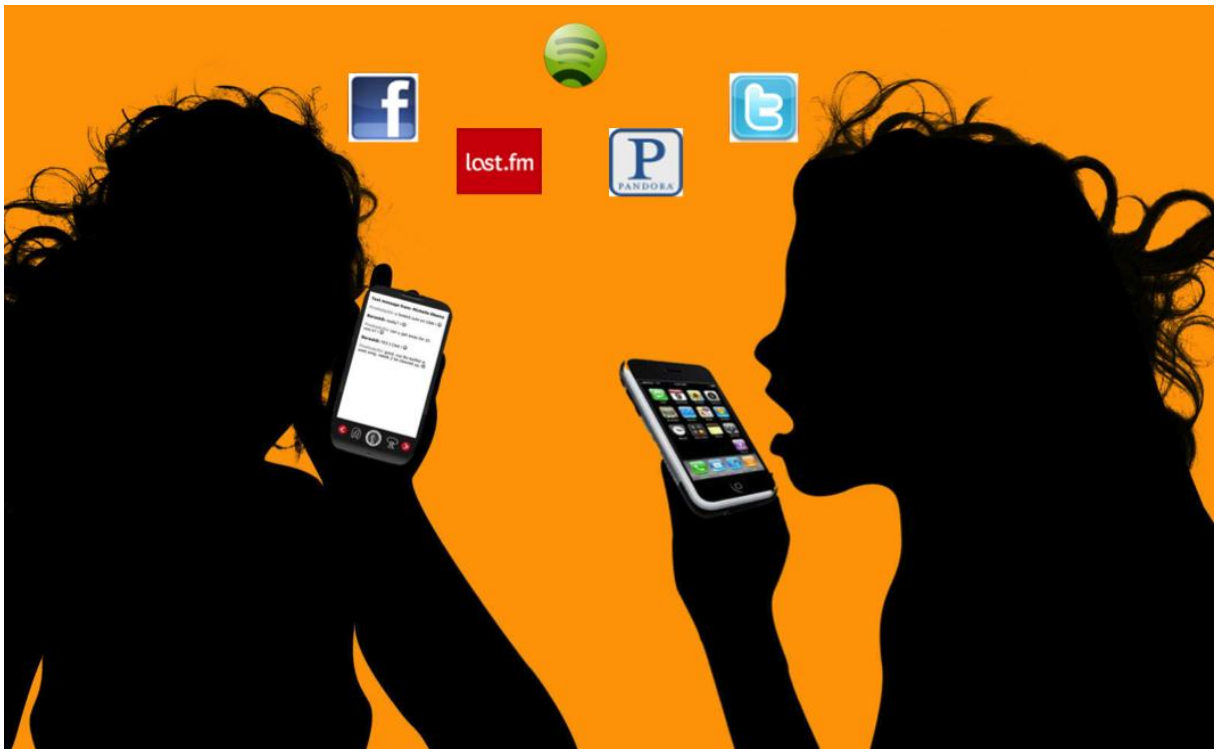
Erasmus University Rotterdam

“Spotifying” new music and mavens on the Web: The role of digital technology in music exploration and sharing



Student: Geert van den Hoek

Student number: 321047

Thesis project: MV05

Supervisor: Dr. M.N.M. Verboord

Second reader: Dr. E. Menchen-Trevino

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Preface

Nearly half a year has gone by since I started to write my research proposal that would give the basis of my master thesis; a period of studying abroad, new cultural experiences and friends, traveling in and around Scandinavia, but also one of hard work and commitment to the research project. Just before I moved to Stockholm, I had already chosen a topic – called "Maven" and Word-of-Mouth: Cultural opinion leaders on the web? – after attending the master thesis market. This decision was made rather quickly. The role of digital media in cultural consumption and participation patterns has always been a field of my interest. Besides, this theme allowed me to combine field research with one of my biggest passions: music. One of the first studies that I came across while finding and reading relevant academic literature was that of Tepper and Hargittai, published in 2009. They conducted a very interesting research observing that students mainly find about new music through their social networks and exposure to traditional media, rather than through the use of new technology. I was somewhat surprised by these findings. As a student myself, I am very active on the Internet using Spotify to listen to new music everyday and reading about other people their opinions in forums, but rarely contribute any content myself. This sparked my interest to do a similar study exploring music exploration and sharing in a digital era, and I am very satisfied with the result.

Of course, this paper would have not been possible without the help of others. Most of all, I would like to thank my parents for their continuous support throughout the last four years of my education. They have always been very enthusiastic and supportive as soon as I chose to apply for a completely new programme, IBCoM, at the Erasmus University Rotterdam and aspire an international career in the field of media and communication. Second, I would like to thank my supervisor, Marc Verboord, for all his helpful comments and suggestions that I have always received quickly after sending new pieces of my work. The cooperation was very pleasant even though we could only contact each other via email. Also, his many seminars, research workshops, and traineeship that I was lucky to participate in over the last four years have been a big contribution to the development of my knowledge and skills. Finally, I wish to thank all my friends that have made my studies in Rotterdam and Stockholm enjoyable and worthwhile.

Abstract

This paper examines the importance of digital technology in shaping the information retrieval and sharing practices of music. Technological innovations have not only changed how consumers search for and find new music, but also how they describe and discuss that material with other individuals. Besides their social networks, music listeners can now express their personal tastes more profoundly to many other users through Web 2.0 applications such as social networking sites, blogs, and wikis. Using data from surveys, this research aims to increase understanding of whether new technologies are predominate or subordinate to social and institutionalized settings of music exploration and sharing. The results show that audiences are losing interest in traditional media to discover new music, due in part to the growing popularity of digital media. Particular younger cohorts of music listeners and higher educated groups spend much time on using new technology to expand and enrich their musical repertoires. The use of technology is often combined with or followed by social exchanges, as word-of-mouth mechanisms remain to play a considerable role in how music is selected, evaluated and discussed. At the core of this process are opinion leaders or mavens who frequently make and receive personal recommendations in their immediate environments as well as in online communities. The paper concludes by describing the nature of opinion leadership in the realm of music and suggests that future research needs to address factors of age differences, social status, and cultural capital in relation to the discovery and sharing of cultural products.

Keywords: word-of-mouth; social networks; digital technology; opinion leadership; mavens; Web 2.0.

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1. Introduction

Over the past decade, technological innovations have dramatically changed typical music consumption behavior, giving consumers an overwhelming number of choices to expand and enrich their music collections. With millions of unique tracks available on the Internet, it has become problematic to find new material that satisfies one's preferences. Therefore, search engines and filters such as "tags" and consumer ratings are needed to present the *right* songs to the users, according to their tastes (Anderson, 2006). These tools are prominent in a variety of online retailers and services such as Amazon, iTunes, YouTube and Spotify – categorizing content into *labels* (e.g. genre, country) or *popularity* (e.g. amount of listeners, average rating scores, rankings). Despite all such information, the search process often leads to suggestions for more items than are desired at a time. To filter out the rest, consumers can look for additional in-depth information about the cultural objects by reading the evaluations and recommendations shared by professional critics as well as amateur reviewers or contributors on the Internet.

Cultural consumers can now vocal their music preferences much more easily on "Web 2.0" – a term commonly associated with the wide array of technologies and online platforms that encourage users to interact, create, and publish content online (O'Reilly, 2005). From podcasting to web stores, and wikis to social networking sites like Facebook and Twitter, consumers collaborate with each other and generate content of their own making (David and Pinch, 2006; van Dijck, 2009). According to many scholars, these widely available tools of cultural production and new avenues to distribute amateur created content online contribute to a democratization of culture (Benkler, 2006; Jenkins, 2006). Media audiences that actively make use of the possibilities to find and share content with other online users are continuously switching between their roles of consumers and producers of content, which led them also to be labeled as "prod-users" or "prosumers" (Bruns, 2008; Jenkins, 2006). They can generate a lot of online attention to cultural products by writing reviews in blogs or uploading a fan-produced video on YouTube. These electronic word-of-mouth mechanisms are becoming increasingly determining factors to an artist's success (Hennig-Thurau et al., 2004; Chakravarty et al., 2010). Amateur contributions can start a "buzz" around new artists or albums once they go viral on the Web, but are difficult to direct by professional music promoters. Therefore, opinion leaders or "mavens" in music that – people that have a lot of new information and frequently share this information with others – have become an increasingly important and challenging target for music firms (Gladwell, 2000).

The concept of opinion leadership has been widely discussed in marketing research. As the persons who spot and communicate new cultural trends, opinion leaders can have a major influence on how products and services are evaluated and adopted by consumers (Feick and Price, 1987; Flynn et al., 1996). These leaders are generally "innovators" or "early adopters" of new products to whom many consumers look for advice in making well-informed purchasing decisions (Rogers, 2003; Myers and Robertson, 1972). In the past, due in part to the expense and limited shelf space in brick-and-mortar stores, such innovative cultural consumers have tended to come from higher socio-economic backgrounds (Rogers, 2003; Chan and Misra, 1990). Having greater access to as well as knowledge of or competence with "highbrow" culture, the "good" taste, they acquire higher social status and "cultural capital" (Bourdieu, 1984). Also, high status individuals have a larger incentive to be "cultural omnivores" – that is; to participate in various cultural styles and forms of different social prestige or legitimacy – and pass on their knowledge of eclectic tastes that others find useful (Peterson and Simkus, 1992; Peterson and Kern, 1996; van Rees et al., 1999). In theory, the emergence of the Internet and Web 2.0 in particular should democratize the opinion leadership in culture. More citizens are able to access and discover a great variety of music and become the new "tastemakers" by expressing their personal tastes to numerous other interested consumers on the Internet (Anderson, 2006: 99). For these opportunities noted above, both for high status groups and low status groups, information technologies are likely to become more important to discover and share new music with others.

In their study, Tepper and Hargittai (2009) found that social networks and traditional media are the main sources for how students – who are both heavy users of music and technology – search for new material in a digital age. They also characterized opinion leaders or "mavens" who tend to be heavily invested in music, have diverse tastes, and frequently make and receive recommendations about new music. The data of this study is technologically outdated (data from 2003-2005) and lacks some variation in the respondents' social background such as age and socio-economic status. Also, the impact of digital technology on how different kinds of music consumers *spread* new music remains largely unexplored. To fill these gaps in the literature, this empirical research aims to (a) explore the role of new technology in the exploration and sharing of new music, (b) analyze the factors that are related to its use, (c) examine the characteristics of mavens in the music domain, and (d) understand the importance of the Web for mavens to find and spread information about new music.

The overarching research question is:

> *How do music consumers use digital technology to find and spread information about new music as compared to using social networks and traditional media?*

Empirically, a survey (primarily conducted online) was used to ask people about their music preferences, search strategies and information sharing practices. In the next section, the literature on the role of (electronic) word-of-mouth, opinion leaders and mavens, and Web 2.0 technology in music exploration and sharing is critically discussed. Then, in the third section, the research method will be described into detail, including the operationalization of concepts, data collection process, and research sample. Thereafter, the findings of the study are reported and analyzed in the fourth section. The fifth and final section discusses the broader implications of those findings and concludes with a discussion of the limitations of the study, which point to directions for future research.

2. Theoretical Framework

2.1.Traditional word of mouth

Due to the competitive and novel nature of cultural goods like music CDs, movies, or books, producers can never be completely sure what products will succeed or fail in the marketplace. Besides product quality or innovativity, the success or failure of a cultural product depends on many other factors such as audience tastes, market developments, and critical reception (Caves, 2000; Hesmondhalgh, 2007). This economic uncertainty especially concerns smaller companies that have fewer financial resources than large established corporations to promote and invest in attractive cultural products for a large mainstream audience (Goodwin, 1998). It is of great importance for new cultural products that people talk about them in order to stand out from the competition. Alike producers, the dissemination of information is also important for consumers because they need to be knowledgeable about the latest works and their quality in order to develop their cultural repertoires (Caves, 2000). This is accomplished by several types of messages such as advertisements, critical reviews, and word-of-mouth (Chakravarty et al., 2010).

Word-of-mouth (WOM) is long to be considered as one of the most important sources of information for customers to judge the quality of products and to decide whether they want to buy them or not (Brown and Reingen, 1987; Richins and Root-Shaffer, 1988; Herr et al., 1991; Silverman, 2001). In traditional WOM promotion, information is passed voluntarily from one person to another through direct, face-to-face contact. The most common examples of offline WOM communication involve product-related discussions and personal recommendations of goods and services to a friend, family member, or an unknown person. Through multiple conversations between people who discuss their experiences with products, a single WOM message has the potential to reach and influence many individual receivers (Lau and Ng, 2001: 164).

WOM communication is often regarded as more persuasive than costly marketing campaigns using mass media for various reasons. First, WOM is generally considered to be more effective than advertising because it provides information that is easy to access, remember, and therefore more likely to be used as the main source for the judgment and purchasing decision (Biehal and Chakravarti, 1986; Herr et al., 1991). People consistently talk about their favorite and most recent consumed products falling under many different

categories. Unavoidably, products are continuously discussed and therefore highly accessible for consumers.

Second, information from personal sources is likely to be perceived as more reliable, credible and trustworthy by consumers than widespread information from marketing sources (Brooks, 1957; Brown and Reingen, 1987). Offline, there are certain individuals who initiate discussions by transmitting information in a direct conversation with one receiver. Such WOM senders are thought to be independent of the market and have no interests to the promotion and success of a company, product, or service (Silverman, 2001). Instead, they engage in WOM communication for personal purposes such as altruistic rewards, product involvement and self-enhancement (Sundaram et al., 1998; Dichter, 1966; Engel et al., 1993).

Compared to advertisements, WOM messages can be either positive or negative about a certain product (Chakravarty et al., 2010). For instance, a customer would be motivated to recommend a product to others when he or she feels strongly involved with that product and wants others to enjoy the same excitement without any favor in return. A negative WOM message, on the other hand, could be the result of someone's negative experience or anger towards a particular company or product. Consumers are highly engaged in WOM communication due to its spontaneous, personal, and non-commercial nature. They discuss all sorts of subjects, including cultural products, in their network of friends, colleagues, and other personal contacts. For each individual, this social network consists of a unique set of people who they know and trust to varying degrees.

A concept that has been commonly used to explain the different interpersonal relationships in terms of familiarity and trust is that of "tie strength" (Granovetter, 1973; Brown and Reingen, 1987; Goldenberg et al., 2001; Wirtz and Chew, 2002). As introduced by Granovetter (1973), tie strength is "a (probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the tie" (p. 1361). More clearly, the strength of the tie conceptualizes the closeness or intensity of a relationship between a sender and receiver ranging from strong to weak. Strong social ties are characterized by frequent interactions and a large mutual sense of intimacy and support between the companions (Walker et al., 1994: 57). They include a person's family connections and close friends that are trusted and share similar interests and people in their social network. The number and intimacy of interactions is far lower between weak ties such as co-workers, neighbors, and other acquaintances.

Research suggests that both types of ties affect information flows and consumer's behavior. Depending on the situation, each tie can be more beneficial than the others. Several

studies have showed that the exchange of information and recommendations is more influential within strong relational ties than between weak tie relational partners (Brown and Reingen, 1987; Bansal en Voyer, 2000). In relationships with strong ties, individuals are more likely to interact, exchange information, make suggestions, and trust each other, compared to those relations with weaker ties. These differences in the availability and perceived credibility of information suggests that WOM messages have a greater influence on the receiver's decision making when it is transmitted by a person's strong ties.

However, the impact of weak tie information sources on decision-making should not be underestimated. Weak ties facilitate information to flow from one social group to another by bridging the gap between disparate networks of strong ties (Brown and Reingen, 1987: 350). Perhaps the largest contribution to understanding the spread of information in social networks originates from the work by Granovetter (1973). In his study, Granovetter (1973) found that it is easier to find a job through weak ties that give great access to information. Generally, the majority of people's entire social network consists of weak ties which all have their own different network of contacts. In addition, people have a relative small circle of strong ties that more or less interact with the same persons of that network. Therefore, weak ties allow to reach a much larger audience than can be achieved through close personal contacts.

This chapter has described why and how individuals acquire useful information about cultural products through WOM. Consumers rely on WOM for product advice to lower the inherent uncertainty and risks associated with purchasing decisions (Murray, 1991). Within and between core groups of strong ties that are all connected through weak ties, people constantly discuss their latest experiences with music, movies, books, and other cultural products. These post-purchase conversations result in knowledge, ideas, and suggestions regarding cultural consumption traveling quickly from one social network to various other networks. This available information is perceived as extremely reliable and thus valuable by consumers because it is transferred from one person to another in an immediate conversation and outside any commercial interest. Out of all new cultural products being released and discussed at a certain point in time, a few will turn into "hypes" that gain sudden extravagant or intensive publicity which makes them difficult to predict and control. Therefore, WOM is a very important, but complex mechanism in the spreading of information about cultural products that deserves the attention from marketing academics and practitioners.

2.2. Electronic word of mouth

The advent of the Internet has increased consumers' options for obtaining product information, and has facilitated consumers to articulate their own opinions on, and experiences with, cultural products to others by engaging in electronic word-of-mouth (hereafter, "eWOM") (Hennig-Thurau et al., 2004). Hennig-Thurau et al. (2004) defined eWOM communication as "any positive or negative statement made by potential, actual, or former customers about a product or company, which is made available to a multitude of people and institutions via the Internet" (p. 39). Through the Internet, consumers can share their interests and ideas about cultural goods in many ways such as mail, discussion forums, chat rooms, news groups, weblogs, and social networking sites. In essence, the concept of eWOM extends the definition of WOM with the addition of online communication platforms through which people can distribute a wide range of contents (Dellarocas, 2003; Chatterjee, 2001). Unlike WOM, which are traditionally spread within individuals' direct social networks, eWOM does not require personal contact and thus seems to appear amidst human interaction and media that have become more social.

In comparison with WOM, eWOM communication is much more convenient, rapid, and anonymous (Sun et al., 2006; Hennig-Thurau et al., 2004; Goldsmith and Horowitz, 2006). Due to its low cost of information exchange and access, the Internet provides the opportunity for customers to effortlessly communicate with other Web users whenever and wherever needed. In addition, the development and rise of mobile technologies have further lowered the barriers of time and space to a minimum (Ling and Campbell, 2009). Via handheld mobile devices such as smartphones and tablet computers, users are regardless of their location always connected to a mobile network or other wireless service. Before the arrival and expansion of the Internet and mobile technology, WOM was bound to face-to-face contact and oral communication, while now people can traverse large temporal and spatial distances by using electronic media and communications (Steffes and Burgee, 2009). Another advantage of eWOM is that it usually contains information in written texts or images that remain available on the Internet for an indefinite period of time (Sun et al., 2006). Also, the message content can be edited virtually at anyplace and at anytime to keep the WOM conversation current and relevant.

More significantly, eWOM differs from its offline form in that it can reach an unprecedented number of individuals at once (Hennig-Thurau et al., 2004). In the case of traditional WOM, the sharing of information can only involve one-to-one communication of a

single person speaking to another due to the constraint of face-to-face dialogue. On the Internet, however, the nature and scope of communication is considerably more far-reaching. Besides one-to-one conversations (e.g. email, instant chatting), information online is largely exchanged through one-to-many communication (e.g. review sites, chat rooms) or many-to-many communication (e.g. blogs, virtual communities) between individuals who do not necessarily have any social ties (Litvin et al., 2008). While one-to-many communication is primarily a one-way interaction with one person sending a message to a large group of people, many-to-many communication also allows receivers to give feedback on the content that they read. In this interactive model, consumers both contribute and retrieve eWOM information to and from the Internet that is accessible by many other users (Hoffman and Novak, 1996).

Due to these distinct characteristics of online communication, eWOM messages are potentially influential and personally relevant as they can encourage or warn a large group of Internet users to consume a cultural product or not (Chakravarty et al., 2010). Online communities where people actively share their consumption experience with others have added a new dimension to marketing communication what is commonly referred to as "viral marketing" (Hennig-Thurau et al., 2004). Viral marketing can take many forms of electronic content such as videoclips, flashgames, and web pages. Companies have increasingly started to use these viral marketing tools to gain brand recognition through customers spreading the name of the brand and products on various interactive Internet platforms (Dye, 2000; Rosen, 2000; Balter and Butman, 2005). The ultimate goal of marketers is to generate interest, excitement or a "buzz" around their brand, products, or services. WOM commentary plays a fundamental role in this process.

Before messages can go viral (i.e. information and opinions spread quickly and widely from person to person), buzz marketing firms need to create content that is publicly available and appealing for Internet users to receive and forward the content to their network of personal contacts (Ho and Dempsey, 2010). Members of these social networks can, then, also pass along the same message to their friends who do the same thing with their own, additional contacts, and so on. Consequently, the spread of information turns into an "epidemic"; that is, the number of people who receive the message grows at an exponential rate (Watts and Peretti, 2007). There is thus great potential for viral marketing campaigns to reach a large audience and to build their brand. The advantages of the Internet for marketing, outlined here, entail the possibility that WOM behavior will gradually shift from face-to-face conversations to many-to-many communication online.

However, there are a few disadvantages of eWOM as compared to traditional, offline

WOM, which mainly deal with the anonymity of communicators. Participants of traditional WOM communication are generally senders and receivers who share a strong social tie, establishing the credibility of message contents (Steffes and Burgee, 2009). On the other hand, the exchange of eWOM information often occurs between people who have no prior relationship. In most cases, the identity of the sender is completely unknown or hidden behind a nickname. The anonymous nature of eWOM diminishes the ability for receivers to evaluate the trustworthiness of the communicator and message.

Moreover, while WOM typically concerns an honest judgment of a person who is not compensated or rewarded by a company, eWOM can be both firm-initiated and consumer-generated (Dellarocas, 2003; Schindler and Bickart, 2005). For instance, marketing companies pay consumers to write positive reviews about their products or even post their own reviews and comments on seemingly user-initiated websites (Chatterjee, 2001; Werde, 2003). Accordingly, the big advantage of WOM compared to advertising regarding the credibility of the message might disappear. Because of this, consumers often spend some more effort to examine a variety of cues (e.g. source, surrounding advertisements) when judging the credibility and quality of online information appearing on a website (Greer, 2003; Brown et al., 2009).

Traditional WOM and eWOM are conceptually fairly similar, but not exactly the same. According to Hennig-Thurau et al. (2004), consumers' motives to engage in traditional WOM communication suggested in the literature can be relevant for eWOM (p. 40). Given the differences of eWOM specifics (e.g. high speed of transmission, unlimited reach, anonymity, weak tie strength), however, it is problematic to transfer WOM insights on eWOM without any uncertainty. This, in combination with the increasing usage of electronic media in mass communication, has gained the attention from researchers to investigate the motives for seeking eWOM information (Goldsmith and Horowitz, 2006) and for sharing or articulating product information and consumption-related experiences through eWOM (Hennig-Thurau et al., 2004; Ho and Dempsey, 2010).

As found by Goldsmith and Horowitz (2006), the main motives for consumers to seek opinions online are to reduce risk in buying new products, to find the lowest prices, and to get easy access to information. These desires are less likely sufficed when one participates in traditional WOM communication considering the smaller amount and narrower accessibility of information. Moreover, consumers contribute to eWOM by passing along online content themselves. Hennig-Thurau et al. (2004) identified four motivations for such sharing behavior; "the desire for social interaction", "concern for other consumers",

"extraversion/positive self-enhancement", and "economic incentives". Ho and Dempsey (2010) discovered similar motivations of consumer online expression, namely "the need to be part of a group", "the need to be individualistic", "the need to be altruistic", and "the need for personal growth".

These findings also partly explain the viral potential of eWOM. From a communicator perspective, consumers can easily make their opinions and thoughts on products or services available to a wide global community of Internet users (Schindler and Bickart, 2005). Each of those receivers can then share the message offline and online within and outside their network of friends, and so forth. The multi-way interaction that takes place on the Internet fulfills the need for consumers to connect and belong to a certain group and the need to help others. With the use of online tools, the gap between separate core groups of strong ties is now more easily bridged. From a receiver perspective, there is an increasing amount of information to be found on the Internet. Online, consumers can read and base their purchases on product reviews, recommendations, and complaints by countless customers from all over the world. This gives some implication that eWOM communication is appropriate as a risk reduction strategy in that it extensively informs consumers about whatever subject they could be interested in online. But, how do consumers deal with this overflow of information in seeking and selecting that which are most useful to them? And how do they evaluate the quality of all that information in order to fully reduce the risk of trying cultural products?

2.3. Opinion leaders and mavens

Fundamental to any successful marketing campaign using WOM strategy is the support by influential persons – "opinion leaders" – who are respected for their expertise in a specific domain (e.g. food, fashion) and distribute information about the recent trends to ordinary consumers (Feick and Price, 1987; Goldsmith et al., 1996). These leaders influence the attitudes or actions of "opinion seekers" who search for advice on certain topics or products from others to inform their decision (Sun et al., 2006). By facilitating the dissemination of information specific to a product a service, opinion leaders play a pivotal role in linking marketing practitioners and consumers.

As has been stressed already, consumers tend to be influenced by those that are part of their social group, people that are very much alike and can be trusted. The opinion leaders of this group are the first to try out new cultural objects and consequently have the most knowledge and experience with these items. Their potential approval of new products can

lead to the adoption by the mass market (Katz and Lazarsfeld, 1955; Rogers, 2003). For example, a certain individual who spends a lot of time on reading music magazines or listening to the radio makes him or her an expert on this topic. Within his or her social group of friends, this person acts as an opinion leader or mediator and exercises some influence on what music to value and listen to.

According to Lazarsfeld et al. (1948), there is a "two-step flow of communication" in which opinion leaders gather product information from and add their own opinions and interpretations to mass media messages before passing them on to their followers. Katz and Lazarsfeld (1955) coined the term "personal influence" to refer to the process by which opinion leaders intervene between the media's direct message and the audience's response to that message. Contrary to the "magic bullet" or "hypodermic needle" theory, which argues mass media to have a powerful influence on the general public, the two-step flow model emphasizes the human agency of audiences, viewing personal influence as the more important means of communication (Katz and Lazarsfeld, 1955). Also, the two-step flow theory was one of the first to recognize the social relations of audiences. While the hypodermic needle approach suggests that the mass is composed of isolated individuals, the two-step flow theory views individuals as social beings who communicate among themselves (Katz and Lazarsfeld, 1955). Figure 1 illustrates the two opposing theories.

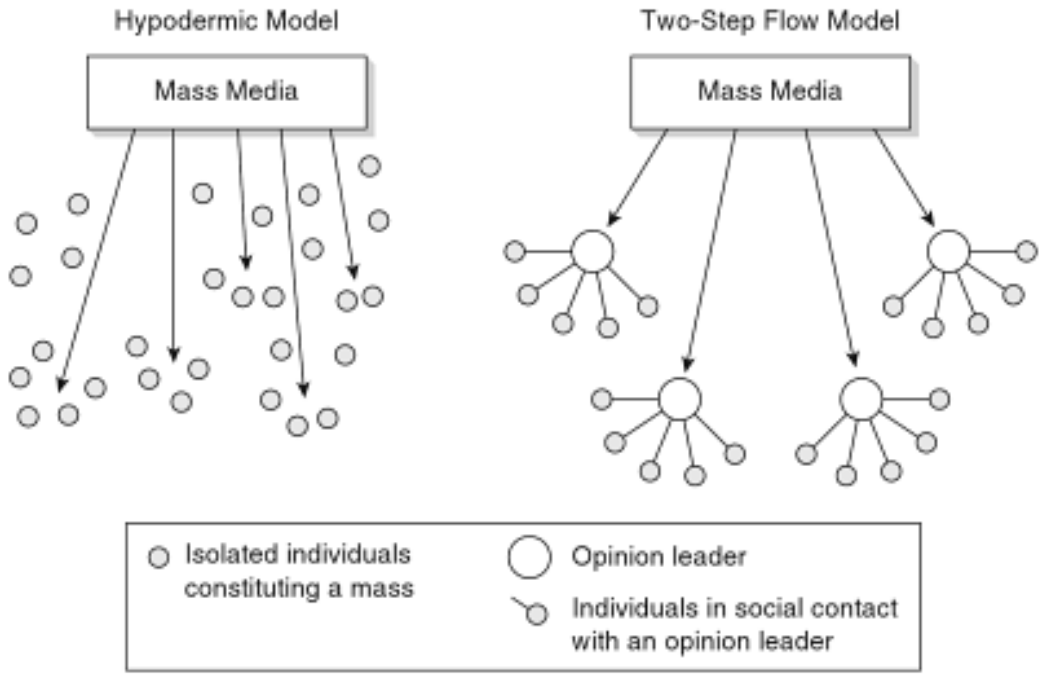

Figure 1: Hypodermic needle model and two-step flow model of mass communication (McQuail and Windahl, 1983).

Although the two-step flow approach has helped to understand the process of interpersonal influence in mass communication, many scholars have criticized and refined the theory due to the simplicity of one-directional communication from opinion leaders to the masses (Harik, 1971; Robinson, 1976; Weimann, 1982). According to them, the two-step flow model is limited in that it depicts information flows in a single direction. Though, information dissemination and personal influence often turn out to be two-way processes in which both opinion leaders and opinion seekers interact and exchange information with each other (Weimann, 1982; Myers and Robertson, 1972). Another point of critique is that access to mass media sources is not merely restricted to opinion leaders (Batra and Kazmi, 2008: 330). The two-step flow theory fails to acknowledge that followers also receive information from and are influenced by mass media.

These limitations have led several studies to posit a "multi-step flow model" that takes account of the complex and multi-directional relays in the WOM communication process (Harik, 1971; Robinson, 1976; Weimann, 1982). This model also includes "gatekeepers" who controls which information will pass along to opinion leaders and opinion seekers, and which will not (Lewin, 1947). Distinct from the opinion leaders, the gatekeeper does not exert influence and is not influenced by others either. In the multi-step flow model, information from the mass media can flow directly to and through different types of consumers, including opinion leaders, gatekeepers, and opinion seekers. They are all part of a multi-step communication pattern. Furthermore, the dimension of opinion seeking is equally essential as the opinion leadership process (Flynn et al., 1996). Without opinion seekers, there would be no opinion leaders, and vice versa. Opinion leaders could also become opinion seekers themselves because they want to frequently acquire information about new offerings in the product category of their interest (Flynn et al., 1996).

Current literature often parallels opinion leaders with the concept of "market mavens" which was first introduced by Feick and Price (1987). They defined mavens as "individuals who have information about many kinds of products, places to shop, and other facets of markets, and initiate discussions with consumers and respond to requests from consumers for market information" (p. 85). In short, market mavens actively acquire information about the general marketplace and spread that broad knowledge to their friends, family, and colleagues on a regular basis (Clark & Goldsmith, 2005). The concept is similar to the concept of opinion leaders in their influence over other consumers derived from knowledge and expertise, but differs in that the expertise is not domain specific. In contrast to opinion leaders, mavens are interested in finding and sharing information on a wide range of products

they do not necessarily purchase or even have experienced firsthand (Feick and Price, 1987). Their motivation to become highly knowledgeable consumers and share market information comes from the pleasure of sharing this information and the altruistic desire of helping others (Walsh et al., 2004).

Gladwell (2000) defines mavens as "information specialists" or "people that we can rely upon to connect us with new information" (p. 14). With their general marketplace expertise and communication skills, mavens are the persons that can start "word-of-mouth epidemics" (ibid: 69). The new ideas of mavens are communicated to "connectors" who know a large group of people, most of them outside the community of the mavens (ibid: 38). Connectors typically exert a lot of influence on others in their immediate environment, not because they are experts like mavens but rather because they have relatively more social links than other people do. Ultimately, there are "salesmen" who are skilled at "selling" the ideas to others in a way that they can understand and will agree with them (ibid: 78). Gladwell (2000) also points out that the message needs to have a "stickiness factor" that is memorable and appealing for the mass (p. 92). In order to spread new ideas and products effectively, the quality of both the messengers as well as the content of the message matters.

Another theory of how ideas spread in a culture is the "diffusion of innovations theory" (Rogers, 2003). Using a multi-step flow model, diffusion of innovations looks at how innovations (i.e. new ideas, new technologies, new products, new forms of behavior) are adopted and mediated by individuals in five stages. According to the theory, the diffusion of innovations starts with the "innovators" who are the first to learn about and adopt the new product or service (Rogers, 2003). The opinions of these innovators will reach the "early adopters" who also accept and buy the new product or service at an early stage. In this model, innovators and early adopters serve as the opinion leaders or market mavens as they accumulate information about new products and share that knowledge with other consumers. They have a considerable influence on whether the "early majority" and the "late majority" of the consumers will accept or reject the innovation. The latest stage of the diffusion of innovations involves "laggards" who are more skeptical and wait how the innovation is received by the mass before they eventually buy the new product (Rogers, 2003).

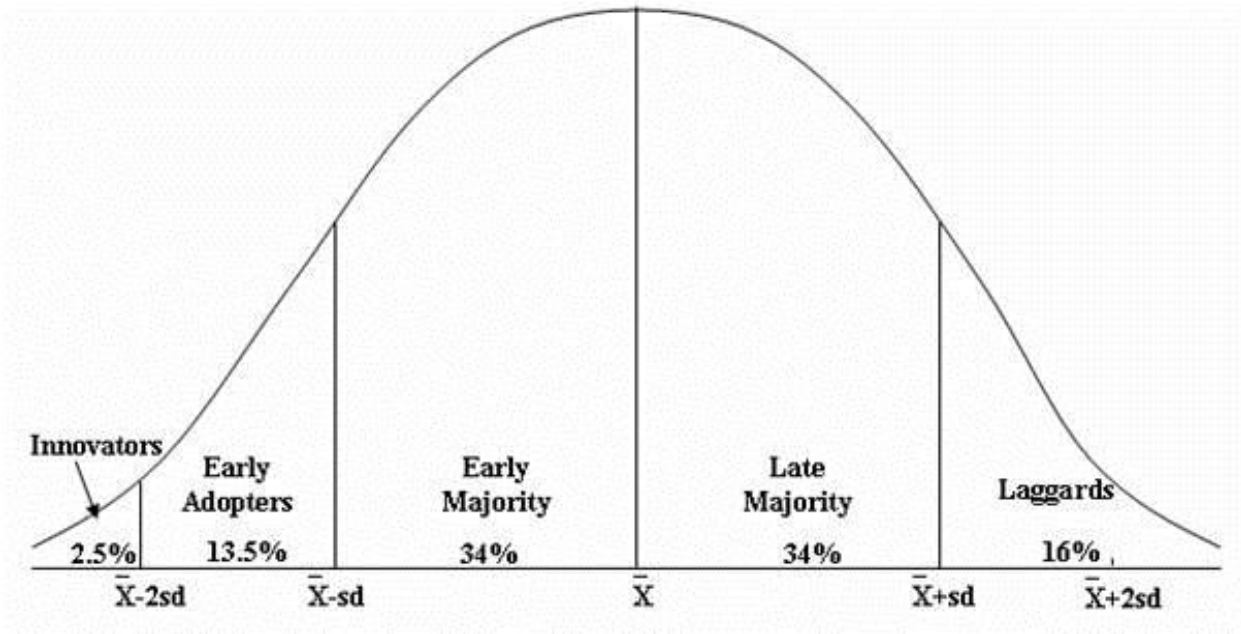

Figure 2: Diffusion of innovations adopter categories (Rogers, 2003).

As shown in figure 2, these five stages follow a standard deviation curve. Very little consumers tend to adopt innovations at the very beginning (2.5%). After a short while, a larger amount of early adopters (13.5%) starts using the new product or technology before the early majority and late majority (both 34%) do. Finally, a last group of laggards (16%) will try or adopt the new product. The diffusion of innovations model demonstrates that, while the media diffuse most new ideas, audiences heavily rely on the recommendations and opinions that (originally) come from opinion leaders or mavens to decide if they adopt the innovation. Once the innovators and early adopters have got the time to "test" the new product, the popularity of that innovation will grow rapidly as consumers start to communicate and are influenced by their WOM more substantially. From the late majority phase, the product has already reached its peak sales and will be increasingly less consumed before it is eventually taken off the market.

In his book "Climbing the Charts", Rossman (2012) provides an alternative model for understanding the diffusion of innovations. By examining on how music songs become popular, he demonstrates how major record labels support their artists on the radio through extensive marketing and promotional efforts. Rossman (2012) also shows the key role played by the radio broadcasting stations that respond to each other's airplay and formats. Thus, consumers' decisions are not only affected by WOM, but also people outside the consumer networks influence which products make it big.

2.4. E-mavens on Web 2.0

The development of digital information and communication technologies (ICT) has radically reshaped the ways people find and share culture (Anderson, 2006; Jenkins, 2006; Kayahara and Wellman, 2007). Particularly, the emergence of "Web 2.0" technologies and platforms (e.g. social networking sites, wikis, video-sharing websites, blogs) where users connect directly to one another and collaboratively create and share content has changed the consumption and distribution of cultural information (O'Reilly, 2005). Before the growth of digital media, consumers of cultural products generally searched for new material through (offline) social networks and traditional media (Tepper and Hargittai, 2009: 231). As already discussed, people constantly rely on their friends and acquaintances for retrieving information about cultural products. In addition, consumers could find about new cultural trends when they are exposed to mainstream media like radio, magazines, and television. The increasing proliferation of technological innovations in recent years has opened another important pathway to the exploration of new cultural products (Tepper and Hargittai, 2009).

New communication channels such as the Internet, email, and mobile phones offer multiple opportunities for audiences to access an overabundance of content. More notably, these technological affordances are believed to have a democratizing impact on culture by providing users with the tools to produce and distribute their own content with countless other users (Anderson, 2006). According to Anderson's (2006) theory of the "Long Tail", there is a driving consumer demand from a relatively small number of popular items or "hits" towards a huge number of more obscure or "niche" products. Anderson (2006) argues that "filters" are needed for consumers to wade through the enormous number of niches in the long tail in order to select content related to their interests. He discusses two main types of filters with several subtypes.

First, consumers can make use of recommendation software to find online information about products that they want. These recommender systems incorporate "wisdom of crowds" or algorithms that harness the "collective intelligence" of participating audiences who share their knowledge and opinions on Web 2.0 platforms (O'Reilly, 2005). They range from search engines (e.g. Google PageRank, Technorati), ratings (e.g. IMDb, eBay ratings), and collaborative filters (e.g. Amazon suggestions) that track the behavior and actions from a lot of users (Anderson, 2006). A rating system asks users to express if they like or dislike certain items, so that it can offer consumers better choices in the future according to their preferences and opinions. It requires the active participation from users to click-through webpages and

rate and like various products. Collaborative filtering tools, on the other hand, are considerably more "passive" by extracting recommendations from users' browsing histories and past purchases from a web store like Amazon.com (David and Pinch, 2006). It is rather based on what customers do instead of what they say on the Internet. Such behavioral filters are less subject to bias than "active" recommendations in the form of ratings expressed by individuals who may differently interpret their choices (i.e. rating scores) or even have a commercial interest to promote a certain product

Besides software, filters can also be people or "tastemakers" that offer recommendations or guidance on the Internet to consumers in need of information (Anderson, 2006: 99). Traditionally, the practices of producing and distributing cultural contents were restricted to "professionals" like critics and celebrities who are economically driven. Consumers could then not intervene in this predominantly top-down corporate driven process. They remained largely passive in consuming content without reflecting the information, generating a discussion, and passing it on to other consumers. However, digital technologies provided passionate "amateurs" or mavens great alternatives to expand their knowledge and to help their peers (Anderson, 2006).

In the new media landscape, individual users "are increasingly active – selective, self-directed, producers as well as receivers of texts" (Livingstone, 2004: 79). Advances in technology have given traditional "consumers" an additional role of producing content as part of their media usage. While consumption indicates that the individual deals with media content passively, production emphasizes the active participation on the Web. Production relates to both the distribution of information via media as well as the distribution of content created by users themselves. Every media user can now produce and distribute high quality content to a global community of Internet users with relative ease via basic means such as Internet connection and a camera phone.

Bruns (2008) initiated the term "produsage" to describe the dual role performed by those that publish their self-created content while using the ideas and knowledge by others at the same time. Audiences and users engage in a "participatory culture" by selecting, rating, and discussing cultural products on video-sharing websites (e.g. YouTube), social networking sites (e.g. Last.fm), webzines or blogs (e.g. Pitchfork), and Wikipedia (van Dijck, 2009). Media content produced and circulated on various digital platforms as a result of user creativity and interaction is widely regarded as "user-generated content" (UGC) (van Dijck, 2009; OECD, 2007). In a 2007 report by the Organization for Economic Co-operation and Development, three basic criteria are proposed to define UGC that is made "publicly available

over the Internet", reflects "a certain amount of creative effort", and is "created outside of professional routines and practices" (OECD, 2007: 4).

The rapid growth of produsage and UGC has led to a "convergence culture, where old and new media intersect, where grassroots and corporate media collide, where the power of the media producer and the power of the consumer interact in unpredictable ways" (Jenkins, 2006: 2). The idea of convergence is mostly understood as a technological process bringing together multiple media platforms, often into one digital form (Jenkins, 2006). A good example of a device that has brought many different media functions together is the cell phone. Originally, a cell phone was created for users to make and receive calls without being constrained to a wired connection. Now, people are also able to use the cell phone as a music player, a video camera, and computer modem for Internet access.

According to Jenkins (2004), media convergence represents more than just a shift in technology; it also describes cultural and social changes (p. 34). While media companies are delivering their content across a wide range of channels for the purpose of increasing revenue, consumers are encouraged to access many different platforms where they can participate, interact, and co-create with other users (Deuze, 2007). In other words, convergence culture is part of the participatory culture in which the lines between the acts of production and consumption, and between professional and amateur media makers are blurring as former consumers have increasingly more control over the flow of media content (Deuze, 2007).

The emerging participatory media ecology suggests that technology is becoming a more important tool for consumers to obtain cultural information and provide recommendations to members of their social networks. Using the Web to search for cultural information proves to be tremendously efficient and time saving, mostly due to the benefit of access to a wider array of information (Kayahara and Wellman, 2007). Furthermore, Internet users often have the opportunity to respond to the information that they have found by sending the author an email, adding comments to a website, or spreading the content via social networking sites. This may also add to the pleasure derived from "recreational information seeking" that leads some people to prefer the Web for approaching culture because that is more enjoyable to them compared to offline sources (DiMaggio and Hargittai, 2002).

The new mode of finding and sharing cultural information performed on the Web has slightly modified the definition and characteristics of market mavenship in terms of the type of medium through which a message can be transmitted and the nature of the intended audience of that message. Originally, mavens informed themselves about the marketplace

through broadcast media like television and radio before sharing that knowledge face-to-face within their close personal social network (Feick and Price, 1987; Clark and Goldsmith, 2005). Online communication channels like social networking sites and blogs have however enlarged the reach of mavens to give their opinion and recommendations regarding cultural products to a vast, rather distant network of friends and often even complete strangers. Also, they are no longer dependent on offline sources to keep themselves updated about many different consumer products, because they can simply turn on their computer or mobile phone and see what other consumers have posted online. These people who both accumulate and frequently distribute information via electronic platforms are known as "e-mavens" (Ho and Dempsey, 2010).

Despite the increasing importance of information dissemination through new technology, offline social networks and traditional media remain to play the leading roles in the exploration and exchange of culture (Kayahara and Wellman, 2007; Tepper and Hargittai, 2009). Kayahara and Wellman (2007) found that people first seek information about cultural products from interpersonal ties or other offline information sources (e.g. newspapers, bookstores), and only then go online to gather additional information about the recommendations they received from their original source. They may share this new information with their ties that, in turn, again provide them with further cultural information and opinions. This finding led the researchers to propose these extra steps to be included in the model of the traditional two-step flow of communication.

What this new model fails to include is the act of forwarding electronic content by e-mavens who regularly give their advice and opinions about products and services in personal blogs, forums, and other such online platforms. In Kayahara and Wellman's (2007) model, the market maven is merely spreading information in one's offline social networks. Results of several studies however indicate that consumers with market mavenism tendencies are also highly motivated to share their knowledge within an online context. Driven by needs to be socially involved, to be helpful to others, and to be developing personally, mavens pass along websites or specific online content to others via electronic communication channels such as email and instant messaging (Ho and Dempsey, 2010). Moreover, they tend to participate in consumer-based online communities where they frequently provide input or post information and interact with other community members (Kim et al., 2011). Besides social and personal benefits from participating in online communities, mavens also satisfy an entertainment value by exchanging information and helping other consumers to make decisions on the Internet.

2.5. Music exploration and sharing in the digital era

This final theoretical chapter looks at the importance of digital technology in finding and spreading information about new music. As discussed in the previous chapters, the Internet and particularly Web 2.0 technologies have greatly altered the ways people go about searching and sharing cultural information. An important mechanism for the dissemination of information about new cultural products is WOM. Traditionally, WOM only involved face-to-face interactions between members of personal (offline) social networks. For instance, a person could tell a friend about a recent music video or recommend a new album. Such personal information sources can trigger consumers to gather more information about it via traditional media and digital media (Sonck and de Haan, 2012). For example, music fans want to read more about an album or artist in a printed magazine or visit the official websites of their favorite artists to find scheduled concerts and such other news. With digital media, they can also inform themselves about new music by reading the experiences and opinions shared by other, mostly unknown, interested persons on fan sites or blogs. The growth of such eWOM platforms have changed people's social networks that are becoming increasingly defined by weaker ties of online friends instead of stronger ties such as close friends or family members.

In addition to the expanded opportunities for gathering information, opinion leaders and mavens in music do now have a large amount of tools at hand to spread their recommendations on the Internet. Such individuals invest heavily in looking up the market and share their knowledge with their peers by participating in online communities (e.g. forums), posting reviews on blogs, or talking to their friends on various social networking sites. What is more, digital media allow for interactivity between users who collaboratively create, edit, and upload content, but also between music artists and fans who are brought more "closely" together. On Twitter, for example, music celebrities provide their audiences with updates concerning their professional work but also reveal information about their personal life (Marwick and Boyd, 2011). Fans can easily access and engage with such content by replying to the celebrity tweets or asking questions with the possibility of getting a response back.

The music industry has dramatically changed since the digital revolution and arrival of new interactive technologies. Wikström (2009) summarizes this transformation as follows: "the new music industry dynamics is characterized by high connectivity and little control, music provided as a service; and increased amateur creativity" (p. 8). In the digital era,

copyright holders have lost control over the distribution and consumption of their music albums and songs, mainly due to the technological innovation of peer-to-peer (P2P) networking (Wikström, 2009: 148). P2P networking is a networking technology that allows communication and the sharing of resources to take place directly between large numbers of computers connected to the network. In such a network, consumers both supply and consume music or other kind of digital information without the owner's consent and without paying for the copyrighted material.

Since the introduction of the first mainstream P2P service, Napster, there is an intense debate about the impact of file sharing on the sales of recorded music (Wikström, 2009: 150). The majority of the recording industry argues that P2P file sharing is the blame for the decline in music revenues. They reason that consumers are turning to free but illegal means of acquiring music instead of purchasing music through legal methods. On the other hand, some would argue that music companies are actually benefiting from file sharing because more consumers will be able to access and discover music that they would not be able to discover otherwise. This is good for the entire music industry as it leads to expanding international markets since customers are able to find products outside their geographic region. According to the digital music report of the International Federation of the Phonographic Industry in 2012, music downloads are on a continuing rise, creating an enormous demand, and force record companies to make their music available to purchase online (IFPI, 2012: 10).

Unlike many other markets, the music download sector does not offer a physical product (e.g. laptops) or service (e.g. restaurant) to consumers. In his Long Tail theory, Anderson (2006) explains how music catalogues have shifted from expensive, physical (limited) space in local stores to cheap, virtual (infinite) shelf space on the Internet. In other words, audiences do now have access to vast amounts of musical content and information through which they need to be navigated. Because of this, legal online stores like iTunes enable consumers to "test" the product by listening to samples of the music for a short period of time at no cost before spending the money to purchase it. Once consumers have listened to the sample to make sure whether they like the music or not, they might decide the buy the full (download) version of the song or even an entire album which they might never had bought if they did not have the possibility of sampling the music.

Other popular ways to discover music are watching (or listening to) Youtube videos that contain music or streaming songs from music streaming services (Nielsen, 2012; Imam, 2012). Music streaming services, of which Spotify is the most famous example, provide millions of songs for users to directly listen to for free while paying with their attention to

advertisements. They generally follow a "freemium" business model requiring its users to subscribe for a paid premium account that gives them unlimited access to ad-free content and other advanced features of the service (Anderson and Wolff, 2010). Many of these services allow users to discover new music by searching for particular artists, genres, record labels, or playlists from friends, artists and other celebrities. Often, they also include recommendation applications such as an online radio station that plays a list of similar music based on a selected artist, song, or genre. While music-streaming websites do not make it possible to "own" or share the digital content to others, they are easy and effective tools for consumers to broaden their musical orientation.

The Web contains large numbers of sources that provide different types of information about music. To filter choices that will be of interest to them, music listeners can go online to look for critical reviews of new albums or rely on mavens who provide music recommendations and opinions in blogs, forums, customer reviews, or playlists (Gladwell, 2000). Online music critics and mavens thus serve as additional "filters" for the average music listener to confidently find their way through the long tail of common and obscure music (Anderson, 2006). Filters can also come in more simple forms such as average ratings based on multiple critic reviews and/or user reviews (e.g. Metacritic, RateYourMusic) or "tags" that categorize content according to genre, artist, country, or year. These types of information require less search and interpretation effort from the user than elaborate reviews and discussions. Many music websites therefore employ several different filters to make it as easy as possible for consumers to find their preferred music. For example, users of the music website "Pitchfork" can type simple key works (tags) in the search engine, read the trending album reviews with ratings, find related album reviews, and link to Spotify to play the albums.

Thus far, we have characterized the new music economy by a high level of network connectivity, and music provided as a service. These changes have caused music firms to lose their ability to control the flows of information. In his book, Wikström (2009) also talks about the increased amateur creativity in the contemporary landscape of popular music. In this regard, the Internet is believed to democratize the tools of music production and digital distribution enabling amateurs to create, remix, and distribute music and other related content online (Anderson, 2006; Wikström, 2009). These various kinds of tools are very cheap, easy, and available to all consumers equipped with an ordinary laptop and high-quality-low-cost software and hardware. As a consequence of the audience's improved connectivity and more widely accessible upload capability of digital sounds and images online have, the amount of

user-generated content in the area of music is increasing rapidly (Wikström, 2009: 158). The majority of UGC is a manifestation of what is often referred to as a "remix culture" (Wikström, 2009: 157). Remix culture closely relates to the concept of participatory culture, but emphasizes how consumers combine and edit existing materials to create new meanings and new products. For instance, audiences can (re)write entries in Wikipedia (Nov, 2007) or produce and distribute creative content (e.g. covers, slideshows, music videos) through sites such as YouTube (Burgess and Green, 2009). Also, they can create and promote their own music through social networking music websites such as SoundCloud. These examples show how audiences are not only passively consuming music but also contribute to the production of that culture.

Considering the changed dynamics outlined above, it can be expected that digital technology will become more important as a method for consumers to discover and share new music. Until now, little research has been conducted that explores to what extent and in which ways people find and spread information about new music on the Web. Using data from a survey conducted in 2003-2005, Tepper and Hargittai (2009) concluded that social networks and traditional media continue to be the most commonly used sources for college students to find new music. According to them, new technology is not an "all one thing"; it is a tool used by individuals to reinforce existing social and cultural patterns, rather than transform them (Tepper and Hargittai, 2009: 245). To put in other words, different types of online tools to search for and share music are used differently by different kinds of music consumers as a supplement to personal recommendations and traditional media. The authors of the study also separated the use of technology for finding music into two distinct categories: peer-to-peer (P2P) file sharing and browsing online. They found that using a P2P file-sharing network is more popular than any other activity that involves browsing online for music. There are multiple ways in which people can browse online to discover new music of which music libraries online (e.g. iTunes) or Internet music sites are the most popular ones (Tepper and Hargittai, 2009: 234).

Tepper and Hargittai (2009) also examined the important role played by opinion leaders or mavens in the music discovery process. In measuring mavens, students were asked whether they considered themselves to be "someone who frequently makes recommendations to others regarding new music" (Tepper and Hargittai, 2009: 236). Also, top mavens were self-identified as persons who recommend music to at least five other people on a regular basis. In the sample, thirty-four percent of all students consider themselves to be a maven, while top mavens were represented by 16% of the students (ibid: 245). Mavens generally

invest a lot of time in listening to music, have varied tastes, and are actively involved in social networks, providing as well as receiving information about music on a regular basis (ibid: 245). While the authors give insights to how people are mainly using their social networks to explore music in offline settings, there is not enough information to explain how and to what extent mavens recommend music to people in their offline social networks compared to their online social networks. Also, it remains unknown what exact online sources mavens use for spreading information about new music as well as the motivations for these specific uses.

Walsh and Mitchell (2010) were the first to look more closely at the characteristics and motivations of e-mavens for visiting websites and spreading information in a music context. Compared to non-e-mavens, e-mavens tend to be younger, less educated with a lower income, and are more likely to be represented by a high proportion of females (Walsh and Mitchell, 2010: 51). Walsh and Mitchell (2010) found that the two overall factors of music information need and personal/professional interest motivate e-mavens to use Internet music websites (p. 52). Subsequently, they identified four groups of e-mavens with each having their distinguishing characteristics and motivations: music professionals, high Internet using e-mavens, non-community e-mavens, and non-online communication e-mavens.

Out of all groups, music professionals are most likely to have a job-related interest in music sites, are the least educated, recommend music to friends most regularly, are motivated to obtain topical information about their favorite artists, visit internet music websites most frequently, and they get to know about these sites mainly through magazines and newspapers (Walsh and Mitchell, 2010: 53). High Internet using e-mavens are characterized by having a high need of information, spending the most time online, and relying mainly via e-mail newsletters to find about music websites. Non-community e-mavens are less interested in the music industry and are rarely asked for information about music styles, bands, songs and websites. They are most likely to be well educated and young, spend their time online mainly for private purposes, and get to know about music sites mainly through CD covers. The fourth segment of the groups, non-online music communication e-mavens, have the lowest need for information, are not likely to have much interest in the music industry, and come to know about music websites from newspapers and magazines (Walsh and Mitchell, 2010: 58). All groups rarely surf the Internet or get involved in online music communities in order to become knowledgeable about music sites.

In their study, Walsh and Mitchell (2010) restricted themselves to explore the frequencies of e-mavens visiting and using music Internet music sites, ignoring various other online platforms where music can be evaluated and discussed. Digital technology facilitates

the distribution of information and consumer feedback on music by allowing continuous interaction between consumers through multiple eWOM channels such as social networking sites, personal blogs, and video sharing platforms. Research is needed that examines the intensity of e-mavens use to spread information about music on the Internet as well as on which online platforms eWOM is most vigorous.

The contributions of Tepper and Hargittai (2009) and Walsh and Mitchell (2010) to the field of digital technology and music exploration and sharing are rather outdated as many new (free) music Web-based services (e.g. Spotify) and mobile applications (e.g. Discovr) have been spread and adopted by the mass in the last couple of years. Also, many questions remain unanswered that would help to better explain technology use for music exploration and sharing. In addition, it is unclear which kinds of platforms mavens mainly use to make recommendations to others online. The paper at hand will therefore aim to answer the following overarching question:

> *How do music consumers use digital technology to find and spread information about new music as compared to using social networks and traditional media?*

Music consumers can be divided into many groups in terms of musical preferences and social background. A central concept in the literature on musical taste and social background is the "cultural omnivore" (Van Eijck, 2001; Warde et al., 2007; Savage and Gayo, 2011). The cultural omnivore refers to an individual "who is deemed to enjoy a pluralistic range of cultural activities drawn from both elite and popular culture" (Savage and Gayo, 2011: 337). There is some evidence that members from higher status groups have a greater likelihood of being omnivorous than members from lower-status groups (Van Eick, 2001; Peterson and Simkus, 1992). Omnivorous individuals who like many dissimilar genres of music (e.g. alternative rock, classical music, blues) are also often mavens (Tepper and Hargittai, 2009). They are more likely to use social networks for finding new music than individuals who enjoy music across rather similar musical traditions. In contrast, omnivores tend to use traditional media less often, possibly because heavy use of traditional media hinders them to seek for a great variety of tastes (Tepper and Hargittai, 2009). In terms of technology use, there is no support that omnivores are more likely to use technology for finding information about new music (Tepper and Hargittai, 2009).

There is an increasing body of literature on technology use in relation to social background differences such as in gender, age, and education. Evidence suggests that women are less likely to spend time online and claim lower-level web-use skills than men (Tepper

and Hargittai, 2009; Hargittai and Shafer, 2006). Younger people have also been shown to be "digital natives" who are highly technological savvy and use the Web more frequently than older generations of people or "digital immigrants" who have been growing up with old-school technologies such as radio and television (Prensky, 2001; Fox, 2004; Selwyn et al., 2005). Factors of socio-economic status are also important predictors of people's Internet uses, with those with higher levels of (parental) education and of a more privileged family background using the Web for more "capital-enhancing online activities" (Hargittai and Hinnant, 2008; Hargittai, 2010).

Tepper and Hargittai (2009) have touched upon the predictive power of several factors on the use of technology for exploring new music; gender and socio-economic status; musical habits and tastes; and Internet user experience. They found that women were significantly less likely to use technology for finding music. However, inconsistent with other theory and evidence suggesting that discovery and social status are linked, parent's college education – a measure for socio-economic status – did not predict the use of technology for the discovery of new music (Tepper and Hargittai, 2009). The authors explain this unexpected result due to the lack of variation in the sample consisting of students who often have parents that are both college graduates. Further research is desired that also studies different age groups in order to control for more variation in the sample. Therefore, in this paper, we will analyze more closely the links between the discovery and sharing of new music, social background and status, technology use, and opinion leadership. Several sub-questions are formulated to help guide this research. The first sub-question examines the relationship between social background and technology use for finding and sharing new music:

> *How does the use of digital technology for finding and spreading information about new music relate to social background?*

Interestingly, the time people spend online does not show a consistent relationship between heavy Web users and less frequent Internet users in their use of technology for purposes of finding or spreading new music (Tepper and Hargittai, 2009: 242). Except, people spending more time online are significantly more likely to use P2P services for finding new music. More research is deserved to scrutinize these relationships further, also in relation to music sharing practices. Thus, the second sub-question reads:

> *To what extent do heavy Web users differ from less frequent Web users in their use of digital technology to find and spread information about new music?*

In explaining the use of technology to find and spread information about new music, we also take a closer look at variables of musical consumption. People who listen to a greater number

of artists are more likely to use technology for finding new music (Tepper and Hargittai, 2009: 240). However, another indicator of musical consumption – amount of hours spend on listening to music – shows no consistent relationship between music discovery and the use of technology. A third sub-question examines how musical consumption variables are associated with technology use to find and spread new music:

To what extent do heavy music listeners differ from less frequent music listeners in their use of digital technology to find and spread information about new music?

Another area of interest to this research focuses on opinion leaders (mavens) and how and where they manifest themselves on the Web to take a leading role in recommending new music to other people. The first concern is to differentiate mavens from non-mavens. Tepper and Hargittai (2009) found that music mavens are more likely to be males, omnivorous in their tastes, and pre-disposed toward experimentation than non-opinion leaders. Consistent with previous studies on opinion leadership and market mavens, they tend to be heavily invested in their domain of expertise (e.g. they listen to lots of music) and receive many recommendations from other consumers (Feick and Price, 1987; Myers and Robertson, 1972; Tepper and Hargittai, 2009). The fourth sub-question inquires whether these attributes of mavens are still applicable in this era of increasing Internet usage and capacity for many individuals to become opinion leaders in music:

What are the distinguishable characteristics of mavens in the realm of music?

Research suggests that mavens are more likely to be "early adopters" of technology for music exploration than non-mavens (Rogers, 2003; Tepper and Hargittai, 2009). They have established a reputation of expertise for themselves by providing a constant flow of valuable information and recommendations to other people. More than other consumers, they are "trendsetters" and are expected to take advantage of the opportunities provided by new tools to search for and actively share new music. Yet, a clear-cut understanding about the importance of digital media for mavens to find new music compared to their use social networks and traditional media is lacking. Also, it remains unclear what online platforms mavens mainly use to make their suggestions and give out advice and information about new music. Thus, a fifth sub-question asks:

How important are various digital technologies for mavens to find and spread information about new music?

Furthermore, the growing online presence of music-based social network sites and forums provide mavens with opportunities to express their preferences and share advice alongside other consumers interested in music. Baym and Ledbetter (2009) presented evidence that the

strength of a relationship is strongly associated with high frequencies of communication across almost all forms of communication (both offline and online). Therefore, it can be expected that mavens incorporate both their offline and online social networks as well as social media extensively to get their message across while at the same find about new music from users with similar tastes and interests as them. The sixth sub-question will investigate how mavens typically engage in word-of-mouth, whether by personal recommendations given in person or on the Web:

> *How do mavens use their offline and online social networks to find and spread information about new music?*

The following section describes the methodology and data used to answer these questions.

3. Method

This section provides a detailed description and argumentation of the applied research method and outlines the operationalization of the important concepts in this study. Then, it explains how the research sample was selected and how the data was collected. Finally, the analyses conducted in this research are clarified.

3.1. Survey

A survey was conducted to explore the ways people find out about new music on the Web and the role of other consumers' opinions in this process. The central question guiding this study was:

> *How do music consumers use digital technology to find and spread information about new music as compared to using social networks and traditional media?*

Focusing on who are mostly searching for information and who are also spreading information on a regular basis, so called mavens were identified that take an active role in recommending new music in their offline and/or online social networks. This explorative research is an extension of the study by Tepper and Hargittai (2009) and aims to investigate how important technology is for mavens and non-mavens in finding and spreading information about new music. To explain their use of technology, several possible factors were taken into account such as musical interests, Web use, and social background. The measurements that proved to be accurate in Tepper and Hargittai's (2009) study were used and modified in this present survey. In addition, other (answering categories to) variables were included in the survey questions relevant to the latest changes in digital technology and music discovery. See paragraph 3.2 for details about the variables and their appropriate measures.

Quantitative research in the form of a survey was deemed to be the most appropriate research method as it enabled to categorize and compare different groups of music consumers according to media orientation and information seeking and sharing practices. Conducting the survey on the Internet is ideal to collect data from large numbers of respondents who may be geographically dispersed (Sue and Ritter, 2007: 12). Furthermore, an online survey was preferred over a printed survey due to its low costs and great potential for fast turn around. The design of the data collection strategy in this study is explained into more detail in paragraph 3.3. This type of research also allows us to generalize the findings from the data

sample to the rest of the population. Most responses to the survey were attained online while a small part of the sample included respondents who filled out the questions offline. The sampling strategy and implications for the generalizability of the results are further discussed in paragraph 3.4. A final advantage of online surveys is the direct data entry in other software to analyze the results (Sue and Ritter, 2007: 12). See also paragraph 3.5 for an elaborate discussion on how the data was processed and analyzed.

3.2. Operationalization

In this paragraph, the measurements of the independent variables and dependent variables studied in this research are explained in six different subparagraphs: demographics, time spent online, social networks, musical habits, finding new music, and spreading new music. Each subparagraph describes what was done and how it was done (i.e. the survey questions, response categories) to measure the relevant variables (see also online survey in appendix C).

Demographics

Demographic information was asked to know more about the social background of the respondents. Besides controlling for gender (0 = male; 1 = female) and age (both in years and groups: less than 22 years; 22-35 years; 36-49 years; more than 49 years), socio-economic status was measured through the level of education (0 = less than high school; 1 high school or equivalent; 2 = vocational school/some college; 3 = bachelor's degree; 4 = master's degree; doctoral degree) with higher levels of educational attainment being associated with better social end economic outcomes (i.e. more income, greater access to healthcare resources, social networking). Also, the nationality of the respondents was asked to inform about their cultural background.

Time spent online

Respondents were asked to indicate how many hours they spend using the Internet through both their PC and mobile phones per week on average (not including email and chat use). An ordinal variable was used for *time spent online*, represented by five categories (less than 4 h; 4-12 h; 13-21 h; 22-30 h; more than 30 h), to determine their use and experience with information technologies.

Social networks

The survey also asked for the amount of friends that the respondents have in their social networks. Respondents were asked to indicate the number of friends they have in their daily life, called *offline friends* (less than 6 friends; 6-20 friends; 21-35 friends; 36-50 friends; more than 50 friends); and how many people they have "friended" on Facebook (less than 51 friends; 51-200 friends; 201-350 friends; 351-500 friends; more than 500 friends), called *online friends.* To ensure that the respondents did have a similar perception of real friends with personal acquaintances, a definition of a "friend" was provided at the start of the questions: "a person with whom one has a bond of mutual affection, typically one exclusive of sexual or family relations" (Oxford Dictionaries, 2013). Respondents with more than 35 offline friends and 350 online friends were called *connectors* – persons who are highly connected to various social networks (Gladwell, 2000). These people constitute the group of connectors in the analysis representing 4.6% of the respondents.

Musical consumption

In terms of musical consumption, respondents were asked about their current musical interests and habits. First, they we are asked to indicate whether they frequently listen to each of the following twenty (combinations of) genres and subgenres: (1) classical; (2) jazz; (3) pop; (4) alternative rock; (5) hardrock; (6) dance and electronica; (7) hiphop/rap; (8) R&B/soul; (9) new wave; (10) blues; (11) reggae; (12) punk; (13) hardcore; (14) opera; (15) folk; (16) country; (17) heavy metal; (18) americana; (19) techno; (20) latin. Following van Eijck (2001) and Bryson (1996), all musical genres were structured on the basis of three distinct categories: highbrow, middlebrow, and lowbrow culture. These hierarchical classifications of musical genres as more or less "legitimate" (highbrow) or "popular" (lowbrow) signal membership in the higher or lower status groups (Tepper and Hargittai, 2009). A cultural good is legitimate when it is conventionally regarded as difficult (i.e. demanding attention to form rather than content) and exclusive opposed to the more simple and accessible lowbrow cultural objects (Bourdieu, 1984).

An *omnivore* variable was created as a measure of musical preference across multiple genres. According to Peterson and Kern (1996), the defining characteristic of a music omnivore is someone whose musical preferences embrace various degrees of social prestige or legitimacy, taking in not only highbrow tastes but also middlebrow or lowbrow tastes.

Respondents were coded as omnivores if they chose a genre or subgenre from 5 or more of the following 7 categories: classical, jazz, pop, rock, dance, hiphop/rap, and R&B/soul.[1] These seven genres represent very diverse musical traditions and tastes: highbrow (classical, jazz), middlebrow (rock, pop), and lowbrow (dance, hiphop, R&B). Therefore, 15.1% of the respondents combining five or more musical genres from these categories were considered to be omnivores.

Then, the ordinal variable called *hours of music* was operationalized based on the number of hours (less than 3 h; 3-10 h; 11-20 h; more than 20 h) respondents spend on listening to music in a typical week. *Number of artists* is another ordinal variable designating to how many different artists or bands (less than 6 artists; 6-10 artists; 11-15 artists; more than 15 artists) respondents listen to in a week on average. With these two variables, heavy music listeners and more casual music listeners were identified.

One of the main purposes of this research is to differentiate mavens from non-mavens and examine their characteristics. In the survey, the term "mavens" was preferred instead of opinion leaders to define them by the frequency of sharing information with others rather than the level of expertise in one domain (e.g. music) that mainly defines an opinion leader. The concept of *mavens* was operationalized deductively based on the measurements originally used in the study by Tepper and Hargittai (2009) by asking respondents to whether they self-identify as "someone who frequently makes recommendations to others regarding new music." A third of the sample (exactly 33.3%) self identified as a maven. Furthermore, *top mavens* were measured as a binary variable indicating whether or not a respondent makes recommendations for new music to five or more people on a regular basis. On average, 18.9% of the respondents were identified as top mavens. Likewise, the variable of *recipients of recommendations* was created to point out respondents who also receive recommendations for new music from five or more people on a regular basis.

[1] This selection of genres to measure omnivores was chosen for methodological and theoretical reasons. First, all seven genres were frequently listened to by at least a quarter of the sample which would allow us to identify enough respondents who liked five or more of these genres. It was decided to not include all types of music used in the survey for the omnivore measure because most of these genres and subgenres are perceived as lowbrow. This would involve the risk that some respondents are coded as omnivores whose musical tastes merely represent popular culture. Instead, the aim was to find persons with truly omnivorous tastes, combining highbrow musical genres and middlebrow and lowbrow genres. Many alternative measurements for the omnivore variable with different mixes of genres were tried and, in most cases, the results were similar.

In addition to mavens, Gladwell's (2000) definition of *salesmen* – persons who are able to "sell" products and ideas to others – was used to specify those people who are skilled at influencing other people in what kinds of music they like. The survey asked the respondents to rate how strongly they agreed to the following statement based on five-point Likert scale: "When I recommend people to listen to a particular music style, band or song, they will always follow my suggestion and listen to that music." In order to have a select group of true salesmen, only 3,9% of the participants (those that strongly agreed with the statement) were identified as such. The similar scale (strongly disagree; disagree; neutral; agree; strongly agree) was also used to measure the variety-seeking behavior of the respondents through the next statement: "I always experiment and actively search for new things to try when it comes to music." Those respondents with the highest level of interest in new music discovery (i.e. who answered with "strongly agree") were subsequently classified as *experimenters* (represented by 10.5 % of the sample).

Finding new music

The survey included a list of 28 different ways in which people find music that is new to them. Most of these channels of finding new music match those that were originally used in the study by Tepper and Hargittai (2009), but also new categories were added to account for new technologies for finding music like some mobile applications (e.g. Discovr) and music streaming services (e.g. Spotify). The survey asked: "In general (not specific to any particular song/CD/album), when you try something new or different (that is, a song or artist that does not fall within the category of music you "typically listen to"), how do you typically find out about such music?" For each item, the respondent was asked to rate how often they find music through that particular method based on a five-point Likert scale (never; rarely; sometimes; often; very often). They were also asked to rank their top three ways for finding new music in order of preference. Based on Tepper and Hargittai's (2009) categorizations of finding new music, each of the 28 methods were classified as *social networks*, *traditional media,* or *technology* to identify which of the three general means of finding new music is most often employed by people (see table 3 for a list of these designations). Afterwards, those methods that fall under *social networks* were divided into *offline social networks* and *online social networks* depending on whether the recommendation or information sharing is done in person or via the Internet. Dummy variables were used to indicate whether a respondent employs one of these five methods as a first, second or third choice to find new music.

Spreading new music

The final part of the survey was dedicated to the range of possibilities of spreading new music. The respondents were again provided with a list of items (18 in total) to which they were asked to rate how often they used that particular method for introducing other people with new music. The majority of these items were a modification to the exchanges of music listed in the previous section concerning the ways in which people find new music. Some specific ways of spreading music were added such as sharing online playlists or posting comments to music videos online. Channels via traditional media to spread new music were left out due to its irrelevance, with the exception of writing stories about a song/album/artist for a printed newspaper/magazine. Once more, the respondents were asked to identify their top three most typical ways for spreading new music to others. Each approach for spreading new music was subsequently categorized under *technology*, (*offline*/*online*) *social networks*, or *traditional media*. Again, a dummy variable was created for each of these general methods to identify whether a respondent ranks them as their three most preferred ways for spreading new music.

3.3. Data collection

The survey was pretested with a select group of five people with different nationalities (British, German, French, Spanish, and Dutch) before distributing it online. Testing the survey questions and answering categories with persons from different cultural backgrounds was done on purpose as they might interpret questions differently considering their difference in native language and proficiency of English. Also, they are a better reflection of the general target group than five people with the same nationality. Each test person filled out the survey individually and was asked to check for and write down possible spelling mistakes, unclear questions and answers, and missing items. After completing the survey, a short interview was conducted with the test person giving his or her feedback and ways to improve the survey. This has resulted in 2 questions and 3 answers being rephrased. Specifically, the list of items to find new music was adapted following the suggestions of the test persons for additional ways of findings new music: “watching a TV program in which the song/artist was featured as part of the sound track”, “watching a TV commercial in which the song/artist was featured” and “watching a music video on the Internet (e.g. YouTube)”. Moreover, the item of “using P2P services” to find/spread new music was unclear to some of the test persons and was

therefore changed into "using a file-sharing network/service (e.g. BitTorrent, Limewire)" to make it more easy for respondents to understand what is meant with these tools. No changes to the survey were made in terms of the lay out. The pre-test contributed to a high internal validity of the study.

The final survey was created on the website qualtrics.com and accessible for anyone to fill out through a link posted on several Facebook group pages. One of those pages was from the Swedish music distribution service called 'Spinnup' which is "liked" 626 times on Facebook. Spinnup is a way for artists to get their music out on Spotify, iTunes, and so on, and also an opportunity to get noticed by a scout, which works as a direct link to Universal Music. In addition, the link of the survey was shared in Facebook groups with large amounts of members including fellow students, family, friends, sports club associates, and unknown persons. Also, individualized emails were sent to personal acquaintances as well as people approached at the 'Hard Rock Café' located in Stockholm. At the same place, some other potential respondents were asked to fill out the survey in paper. The survey has been online for 2 weeks from the period of 7 May 2013 till 21 May 2013. Follow-up invitations to the survey were sent after the first week via e-mail and Facebook to remind those that have not responded yet. After the second week, 266 responses to the online survey were monitored of which 251 were completely filled out. In total, the printed survey was completely filled out by 34 people from the 42 that were taken. All incomplete survey responses were left out for further analysis.

3.4. Data sample

The unit of analysis for this explorative study is music consumers. Convenience and snowball sampling was used to recruit participants that are readily available and willing to participate in and forward the survey among their acquaintances. This sampling strategy made it easy and fast to search for a diverse sample that could be both reached offline and online. Diversity of respondents was required to a certain extent in order to answer the question on how different social classes find and spread new music. Using such a sample is however not without its limitations. The most obvious criticism to this combination of non-probability sampling techniques concerns the issue of sampling bias as respondents who self-select into the research sample are not representative of the entire population; they tend to have a particular interest in the survey topic (Sue and Ritter, 2007: 32). Another weakness of this approach is that the sample includes far more acquaintances than "strangers" in contrast to most other

studies using sampling frames given by institutions such as college campuses (e.g. Tepper and Hargittai, 2009). As a result, the study is low with respect to external validity implying that the results obtained from the sample are limited in making generalizations to the total population.

The sample consists of 285 respondents with a moderate variation in demographics (i.e. gender, age, nationality), Internet use, and musical consumption to support evidence for possible differences between certain types of people in how they find and/or share information about new music. There is a close-to-equal representation of males (48.1%) and females (51.9%) while the average respondent is 26 years of age (std. deviation: 9.1 years; minimum: 17 years old; maximum: 63 years old). The respondents come from 30 different countries with a little less than half (49,8%) being Dutch (see appendix A2 for a complete list of nationalities). In terms of education, more than half (63.9%) has finished a bachelor's degree or higher, indicating high socio-economic status and thus excellent access to new technology. This also partly explains the fact that most participants of the survey (78.6%) spend more than 12 hours using the Internet on their PC and cell phone each week, with more than a quarter (26.3%) spending time online for even more than 30 hours.

3.5. Data analysis

The results of the survey were transformed and analyzed in SPSS. First, descriptive statistics were used to get a sense of the musical background of the respondents (listening behavior, experimentation with music, preferences, making and receiving recommendations) and to gain a better understanding of the most preferred ways in which they find and spread new music. Then, OLS regression analyses were conducted to predict the use of technology for finding and spreading new music by looking at the independent variables of social background (sub-question 1), Web use (sub-question 2), and musical consumption (sub-question 3). A binary logistic regression analysis was performed to understand the characteristics of mavens in the music domain (sub-question 4). Finally, independent samples t-tests were used to analyze the importance of new technology to find and spread information about new music between mavens and non-mavens (sub-question 5), as well as how mavens use their offline and social networks to find and spread new music (sub-question 6). The results of these analyses are being presented in the next section.

4. Results

4.1. Musical background of respondents

This paragraph presents descriptive statistics about the respondents' frequency of listening to music on a weekly basis, their openness to explore new things, what kinds of music they enjoy to listen to the most, and the extent to which they make and receive recommendations about new music. It is important to know these statistical data before examining the ways in which people find and spread new music, as they will indicate the significance of music (discovery) for the participants of the survey. First, when asked about the number of different artists they listen to on an average week, more than half (56.8%) responded that they listen to at least 11 different artists per week while just 17.5% of the sample indicated to listen to not more than 5 artists in any one week (see Fig. 3). When looking at the number of hours people spend on listening to music per week on average (see Fig. 4), it appears that music listening is a common form of entertainment for most people, with the vast majority (89.2%) spending more than 3 hours listening to music a week, and almost a third (30.2%) who listen to music heavily.

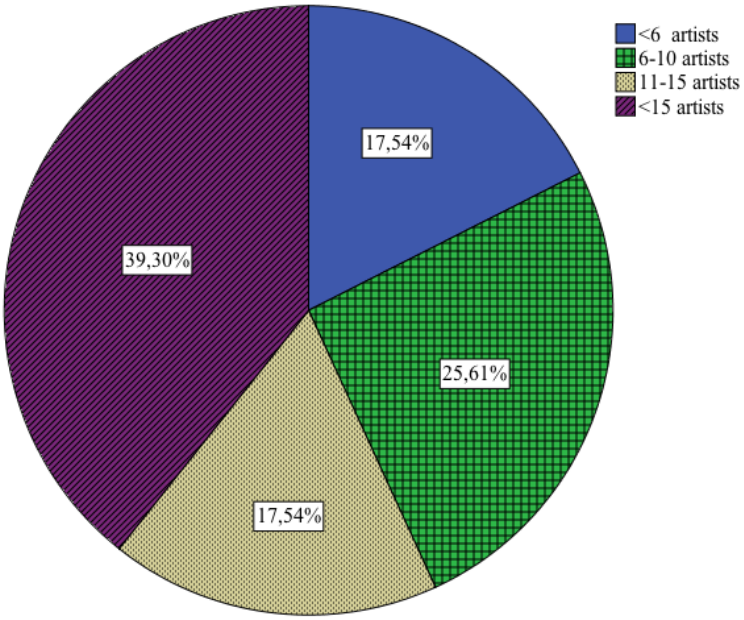

Fig. 3. Number of different artists that people listen to per week on average (N = 285).

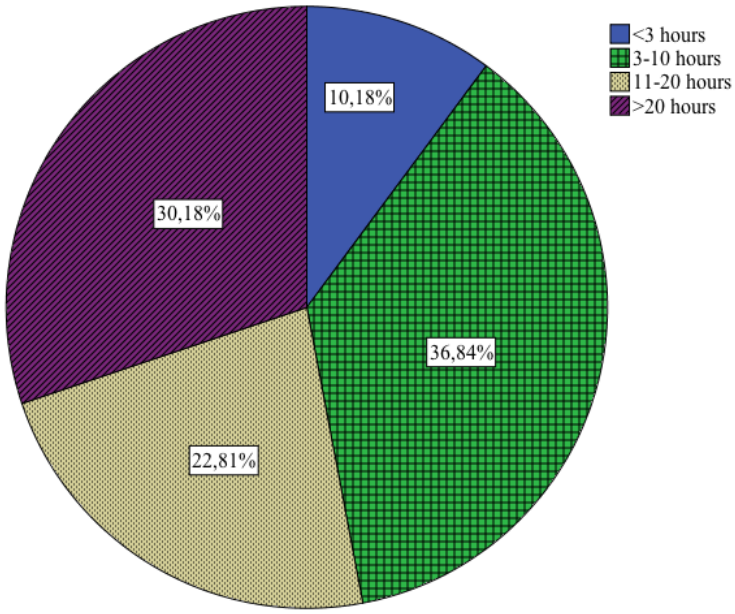

Fig. 4. Number of hours that people spend on listening to music per week on average (N = 285).

These descriptive figures make clear that people listen to music from many different artists on a regular basis, which suggests they have at least some sort of interest for finding new music in order to keep being entertained. Table 1 shows the level of interest in new music exploration between males and females. There is no evidence to suggest that male and female music listeners significantly differ in their variety seeking behavior ($X^2 = 3.492$; $p > .05$). In total, 43.5% of the music listeners engage in variety-seeking while 33.7% of the respondents appears to stick to music they like and know well while not often exploring for them new types of music. True *experimenters* – those who strongly claimed to always experiment and actively search for new music – represent 10.5 % of the sample.

Table 1. Respondents' variety seeking behavior regarding new music by gender (N = 285)

	Response to Question 14 (%)		
"I always experiment and actively search for new things to try when it comes to music"	Female (N = 148)	Male (N = 137)	Total (N = 285)
Strongly disagree	8.8	11.5	10.2
Disagree	22.6	24.3	23.5
Neutral	19.7	25.7	22.8
Agree	37.2	29.1	33.0
Strongly agree	11.7	9.5	10.5

Note: Chi-Square = 3.492, p = .479 > .05.

Those respondents who are rather neutral in seeking out for a variety of new music could be possibly interpreted as persons who do not actively look for new material on their own, but sometimes try out new things when they receive a recommendation from someone else. A third (33.3%) of the sample reported to receive recommendations from 5 or more people regularly (see appendix A1 for frequencies for recipients of recommendations and other variables). Besides listening to new music when others recommend them to do so, people can also be trendsetters themselves by taking the active role of *mavens*. As previously noted, 33.3% of the respondents self-identified as such a person who frequently makes recommendations to others about music. This group of mavens almost decreases by half if only those that regularly make recommendations to five or more people are included. Those persons are distinguished as *top mavens* represented by 18.9% of the people. Finally, 3.9% of the sample was entitled as *salesmen* who reported that their suggestions to listen to certain music are always followed by others receiving that recommendation.

Table 2. Number and proportions of musical genres that respondents listen to frequently categorized by highbrow, middlebrow and lowbrow culture (N = 285).

Genre	Count (%)	Genre	Count (%)	Genre	Count (%)
Highbrow		*Middlebrow*		*Lowbrow*	
Jazz	77 (27.0%)	Pop	217 (76.1%)	Dance and electronica	138 (48.4%)
Classical	69 (24.2%)	Alternative rock	146 (51.2%)	Hip/hop/Rap	95 (33.3%)
Opera	10 (3.5%)	Blues	44 (15.4%)	R&B/Soul	89 (31.2%)
		Punk	42 (14.7%)	Techno	58 (20.4%)
		New Wave	24 (8.4%)	Hard rock	55 (19.3%)
				Reggae	50 (17.5%)
				Folk	45 (15.8%)
				Country	36 (12.6%)
				Latin	35 (12.3%)
				Heavy metal	23 (8.1%)
				Hardcore	15 (5.3%)
				Americana	6 (2.1%)

Table 2 shows the popularity of several genres and subgenres of music that respondents could indicate to listen to regularly. Pop music and alternative rock (respectively listened to by

76.1% and 51.2% of the sample), generally perceived as "middlebrow" culture, turn out to be people's two most favorite genres. Almost half (48.4%) of the respondents often listen to mainstream dance music whereas jazz and classical music, two "highbrow" tastes, are listened to by around a quarter. On average, the respondents reported that they enjoy listening to 4.5 different types of music (M = 4.47, SD = 2.20) out of the 20 possible genres, with 15.1% of the sample appreciate at least five out of the seven dissimilar (sub-)genres of classical music, jazz, rock, dance, hiphop/rap, and R&B/soul – a measure used to identify *omnivores*. Thus, it appears that while music listening is an important activity in people's everyday lives, there is just a small number of persons that have very diverse tastes, listening to both highbrow and middlebrow or popular genres while always actively searching for new music to try out.

4.2. Popular methods for discovering new music

Table 3 presents a list of various possibilities to find new music, classifying each item as one of these three broad approaches – *social networks*, *traditional media*, and *information technologies*. The number of mentions refers to how many participants ranked it as one of their top three preferences for finding new music. Many observations can be made based on these frequencies. First and most interestingly, the two most popular ways of discovering music involve a type of new technology. These are either by watching a music video on the Internet (ranked by 38% of respondents) or by listening to a free music streaming service like Spotify (ranked by 34% of respondents). The latter turns out to have replaced illegal file sharing networks as the most preferred easy-to-use service for consumers to access and discover new artists or songs. Music consumers seem to appreciate the streaming possibilities that enable them to legally retrieve songs instantly for free while with P2P services they have to download a song first before they will be able to hear it. Using social networks to receive recommendations about music remains prevalent. These involve both recommendations from personal acquaintances in person (indicated by 30%) as well as in online settings such as social networking sites (20% prefer this option). The use of mainstream media to get ideas for new music has decreased in popularity compared to previous years. For example, 19% still prefers to discover new music from listening to the radio offline, which used to be much more common before (Tepper and Hargittai, 2009). An explanation for this might be that many radio listeners have started to listen to their favorite radio station by using an online player, which was listed by 19% of the respondents as a top three method for finding new music.

Table 3. Ways of finding new music, ranked in order of preference (N = 285).

	Number of mentions	%	Type
Watching a music video on the Internet (e.g. YouTube)	107	38	IT
Listening to a free music streaming service (e.g. Spotify, Grooveshark)	98	34	IT
A personal acquaintance recommended the song/album/artist to me in person	84	30	SN
A personal acquaintance recommended the song/album/artist to me via a social networking site (e.g. Facebook)	57	20	SN
Listening to a radio station (offline) that I frequently listen to	55	19	TM
Listening to live radio online	55	19	IT
A personal acquaintance played me the song/album/artist	51	18	SN
Watching a film in which the song/artist was featured as part of the sound track	39	14	TM
Browsing the Internet (not an online radio station or music library or online store)	38	13	IT
A personal acquaintance sent me the song(s) via the Internet	29	10	SN
A personal acquaintance pointed me to a site on the Internet where the song(s) was available	28	10	SN
Using a file-sharing network/service (e.g. BitTorrent, LimeWire)	22	8	IT
Referred to the song(s)/artist by a post shared on a social networking site	21	7	IT
Watching a TV program in which the song/artist was featured as part of the sound track	21	7	TM
Watching a music video on television (e.g., MTV)	19	7	TM
Browsing a subscription music library online (e.g., MP3.com or iTunes)	16	6	IT
I read about the song/album/artist in an online newspaper or magazine	16	6	IT
Browsing through multiple radio stations (offline)	14	5	TM
A personal acquaintance made me a CD/tape compilation	13	5	SN
I read about the song/album/artist in a printed newspaper/magazine	13	5	TM
Referred to the song(s)/artist by a mobile application (e.g. Discovr, Shazam)	11	4	IT
I read about the song/album/artist on a blog	10	4	IT
Referred to the song(s)/artist by an online service (a service that tries to match recommendations to users' preferences)	10	4	IT
Watching a TV commercial in which the song/artist was featured	10	4	TM
A personal acquaintance bought me the song/album/artist as a gift	8	2	SN
A personal acquaintance lent me a disk or recording of the song/album/artist	4	1	SN
I read about the song/album/artist on a discussion forum	4	1	IT
An employee of a music store recommended the song/album/artist to me	2	1	SN

Note: SN = social network; TM = traditional media; IT = information technology.

Figure 5 shows the relative popularity of social networks, traditional media, and information technology for discovering new music. Again, information technologies are by far the most popular means to find new music, with at least 82% of the sample using some sort of technology, and over a half (51%) considering it as their most favorite method. In contrast, traditional media are considerably less popular with only 18% of the sample using them as their most typical method for exploring new music. Social networks remain to be substantial with two-thirds (67%) indicating recommendations from people in one's social networks as one of their top three choices to find new music. Yet, they are no longer more popular than digital media tools (Tepper and Hargittai, 2009). This inspired to also inspect whether the recommendations from these social networks appear to result from face-to-face contact or online interaction.

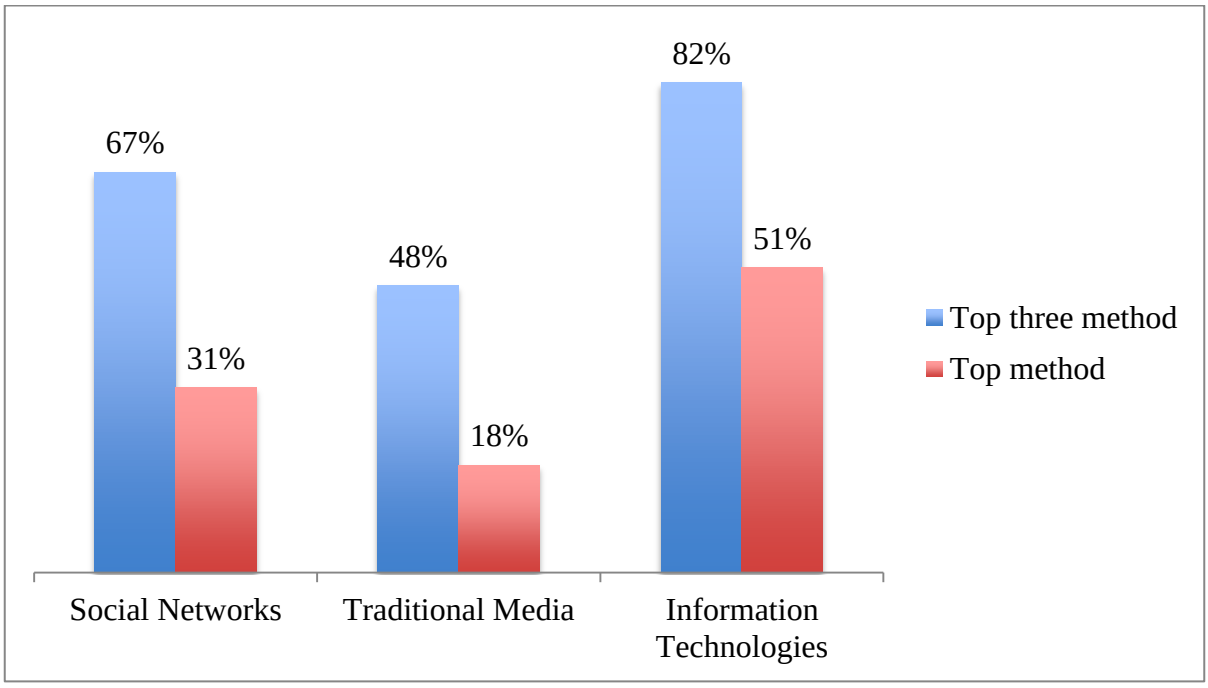

Fig. 5. Favorite methods for finding new music: comparing social networks, traditional media and information technology (N = 285).

Figure 6 shows that, while online platforms are becoming noticeably popular, people judge their offline social networks to be more useful than their online social networks for finding new music that they will like. These findings stress again how consumers highly appreciate the usefulness and credibility of recommendations given in person (Steffes and Burgee, 2009). They tend to rely mostly on strong ties to expand their cultural portfolio to which they feel very close and with whom they have frequent contacts (Bansal en Voyer, 2000; Laplante,

2011). Such strong ties are largely intertwined in one's offline social networks whereas online social networks mainly include weak ties to which people incidentally interact with and exchange new music.

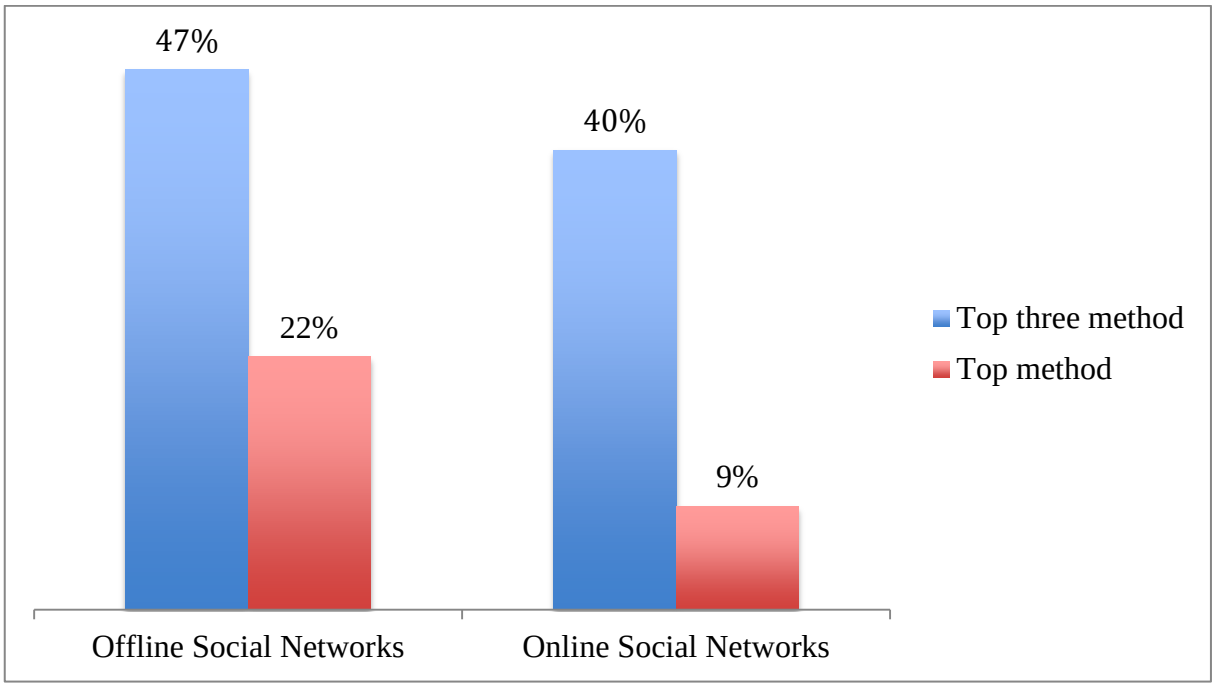

Fig. 6. Favorite channels for finding new music: comparing offline social networks and online social networks (N = 285).

On a final note, we can conclude from these descriptive data that the increasing possibilities available to find new music have dispersed people's preferences – noting that for 10 items in total, 10% or more ranked it as one of their three most favorite methods. Both offline searches and Web searches continue and seem to be interwoven, with people moving back and forth to their computer networks and social networks in order to find new music (Kayahara and Wellman, 2007). The growing importance of digital media in this search process suggests that consumers are starting to use the Web as a first channel to seek completely new information about new music. This finding has implications for the adjusted two-step flow model of Kayahara and Wellman (2007) suggesting that people only turn to the Web for additional information after they have received a recommendation from their interpersonal ties or elsewhere. However, while new technology has clearly become the most popular source for finding new music, "word-of-mouth" activity, particularly in its traditional sense, remains to be very important in the consumer process of music discovery.

4.3. Explaining use of technology to find new music

Digital technology has taken on a prominent role in how people find music new to them. Table 4 shows the results from OLS regression analyses to better explain the extent of its use by looking at several factors; gender, age and education; time spent online, musical consumption, and Gladwell's (2000) categorizations of mavens, connectors, and salesmen. In addition, these key variables are used to predict how often (offline and online) social networks, and traditional media are used by music listeners to find new material. To clarify, we look here at the mean of all items that measure the particular type of finding new music based on a Likert scale, and not the extent to which they ranked it as one of their top three most preferred ways to find new music.

Table 4. Predictors of using social networks, traditional media or technology to find new music, coefficients from OLS regression analyses. Numbers appearing in bold are statistically significant (N = 285).

Variables	Social networks	Offline social networks	Online social networks	Traditional media	Technology
Female	**.172****	**.161****	**.132***	**.223*****	.023
Age	**-.158****	-.088	**-.182****	.029	**-.181****
Education	**.173****	**.197****	.098	**.125***	**.134***
Time spent online	.003	-.111	**.119***	-.084	.002
Hours of music	.064	.064	.045	-.107	.072
Number of artists	-.007	-.078	.069	**.242****	**.130***
Top maven	**.234*****	**.191****	**.209****	.000	**.141***
Experimenter	.054	.008	.087	.002	**.233*****
Omnivore	.071	.066	.056	.117	.080
Connector	.033	.028	.029	.037	.095
Salesman	.085	.043	.103	.010	-.046
R^2	.198	.135	.232	.110	.298

R^2 = R Square = Variance explained. Coefficients are standardized (Beta).
Significance: *p < .05; ** p < .01; *** p < .001.

First, the use of digital technology for finding information about new music is explained by factors related to social background (SQ1). Contrary to the study by Tepper and Hargittai

(2009) suggesting that women are less likely to discover new music through digital technology than men, there is no such significance to be found in this research to support this notion. In fact, female music listeners tend to use social networks ($p < 0.01$) and traditional media ($p < 0.001$) for exploring new music more often than male consumers. Thus, they seem to be more actively searching for new music through these particular methods than their male counterparts. The variable age also has considerable predictive power in the models. In line with the literature on age and technology use, younger people are more often adopting new technology to find new music ($p < 0.01$) than older generations who are less technologically advanced (Prensky, 2001; Selwyn et al., 2005). This also holds true for their use of online social networks from which they significantly find new music more often ($p < 0.01$).

Likewise, the level of education shows a consistent relationship with the extent people use technology find new music ($p < 0.05$), underscoring how well educated people have better access to and are more capable of using a range of online services and options for cultural consumption (Hargittai and Hinnant, 2008; Hargittai, 2010). Music listeners with higher levels of education are also more likely to use social networks ($p < 0.01$) and mass media ($p < 0.05$) to find new music. This significant difference might be explained from the notion that discovery and social status are closely linked; that is, people that come from the professional classes and have advanced education tend to be "venturesome" – they are eager to adopt new ideas – in order to raise their status and prestige (Rogers, 2003). They are more interested in expanding their cultural repertoire by discovering new music than low status individuals who are satisfied with a smaller subset of music and feel less obliged to actively look for new styles themselves.

Furthermore, the use of technology for finding new music is explained by comparing heavy Web users with less frequent Web users (SQ2). Surprisingly, respondents who have more experience with using the Internet (*time spent online*) do not significantly use technology more often to find new music than people who spend less time online ($p > 0.05$). This gives the impression that people who spend more time online dedicate those many extra hours to other purposes rather than exploring and consuming music. On the other hand, heavy Web users do find new music through their online social networks more often than less experienced Web users ($p < 0.05$). This suggests that those who use the Web more often are more likely to have bigger networks and thus more frequent contact with online friends who can introduce new music to them.

When looking at the indicators of musical consumption to explain the use of technology to find new music (SQ3), we find similar results to that of Tepper and Hargittai

(2009). Again, it turns out that people who listen to a greater *number of artists* have a greater likelihood of using technology than those who are less invested in consuming music ($p < 0.05$). This variable also explains the use of traditional media to find new music ($p < 0.01$), which was not the case in Tepper and Hargittai's (2009) study. Such evidence suggests that heavy music listeners enrich their experiences by exposing themselves to mainstream media and finding suggestions through digital media. However, there is no significant relationship between the *hours of music* – another measure of musical consumption – across any of the five search strategies ($p > 0.05$).

As expected, opinion leaders (*top mavens*) have a greater likelihood to implement technology ($p < 0.05$) and their social networks ($p < 0.001$) in order to find new music than non-mavens in the sample. Examining the extent to which they use offline and online social networks, top mavens are significantly employing both sources more than non-mavens ($p < 0.01$). This supports the proposition that opinion leaders are socially active and search for new music that they can later share with others in their social circles (Myers and Robertson, 1972; Chan and Misra, 1990).

People that are always searching for new music – *experimenters* – appear to seek out variety mainly by going online where they noticeably find music more often than people that usually experiment less when it comes music ($p < 0.001$). Contrary to expectations, there is not much evidence to suggest that people with diverse musical tastes (*omnivores*) are more likely to find new music across any of the five methods than people without omnivorous tastes ($p > .05$). Likewise, the dummy variables of *connectors* – people with a lot of friends – and *salesmen* – people with great skills to persuade someone to purchase music – were not statistically significant predictors in any of the models.

The variables included in the models best predict the use of technology to find new music with a R squared value of 0.298, indicating that the model accounts for 29.8% in how often people use technology to discover new music. In addition, the regression analyses showed that the entire set of 11 independent variables explained 19.8% of the variance for the use of social networks to find new music ($R^2 = 0.198$). Out of the five regression models, the variance in how often people use traditional media to find new music is most weakly predicted. The overall model fit was $R^2 = 0.110$, which implies that only 11.0% of the use of traditional media is covered by the independent variables. Overall, the major contributors to the R squares appear to be whether the respondent is a top maven or not, and social background variables such as gender, age, and education. However, given the five relatively

low explained variances, the current models need additional significant predictors that can be used to better explain the extent to which people use certain methods to find new music.

In table 5, the use of technology to find new music is further detailed based on five distinct online activities; (1) browsing online, (2) looking on social media, (3) watching videos online, (4) using peer-to-peer file sharing networks, and (5) using free online services. The category "browsing online" refers to the combined means of browsing a subscription music library online and browsing the Internet in general. Similarly, the particular platforms of blogs, forums, and social networking sites where people can read about and be directed to new music (but not by recommendations from acquaintances) were merged into the action labeled as "looking on social media". The activity of "using free online services" entails both deliberately listening to a music streaming service like Spotify and coming across new music by an online service that automatically makes recommendations based on the users' preferences. The categories "watching videos online" and "using P2P services" are separate items from the list of ways in which people find new music.

Table 5. Predictors of using diverse technologies to find new music, coefficients from OLS regression models. Numbers appearing in bold are statistically significant (N = 285).

Variables	BO	SM	WVO	P2P	FOS
Female	-.046	**.112***	-.051	**-.182****	.059
Age	**-.169****	**-.137***	**-.205****	-.088	**-.208*****
Education	.015	**.144****	.033	.057	.038
Time spent online	.011	.017	**.124***	-.052	-.011
Hours of music	.088	.079	-.080	-.016	**.156***
Number of artists	.107	-.019	.104	.099	.113
Top maven	.048	**.224*****	.036	**.214****	.027
Experimenter	**.156***	**.176***	.067	.119	**.157***
Omnivore	-.002	.093	.011	.001	.066
Connector	.070	.110	.057	.037	.018
Salesman	.015	-.007	.094	.019	-.092
R^2	.161	.250	.130	.177	.198

Note: BO = browsing online, SM = social media, WVO = watching videos online, P2P = peer-to-peer file sharing networks, FOS = free online services.

R^2 = R Square = Variance explained. Coefficients are standardized (Beta).

Significance: * $p < .05$; ** $p < .01$; *** $p < .001$.

The additional OLS regressions show that women are more likely to use social media ($p < 0.05$), a positive relationship that was also found between gender and use of online social networks for finding new music. By contrast, they are less likely to use P2P services than men ($p < 0.01$) which hints at the idea that females primarily relish the social aspect of music discovery online (e.g. maintaining relationships with friends and family) and are less focused on searching for new music on their own when they use technology. As anticipated, age is significantly related to technology for finding new music, with younger generations using various types of digital media more often than older people. Although, no significant relationship between age and the use of P2P services appears in the model ($p > 0.05$). To give an explanation for this exception, it might be the case that music listeners from all ages are now downloading less from P2P networks and turn to free, legal alternatives that allows them to obtain and test music that they are not familiar with (The NPD Group, 2012). The level of education only helps to predict the extent to which social media are used to find new music ($p < 0.01$). While social media use is generally perceived as a typical mainstream activity due to low effort costs, people with higher education are perhaps more likely to use this type of technology if we consider that they have the technological affordances of smartphones and tablets to continuously access and find new music on social media.

In contrast to Tepper and Hargittai (2009), heavy Web users (*time spent online*) are not more likely to use P2P services in search for new music compared to less frequent Web users ($p > .05$). Again, this might have to do with the increased use of free music streaming services. People who spend a lot of time online are more likely to find new music by watching a music video on the Internet ($p < .05$).

While the *number of artists* that people frequently listen to is positively related to the general use of technology, it does not help to explain any of the different types of technology uses. However, people who listen to a lot more music (*number of hours*) have a greater likelihood to use free online services to search for new music than more casual listeners ($p < 0.05$). These services are ideal for those that like to spend many hours on listening to music because they can listen to specific albums, playlists, and online radio stations, or simply stream artists' entire catalogues at once. While doing this, they can also stumble across new music when following the recommendations offered by the online service that match their tastes.

As opinion leadership (*top mavens*) is associated with the use of technology to find new music, it is relevant to examine for which specific types of technology uses this is significant. It was found that top mavens are significantly more likely to use P2P services ($p <$

.05) and social media ($p < 0.001$) to find new music compared to those who are not top mavens. Possibly, mavens use them more often to find new music because have the opportunity to share their newest music discovery at the same time, whether that is by exchanging music files in P2P networks or making suggestions via social networking sites. Those who are always in search for a variety of new music (*experimenters*) are more likely to browse the Internet, use social media, and listen to free online services in order to find multiple genres and types of music ($p < .05$). Being an *omnivore*, *connector*, or *salesman* display no relationship with the various IT uses ($p > .05$).

4.4. Popular methods for spreading new music

In addition to looking at the ways in which people nowadays find new music, the popular methods for people to spread new music are examined. Respondents were asked to rank their top three most favorite methods for introducing new music from a list of 18 possible items. In table 6, these ways of spreading new music are listed in order of popularity. The most popular methods are recommending new music to a personal acquaintance in person (ranked by 69% of respondents) and playing the music to a personal acquaintance (ranked by 59% of respondents). Both of these are typical modes of information dissemination within individuals' offline social networks. The third most popular method is one that involves new music shared in an online social network: sending a song to a personal acquaintance via the Internet is chosen by 42% as one of their top three preferences to spread new music. A similar method – fourth in popularity – concerns a recommendation to a personal acquaintance via a social networking site (37% indicated this option).

While people generally most often use information technologies to discover new music, they rely considerably less on digital media tools for the purposes of sharing new music, particularly with other people than their friends and acquaintances. With 21% of the sample ranking the method as any of their top three ways for spreading new music, posting a public message containing the new music on a social networking site completes the top five most popular methods. It is important to note when people do make use of digital technology to spread new music, this often involves sharing existing content online (e.g. playlists, downloadable songs) rather than making some sort of personal or creative effort by writing on a personal website (ranked by 4%) or discussing music on a forum (ranked by 4%). Not many music listeners seem to feel the urge to help other (mostly unknown) consumers to explore new music by providing their recommendations and opinions online. This is further typified

by the nearly lack (1%) of respondents that indicated using consumer websites like Amazon to give their advice on new music as their top three method.

Table 6. Ways of spreading new music, ranked in order of preference (N = 285).

	Number of mentions	%	Type
I recommend the song/album/artist to a personal acquaintance in person	197	69	SN
Playing the song to a personal acquaintance	167	59	SN
I send the song(s) to a personal acquaintance via the Internet	120	42	SN
I recommend the song/album/artist to a personal acquaintance via a social networking site	105	37	SN
Sharing the song/album/live performance of an artist on a social networking site	60	21	IT
Sharing playlists online	50	18	IT
I give the song/album/artist to a personal acquaintance as a gift	36	13	SN
I lent a disk or recording of the song/album/artist to a personal acquaintance	29	10	SN
I make a CD/tape compilation for a personal acquaintance	26	9	SN
Using a file-sharing network/service (e.g. BitTorrent, LimeWire)	26	9	IT
I recommend and give my opinion on the song/album/artist on a forum	10	4	IT
I recommend and give my opinion on the song/album/artist on a personal website/blog	10	4	IT
I make comments and react on other comments to music videos online	7	3	IT
Sharing the song/album/live performance of an artist on a video sharing website	6	2	IT
I am an employee of a music store and recommended the song/album/artist to customers	2	1	SN
I recommend and give my opinion on the song/album/artist on an online shopping website (e.g. Amazon)	2	1	IT
I write stories about the song/album/artist for a printed newspaper/magazine	2	1	TM
I write stories about the song/album/artist for an online newspaper/magazine	0		N/A

Note: SN = social network; TM = traditional media; IT = information technology.

Figure 7 clearly illustrates the great popularity of social networks to spread new music as compared to using information technologies by showing the aggregated numbers for the topmost method. More specifically, it displays the dominant use of offline social networks, with almost two-thirds (64%) of the sample indicating it as their most favorite way to spread new music. Only 19% reported they find information technologies most preferable for spreading new music. It is notable that people do not use online tools for spreading new music as much as for finding new music. As found earlier, 51% of the respondents indicated they

use digital media as their most popular means of discovering new music (see again Fig. 5). It thus appears that people often first search the Web for new music before bringing this information to their ties, most notably to those within their offline social networks. There are several possibilities for this. First, it might be that consumers are more eager to share their new favorite music and experiences to their close friends instead of unknown users of the Web. Second, the relative ease of making a personal recommendation during an everyday conversation compared to using digital media (e.g. making a playlist or writing a review) could explain the popularity of (offline) social networks as channels of spreading new music. Future research might further examine these links between obtaining and sharing information online and offline by examining the uses and gratifications of interpersonal ties and the Web as integrated search systems and tools for spreading new music.

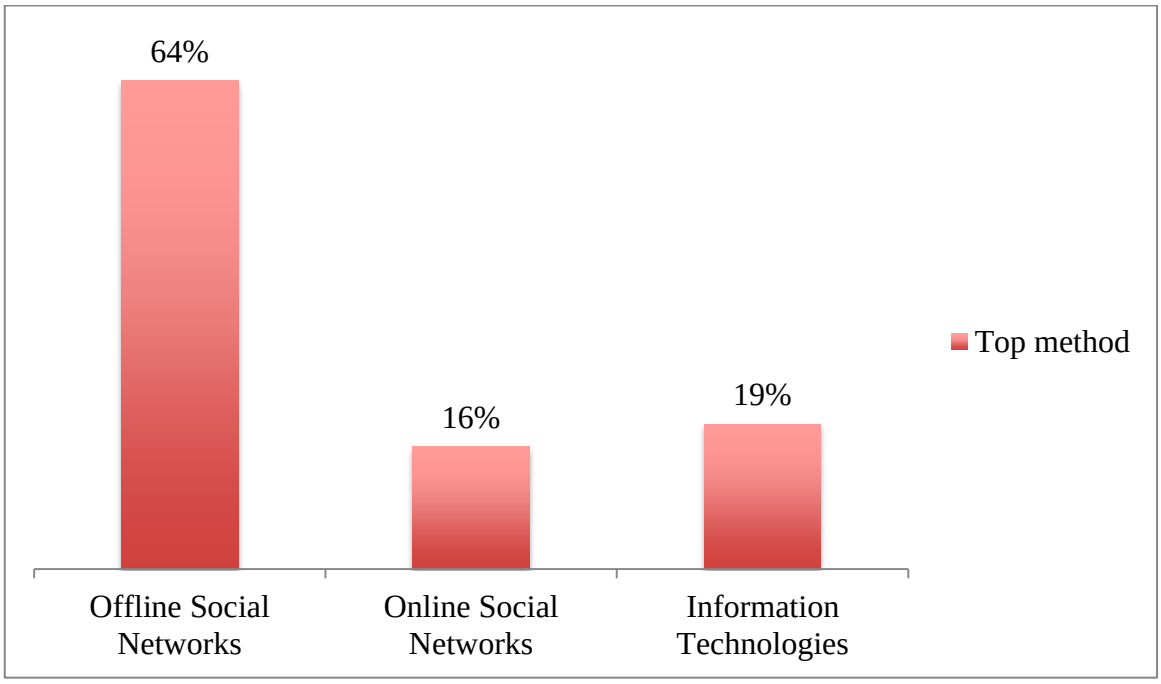

Fig. 7. Most favorite methods for spreading new music: comparing offline social networks, online social networks and information technology (N = 285).

4.5. Explaining use of technology to spread new music

Even though technology is far less popular than social networks as a method for spreading new music, given its prominence in debates about shifting consumer roles and increasing user creativity, it is relevant to examine the factors that predict its use. Table 7 shows the OLS regression analyses in which the uses of technology and social networks to spread new music

are explained based on a set of predictor variables. First, the factors related to social background are examined again (SQ1). While females tend to use technology and social networks more often than males to discover new music (see again table 4), no gender differences were found in terms of music sharing ($p > .05$). Younger people are again more likely to use their online social networks, both for finding and spreading information about new music ($p < .05$). In contrast, younger and older generations of people do not significantly differ in their use of technology to introduce new music to others ($p > .05$). Apparently, the barriers (Web experience and skills) for sharing content online are relatively low to find significant differences between age groups. Consistent with other studies, education is found to be positively associated with capital-enhancing online activities ($p < .05$) (Howard et al., 2001; Hargittai and Hinnant, 2008). This finding suggests that those from more privileged backgrounds take advantage of their Internet access to develop one's cultural capital by actively sharing new music online. However, social inequalities do not affect the usage of online social networks for spreading new music ($p > .05$).

Table 7. Predictors of using social networks, traditional media or technology to spread new music, coefficients from OLS regression models. Numbers appearing in bold are statistically significant (N = 285).

Variables	Social networks	Offline social networks	Online social networks	Technology
Female	.068	.092	.013	.035
Age	**-.129***	-.085	**-.139***	-.023
Education	**.154****	**.150***	.101	**.110***
Time spent online	-.021	**-.125***	**.145***	.036
Hours of music	**.164***	**.163***	**.126***	.101
Number of artists	-.119	**-.147***	-.055	-.013
Top maven	**.289*****	**.265*****	**.228*****	**.372*****
Experimenter	.083	.073	.074	**.190****
Omnivore	.038	.032	.038	.011
Connector	.051	.056	.026	.073
Salesman	**.134***	**.125***	.100	-.063
R^2	.235	.202	.210	.311

R^2 = R Square = Variance explained. Coefficients are standardized (Beta).

Significance: * $p < .05$; ** $p < .01$; *** $p < .001$.

There is one notable difference in terms of Internet usage – heavy Web users (*time spent online*) are more likely to use *online* social networks ($p < .05$), but less likely to spread new music in their *offline* social networks than those who are less active online. The obvious explanation for this is that those who spend a great deal of their leisure time on the Internet primarily engage in online social networking to make personal suggestions and have less time to make face-to-face contact with friends. Yet, heavy Web users do not significantly differ from less frequent Web users in how often they spread new music via digital media (SQ2). Possibly, they spend most of their time on social networking sites, using search engines, and reading content, rather than contributing content (e.g. created videos, commenting on reviews) to online communities.

The use of technology to spread new music does not associate with musical consumption (SQ3). There is some evidence to believe that heavy music listeners (*number of hours*) spread new music more often in their social networks (both online and offline) than less frequent listeners ($p < .05$). However, people who listen to a greater *number of artists* are noticeably spreading less new music to members from their *offline* social networks ($p < .05$). It is beyond the scope of this paper to explain this difference, but these outcomes suggest that those who allocate their spent hours listening to various artists are less inclined to share their discoveries of music than those who focus on a few artists at a time that they "know" well and feel confident suggesting to their friends and acquaintances.

Clearly, opinion leaders in music (*top mavens*) are more likely to use their social networks and digital media to spread new music than non-mavens ($p < .001$). They are heavily involved in both their offline and online networks to make their suggestions while paying attention to recommendations from friends and other persons they have "met" on a specific social media outlet designed for music discussion (Tepper and Hargittai, 2009; Baym and Ledbetter, 2009). Variety-seeking interest (*experimenters*) is positively related to technology use for spreading new music ($p < .001$), with those who are always searching for new things to try being more likely to also share their discoveries with others. People who are *omnivores* (liking more different musical genres) are not more likely to spread new music through social networks and digital technology than people who have less diverse tastes ($p > .05$). Similarly, having a lot of friends (*connectors*) does not predict how often someone uses social networks and new technologies as tools to share information about new music ($p > .05$). On the other hand, salesmen are more likely to use social networks to spread new music than people who are less skilled at selling a new artist or song to someone else. This group of "sellers" has an additional effect to mavens on consumers' opinions towards new music. They

seem to mainly operate in offline settings, perhaps due to the perceived advantage of face-to-face communication to persuade someone to listen to a particular music style, band or song.

4.6. Characteristics of mavens

In order to differentiate opinion leaders (*top mavens*) from non-mavens, binary logistic regression analyses were performed in which the characteristics of top mavens are analyzed (SQ4). Table 8 presents these analyses. According to model 1, market mavenship in the area of music seems no longer be dominated by men as suggested by previous research (Tepper and Hargittai, 2009). This does however conform with other literature claiming that the use of technology to find new music contributes to a democratization of opinion leadership, giving male and female consumers equal opportunities to discover and share new music. Likewise, more life experience (age) and higher education do not increase one's chances to be an opinion leader in music. In sum, these results suggest there is no social differentiation from all ranks in society regarding opinion leadership (Nagelkerke $R^2 = .019$). As noted earlier in this paper, information technology tools clearly facilitate the discovery and sharing of new music. Further research might examine more closely to what extent the flattened hierarchies can be accounted to the arrival of new technologies.

Indicators of Web use and musical consumption were added in model 2. This model shows that top mavens are not more likely to have more Internet experience (*time spent online*) than non-mavens in the sample. Consistent with other literature on opinion leaders, they are more likely to be heavily invested in their area of expertise; in this case, listening to music at least 11 hours per average week (Richins and Root-Shaffer, 1988; Tepper and Hargittai, 2009).

Like previous studies on opinion leaders (*e.g.*, Tepper and Hargittai, 2009), *top mavens* are more than 5 times more likely to be *experimenters* that are always in search for new types of music (column 3, model 3, see exponentiated coefficients reported in parentheses). While they do not necessarily listen to many different artists, they tend to like more different musical genres (*omnivore*) than those who are non-mavens. In addition to making recommendations about new music to at least five other people on a regular, they are also are more likely to receive many recommendations from others (see *recipient of recommendation* in table 8). This finding provides support to the presence of a two-way flow of information between opinion leaders and their followers (Arndt, 1968; Myers and Robertson, 1972).

Table 8. Predictors of top maven, coefficients from logistic regression models (Exp B or odds appear in parentheses). Numbers appearing in bold are statistically significant (N = 285).

	Top maven		
	Model 1	Model 2	Model 3
Female	-.335 (.715)	-.249 (.779)	-.371 (.690)
Age	-.107 (.899)	-.074 (.929)	-.031 (.969)
Education			
High school (baseline)			
Vocational school	-.425 (.654)	-.522 (.594)	-1.188 (.305)
Bachelor's degree	-.035 (.965)	.152 (1.288)	-.146 (.864)
Master's degree	-.125 (.833)	.286 (1.560)	.231 (1.26)
Doctoral degree	-20.360 (.000)	-17.087 (.000)	-16.199 (.000)
Time spent online (weekly)			
< 4 h (baseline)			
4-12 h		.472 (1.604)	1.217 (3.38)
13-21 h		.622 (1.863)	1.309 (3.70)
22-30 h		.397 (1.384)	1.081 (2.95)
> 30 h		.439 (1.551)	.991 (2.69)
Hours of music (weekly)			
< 3 h (baseline)			
3-10 h		1.728 (5.631)	1.945 (6.99)
11-20 h		**2.958**** (19.79)	**2.948**** (19.06)
> 20 h		**3.456**** (31.68)	**3.345**** (28.36)
Number of artists			
< 6 different artists (baseline)			
6-10 different artists		.432 (1.538)	.459 (1.54)
11-15 different artists		.312 (1.784)	.426 (1.65)
> 15 different artists		.836 (1.115)	.925 (.947)
Experimenter			**1.628**** (5.09)
Omnivore			**1.192**** (3.29)
Recipient of recommendations			**1.257***** (3.51)
Nagelkerke R^2	.019	.218	.371

Significance: * p < .05; ** p < .01; *** p < .001.

4.7. Importance of technology for mavens to find and spread new music

As found earlier, the use of technology to find and spread new music was significantly predicted by whether or not music listeners make recommendations to at least five other people (*top mavens*). An independent-samples t-test was conducted to compare the average scores of the extent to which information technologies, as well as social networks and

traditional media, are used to find new music between top mavens and non-mavens. Table 9 shows the results of this analysis.

Table 9. The importance of social networks, traditional media, and digital technology in how top mavens and non-mavens find new music (N = 285).

	Mean		
	Total sample	Top Mavens	Non-mavens
Social networks	2.50	**2.89*** **	2.41
Offline	2.22	**2.44** **	2.17
A personal acquaintance recommended in person	3.36	**3.93*** **	3.23
A personal acquaintance played me the music	3.20	**3.52***	2.12
A personal acquaintance lent me a disk	1.94	2.06	1.91
A personal acquaintance bought me a gift	1.80	1.81	1.80
A personal acquaintance made me a CD	1.76	1.94	1.71
An employee of a music store recommended	1.25	**1.41***	1.21
Online	3.07	**3.78*** **	2.91
A personal acquaintance recommended via a social networking site	3.20	**3.96*** **	3.02
A personal acquaintance pointed me to a site on the Internet where the music was available	3.10	**3.69*** **	2.96
A personal acquaintance sent me the music via the Internet	2.92	**3.69*** **	2.74
Traditional media	2.63	2.65	2.62
Watching a film	3.20	3.41	3.16
Listening to an offline radio station	2.88	2.50	**2.97***
Watching a TV program	2.86	2.96	2.83
Watching a music video on television	2.29	2.24	2.31
Browsing through multiple offline radio stations	2.35	2.30	2.36
I read in a printed newspaper/magazine	2.24	**2.52***	2.17
Watching a TV commercial	2.52	2.63	2.49
Digital technology	2.52	**2.98*** **	2.42
Watching a music video on the Internet	3.70	**4.02***	3.63
Listening to a free music streaming service	3.30	3.52	3.25
Browsing the Internet	3.13	**3.00*** **	3.72
Listening to live radio online	2.74	2.70	2.75
Referred by a social networking site	2.71	**3.39*** **	2.55
Browsing a subscription music library online	2.56	2.87	2.49
I read in an online newspaper or magazine	2.35	**2.89*** **	2.23
Using a file-sharing network/service	2.19	**3.04*** **	1.99
Referred by an online service	2.08	**2.72*** **	1.93
I read on a blog	1.95	**2.56*** **	1.81
Referred by a mobile application	1.94	2.09	1.90
I read on a discussion forum	1.62	**2.20*** **	1.48

Significance: * p < .05; ** p < .01; *** p < .001.

All items are included in this analysis to explore mavens' most common used platforms to discover new music (SQ5). The mean of the general methods for finding new music are the computed scores of each item divided by the total number of items related to that particular search strategy. Remember that respondents rated these items on a five-point scale (1 = never, 5 = very often). Comparing to the use of social networks and traditional media, information technologies seem to be fairly important for top mavens to find new music (M = 2.98) whereas mavens use them significantly less (M = 2.42) for such purposes (see columns 2 and 3). Mavens tend to often watch music videos online (M = 4.02) and listen to a free music streaming service (M = 3.52) in order to discover new music. They differentiate themselves from non-mavens mainly by using those online tools that allow them to not only find, but also discuss and rate musical content with other users. For instance, they can search on YouTube for new music videos to watch (or simply listen to) and, at the same time, give their opinion by leaving a comment. This also explains why more passive technology uses to find new music, such as streaming music and browsing an online music library, appear to not be significantly more important to mavens than for non-mavens.

Top mavens take also great advantage of the Internet to discuss new music with their (online) social networks. They regularly retrieve information about new music from their personal acquaintances via the Internet (M = 3.78), while non-mavens do this considerably less (M = 2.91). This finding stresses again that opinion leaders are both active receivers as well as transmitters of word-of-mouth. While the average score of all *offline* social networks means (M = 2.41) is significantly lower than that for *online* social networks (M = 3.47), it is interpreted that mavens use both their offline and online social networks more or less equally for the purposes of exploring music (SQ6). Some items concerning social exchanges of music, such as finding about new music through a gift (M = 1.81) or a recommendation from a local record store employee (M = 1.41), are not demonstrative for how most individuals usually get informed by their offline social networks. To illustrate, mavens often find about new music through face-to-face conversations (M = 3.93), which is the second most important channel for finding new music after watching music videos online.

In contrast, traditional media seem to be far less important for top mavens (M = 2.65) compared to social networks and digital technology. Although they occasionally find about new music while watching a film (M = 3.41) or TV program (M = 2.96) in which there is a soundtrack featured, they do not use these means significantly more than non-mavens. While mavens are more likely to use print media such as newspapers and magazines (M = 2.52) to discover new music than non-mavens (M = 2.17), they do so only to a limited extent.

Unfortunately, there is a lack of information about what newspapers and/or magazines they read in terms of "quality", number of publications, and genre. Such information might explain why opinion leaders use certain newspapers or magazines more often (e.g. because of more attention to non-mainstream artists and in-depth evaluation of new music releases) than their followers who are generally less invested in consuming and discovering new music. Strikingly, top mavens are less likely to use offline radio stations as a source of music discovery than non-mavens. This does not necessarily indicate that mavens do not often listen to the radio in general. They could very well be "tastemakers" who are already familiar with songs before they spread widely across radio (Anderson, 2006; Rossman, 2012). Non-mavens, on the other hand, are more likely to hear those "hits" for the first time while listening to the radio.

In table 10, another independent samples t-test was conducted to analyze the importance of digital technology and (offline/online) social networks for mavens and non-mavens to spread information about new music (SQ5 and SQ6). The item "writing about the song for a printed newspaper or magazine" was excluded due to irrelevance of traditional media in the debate about consumer music sharing practices since governments and organizations control most of these media. Recent research and theory has emphasized how technology adapts to existing social patterns, reinforcing established relationships, rather than transforming them (Baym and Ledbetter, 2009; Tepper and Hargittai, 2009). We also find evidence for this proposition in the context of music sharing via social networking sites.

Offline, mavens often make a music recommendation to personal acquaintances (M = 3.87) and let them hear new songs (M = 3.61). In contrast, online social networking is used slightly less to make music recommendations (M = 3.48) and share content (M = 3.24) with other users. Significantly more than non-mavens, however, top mavens take advantage of the interactivity on Web 2.0 to find and spread information about new music. After social networking sites, blogs are the most important online platforms for mavens to make recommendations and provide their opinions on new music, but do so quite rarely (M = 2.26). While regularly watching music videos online in the hope to *find* new music, mavens do not often make comments and react on other comments (M = 2.00) or share their own content on video sharing websites (M = 1.93). Online discussion groups (M = 2.11) and web stores (1.70) do not seem to be important to mavens either.

Table 10. The importance of social networks and digital technology in how top mavens and non-mavens spread new music (N = 285).

	Mean		
	Total sample	Top Mavens	Non-mavens
Social networks	2.19	**2.67*** **	2.07
Offline	2.04	**2.41*** **	1.95
I recommend the song to a personal acquaintance in person	3.15	**3.87*** **	2.99
Playing the song to a personal acquaintance	3.02	**3.61*** **	2.89
I lent a disk or recording of the song to a personal acquaintance	1.73	1.96	1.68
I give the song to a personal acquaintance as a gift	1.62	1.81	1.58
I make a CD/tape compilation for a personal acquaintance	1.56	**2.00*** **	1.45
I am an employee of a music store and recommended music to customers	1.13	1.20	1.12
Online	2.62	**3.47*** **	2.42
I recommend the song to a personal acquaintance via a social networking site	2.65	**3.48*** **	2.45
I send the song(s) to a personal acquaintance via the Internet	2.59	**3.46*** **	2.38
Digital technology	1.52	**2.10*** **	1.38
Sharing on a social networking site	2.55	**3.24*** **	2.02
Sharing playlists online	1.88	**2.69*** **	1.69
I make comments and react on other comments to music videos online	1.49	**2.00*** **	1.37
I recommend and give my opinion on a forum	1.44	**2.11*** **	1.28
I recommend and give my opinion on a personal website/blog	1.41	**2.26*** **	1.21
Sharing on a video sharing website	1.36	**1.93*** **	1.22
Using a file-sharing network/service	1.49	**1.85** **	1.41
I recommend and give my opinion on an online shopping website	1.24	**1.70*** **	1.13
I write stories about the song for an online newspaper/magazine	1.08	**1.19***	1.05

Significance: * p < .05; ** p < .01; *** p < .001.

5. Conclusion

5.1. Discussion

The main objective of this paper was to examine how people explore and share new music in an era of increasing Internet usage and numerous options to search for, experience, and exchange culture. In contrast to other studies, the results show that contemporary audiences start to rely less on traditional mass media than they did before and instead focus more on new technology as important tools to discover new music (Tepper and Hargittai, 2009; Neuman, 1991). In terms of social background and musical consumption (sub-questions 1 and 3), particular younger generations of active music listeners and the higher educated are using technology to enrich their musical lives by browsing on the Internet and listening to music-streaming services like Spotify. Such technology uses are often combined with or followed by social exchanges, as word-of-mouth communications – making and receiving personal recommendations in one's social circles – remain prominent for how music is selected and discussed (Kayahara and Wellman, 2007; Tepper and Hargittai, 2009). For instance, new music videos are being shared on a social networking site or talked about in person the day after. Such online exchanges do not seem to require considerable information technology skills as individuals with various degrees of Internet experience do not significantly differ in their use of new technology to discover or share new music (sub-question 2).

Web 2.0 technologies such as blogs, forums and social networking sites offer many possibilities for consumers to make their suggestions and share knowledge and preferences of new music. Yet, there are not many people that seem to take advantage of these online tools to discuss new music as much as they do for finding content that they are looking for. Rather, they choose to share discoveries of music with their interpersonal ties to whom they feel close and speak with on a daily basis. The ones that do use technology to spread new music are most likely those who have finished a higher education (sub-question 1) and engage in variety seeking (*experimenters*). No significant differences were found between heavy Web users and light Web users (sub-question 2), neither between heavy music listeners and more casual listeners (sub-question 3), in their music sharing practices online.

Besides looking at the ways in which people discover and share new music with others, this paper has also explored the characteristics of mavens (sub-question 4) and their role in the social processes that lead people to discover and share new music. Consistent with earlier studies on opinion leaders, mavens are heavily invested in their area of expertise, they

are always in search for new things, and have various tastes (Richins and Root-Shaffer, 1988; Summers, 1970; Tepper and Hargittai, 2009). More than non-mavens, they are driven to use various technologies in order to be "in the know" of new products and vocal about their music preferences and suggestions in online communities (sub-question 5). Particularly, video sharing sites like YouTube and streaming services such as Spotify are important sources for mavens to discover new music. These online platforms provide constant daily updates on new music and the tools to further explore this type of music through personal recommendations of artists, songs and playlists. In addition, social networking sites appear to be most favorable to spread music in a personal and social environment.

Mavens are actively involved with their offline and online social networks (sub-question 6), both continuously spreading and receiving recommendations and information about new music (Myers and Robertson, 1972; Chan and Misra, 1990). Their advice and insights on new music can have a considerable influence on the opinions of their immediate environments and are likely to be assisted by salesmen – who are able to sell those ideas – in this process. In contrast to earlier studies, no hierarchical distinctions of opinion leadership between groups in society were found according to gender, age, and education level (Walker et al., 1996; Goldsmith et al., 1987; Corey, 1971). These findings raise questions about the nature of opinion leadership in an environment with a wide range of sources of all sorts available for different types of consumers to seek and share information on culture.

5.2. Limitations and future recommendations

While this study has offered insights into the importance of technology to find and spread new music, one could question how representative these results are. Because of the use of an online survey for collecting data, the convenience sample is highly overrepresented by younger people from developed countries (the Netherlands, Sweden, France). More notably, most respondents were approached on the social networking site *Facebook* and are thus more likely to use online technology than the average Internet user. Future research should consider taking more additional printed surveys in record shops, bars, and other places to overcome this shortcoming. While existing literature suggests that opinion leadership is closely related to social status the evidence presented here does not support this theory (Rogers, 2003; Summers, 1970). This could be the consequence of having a large share of higher educated respondents despite efforts to control for a variety of status groups by questioning people with different backgrounds and not only college students (*e.g.* Tepper and Hargittai, 2009).

Therefore, more variation in respondents' socio-economic background (e.g. parental education and income) is desired to further explore the dynamics of this relationship.

The results may also have limited generalizability to other cultural fields such as film, theatre, and dance. More than any other markets, music is distributed online and can be "tested" several times – that is, consumers' listening to a song sample or playlist to find what best fits their tastes before purchasing the music. Moreover, online technology allows consumers to spread music in digital format among themselves through file-sharing networks or produce and distribute self-created sounds and videos on Web 2.0. While the availability of similar tools to search for and share content is also relevant for other cultural experiences, they are likely to be used differently by different types of consumers (e.g. visual arts as a form of pure creativity and self-expression). Future studies should therefore move the analysis to other product domains for a broader understanding of the role of technology on the discovery and sharing of culture.

There are also a number of limitations regarding the design of the survey. First, it should be noted that this study did not account for all possible ways in which one might come across new music. While most methods fall into one of the three distinct categories used in this study – social networks, traditional media, or digital media – people can also discover new bands and artists by attending certain events such as support acts of concerts and music festivals. Moreover, it became clear from the results that not everyone have or is used to ever spread music. Thus, a survey question that includes this option could improve further analysis on how listeners typically go about sharing new music when they wish to do so. Furthermore, to suspicion, a few respondents did not self identify as mavens while claiming to make recommendations to five or more people (*top mavens*). The measurement of top mavens can be more accurate by making the definition less interpretive (e.g. include time interval such as "on a monthly basis" instead of "on a regular basis"). Rather than self-identification of respondents, mavens and non-mavens can be classified based on their mean scores of several items on a market mavenism scale (see Geisler and Edison, 2005), measuring the extent to which they make recommendations and like to help other people by providing them with information on new music. Likewise, more meaningful differences between heavy music listeners and less active listeners could be captured by additional variables of musical habits such as the amount of concert/festival visits, intensity of music listening (intensive listening versus background music), and musical participation (playing a music instrument or singing). Besides measuring one's affinity with music, it might be also useful to consider musical education (musical habits and preferences of parents) as a form of "cultural capital".

The lack of significant results for omnivores in how they use technology to find and spread new music asks for better measures. First, more different types of "highbrow" and "middlebrow" tastes (e.g. post-rock, Broadway) should be included in the list of genres and subgenres to differentiate omnivores (liking many different genres of music) from non-omnivores. One could also criticize the reliability of the salesmen variable that is based on only one question. More statements should be added that measure someone's passion and skills to "sell" such as the ability to communicate well, strong negotiation, and self-confidence.

Social networking sites were found to the most common used online tools to find and spread information about new music. There is however no information whether these comprise general social networking sites (Facebook, Twitter) or taste-based social networking sites (Last.fm, SoundCloud). While a survey is appropriate as a method to investigate *what* new technologies are being used to explore and share new music, other types of research would increase the understanding of *how* and *why* different types of music consumers communicate on the Web. Earlier research has shown the positive effect of online attention on the commercial success of cultural products such as fiction books (Verboord, 2011). Internet publicity comes in many forms, including critics' opinions, consumer ratings, and user-generated content. A content analysis could aim to identify users who take a leading role on different websites by actively sharing their preferences and evaluations of music. It would be worthwhile to observe what kinds of content (e.g. news, reviews, personal experience) these mavens provide when spreading new music and analyze how such information is typically communicated on "mainstream media" (e.g. Amazon, YouTube) versus "niche media" (e.g. a femme metal webzine, Britpop forum). For instance, posts shared on blogs might be more personal and elaborate than comments at web stores or social networking sites.

In addition, qualitative research could shed light on what motivates mavens to distribute advice and insights into new music on the Web, which are worth studying. They can also be asked how they collaborate with connectors (i.e. those people with large networks of friends by whom they are trusted) in order to spread their music recommendations, if still important now personal online communities give them the possibility to interact with countless users. Answers to such questions would contribute to our understanding of the relationship between audiences and mediators in the course of music exploration and sharing.

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Appendices

Appendix A1. Frequencies

	Count	%
Male	137	48.1
Female	148	51.9
Age groups		
< 22 years	57	20.0
22-35 years	199	69.8
36-49 years	12	4.2
> 49 years	17	6.0
Education		
High school or equivalent	74	26.0
Vocational school/some college	29	10.2
Bachelor's degree	135	47.3
Master's degree	46	16.1
Doctoral degree (PhD)	1	.4
Time spent online (weekly)		
< 4 h	10	3.5
4-12 h	51	17.9
13-21 h	90	31.6
22-30 h	59	20.7
> 30 h	75	26.3
No omnivore	242	84.9
Yes omnivore	43	15.1
Not a recipient of recommendations	190	66.7
Recipient of recommendations	95	33.3
Not a connector	172	95.4
Connector	13	4.6
Not a salesman	174	96.1
Salesman	11	3.9
No experimenter	255	89.5
Experimenter	30	10.5

Appendix A2. Frequencies (*Continued*)

Nationalities	Count	%
Dutch	142	49.8
Swedish	39	13.7
French	21	7.4
Greek	17	6.0
German	12	4.2
Austrian	7	2.5
Polish	5	1.8
Finnish	5	1.8
Italian	4	1.4
Canadian	3	1.1
Slovak	3	1.1
Estonian	3	1.1
Brazilian	3	1.1
Czech	3	1.1
Danish	2	.7
Belgian	2	.7
British	2	.7
Japanese	2	.7
Russian	1	.4
Hong Kong	1	.4
Indian	1	.4
Bangladeshi	1	.4
Colombian	1	.4
Lithuanian	1	.4
Spanish	1	.4
Indonesian	1	.4
Kazak	1	.4
American	1	.4

Appendix B. Survey

Thank you for taking the time to participate in this survey. I am currently writing my master thesis that studies the ways people go about finding and sharing new music.

The questionnaire covers six different topics and 18 questions in total: General information (4 questions), Time spent online (1 question), Social networks (2 questions), Musical consumption (7 questions), Finding new music (2 questions), and Sharing new music (2 questions).

It takes you not more than 10 minutes to complete the survey. All of your responses are completely anonymous and will be kept confidential.

>>

Are you a male or female?

- Male
- Female

What is your age?

What is your nationality?

What is the highest level of education you have completed?

- Less than high school
- High school or equivalent
- Vocational school/some college
- Bachelor's degree
- Master's degree
- Doctoral degree (PhD)
- Not sure

How many hours do you spend using the Internet per week on average? (both on PC/laptop and mobile devices; not including email and chat use)

- Less than 4 h
- 4-12 h
- 13-21 h
- 22-30 h
- More than 30 h

How many friends do you have in daily life?

Please consider the following definition of a "friend": a person with whom one has a bond of mutual affection, typically one exclusive of sexual or family relations.

- ◯ Less than 6 friends
- ◯ 6-20 friends
- ◯ 21-35 friends
- ◯ 36-50 friends
- ◯ More than 50 friends

How many friends do you have on Facebook?

- ◯ Less than 51 friends
- ◯ 51-200 friends
- ◯ 201-350 friends
- ◯ 351-500 friends
- ◯ More than 500 friends
- ◯ I don't have an account on Facebook.

The following is a list of several types of music. Which of these types of music do you listen to regularly?

Please select one or more of the following categories.

- ☐ Classical
- ☐ Jazz
- ☐ Pop
- ☐ Alternative Rock
- ☐ Hard rock
- ☐ Punk
- ☐ Heavy metal
- ☐ Dance and Electronica
- ☐ Hip-Hop/Rap
- ☐ R&B/Soul
- ☐ Country
- ☐ Americana
- ☐ Reggae
- ☐ Latin
- ☐ Blues
- ☐ Opera
- ☐ Folk
- ☐ New Wave
- ☐ Techno
- ☐ Hardcore

How many hours do you spend listening to music per week on average?

- ◯ Less than 3 h
- ◯ 3-10 h
- ◯ 11-20 h
- ◯ More than 20 h

How many different artists or bands do you listen to per week on average?

- ◯ Less than 6 different artists
- ◯ 6-10 different artists
- ◯ 11-15 different artists
- ◯ More than 15 different artists

Do you consider yourself as someone who frequently makes recommendations to others regarding new music?

- ◯ Yes
- ◯ No

Do you make recommendations for new music to five or more people on a regular basis?

- ◯ Yes
- ◯ No

Do you receive recommendations for new music from five or more people on a regular basis?

- ◯ Yes
- ◯ No

Please rate how much you agree with the following statements.

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
When I recommend people to listen to a particular music style, band or song, they will always follow my suggestion and listen to that music.	◯	◯	◯	◯	◯
I always experiment and actively search for new things to try when it comes to music.	◯	◯	◯	◯	◯

The following is a list of ways to find new music. In general (not specific to any particular song/CD/album), when you try something new or different (that is, a song or artist that does not fall within the category of music you "typically listen to"), how do you typically find out about such music?

Please rate how often you find new music through the following ways by placing a check mark in the appropriate box.

	Never	Rarely	Sometimes	Often	Very Often
A personal acquaintance bought me the song/album/artist as a gift.	○	○	○	○	○
A personal acquaintance lent me a disk or recording of the song/album/artist.	○	○	○	○	○
A personal acquaintance made me a CD/tape compilation.	○	○	○	○	○
A personal acquaintance played me the song/album/artist.	○	○	○	○	○
A personal acquaintance pointed me to a site on the Internet where the song(s) was available.	○	○	○	○	○
A personal acquaintance recommended the song/album/artist to me in person.	○	○	○	○	○
A personal acquaintance recommended the song/album/artist to me via a social networking site (e.g. Facebook).	○	○	○	○	○
A personal acquaintance sent me the song(s) via the Internet.	○	○	○	○	○

Please rate how often you find new music through the following ways by placing a check mark in the appropriate box.

	Never	Rarely	Sometimes	Often	Very often
An employee of a music store recommended the song/album/artist to me.	○	○	○	○	○
Browsing a subscription music library online (e.g., MP3.com or iTunes).	○	○	○	○	○
Browsing the Internet (not an online radio station or music library or online store).	○	○	○	○	○
Browsing through multiple radio stations (offline).	○	○	○	○	○
I read about the song/album/artist in a printed newspaper/magazine.	○	○	○	○	○
I read about the song/album/artist in an online newspaper or magazine.	○	○	○	○	○
I read about the song/album/artist on a blog.	○	○	○	○	○
I read about the song/album/artist on a discussion forum.	○	○	○	○	○

Please rate how often you find new music through the following ways by placing a check mark in the appropriate box.	Never	Rarely	Sometimes	Often	Very Often
Listening to a free music streaming service (e.g. Spotify, Grooveshark).	○	○	○	○	○
Listening to a radio station (offline) that I frequently listen to.	○	○	○	○	○
Listening to live radio online.	○	○	○	○	○
Referred to the song(s)/artist by a mobile application (e.g. Discovr, Shazam).	○	○	○	○	○
Referred to the song(s)/artist by a post shared on a social networking site.	○	○	○	○	○
Referred to the song(s)/artist by an online service (a service that tries to match recommendations to users' preferences).	○	○	○	○	○
Using a file-sharing network/service (e.g. BitTorrent, LimeWire).	○	○	○	○	○

Please rate how often you find new music through the following ways by placing a check mark in the appropriate box.	Never	Rarely	Sometimes	Often	Very Often
Watching a film in which the song/artist was featured as part of the sound track.	○	○	○	○	○
Watching a TV program in which the song/artist was featured as part of the sound track.	○	○	○	○	○
Watching a TV commercial in which the song/artist was featured.	○	○	○	○	○
Watching a music video on television (e.g., MTV).	○	○	○	○	○
Watching a music video on the Internet (e.g. YouTube).	○	○	○	○	○

Please rank your top three ways of finding new music in order of preference by typing the ranking number before the item (most preferred item = number 1; second most preferred item = number 2; third most preferred item = number 3).

- [ ] A personal acquaintance bought me the song/album/artist as a gift.
- [ ] A personal acquaintance lent me a disk or recording of the song/album/artist.
- [ ] A personal acquaintance made me a CD/tape compilation.
- [ ] A personal acquaintance played me the song/album/artist.
- [ ] A personal acquaintance pointed me to a site on the Internet where the song(s) was available.
- [ ] A personal acquaintance recommended the song/album/artist to me in person.
- [ ] A personal acquaintance recommended the song/album/artist to me via a social networking site (e.g. Facebook).
- [ ] A personal acquaintance sent me the song(s) via the Internet.
- [ ] An employee of a music store recommended the song/album/artist to me.
- [ ] Browsing a subscription music library online (e.g. MP3.com or iTunes).
- [ ] Browsing the Internet (not an online radio station or music library or online store).
- [ ] Browsing through multiple radio stations (offline).
- [ ] I read about the song/album/artist in a printed newspaper/magazine.
- [ ] I read about the song/album/artist in an online newspaper or magazine.
- [ ] I read about the song/album/artist on a blog.
- [ ] I read about the song/album/artist on a discussion forum.
- [ ] Listening to a free music streaming service (e.g. Spotify, Grooveshark).
- [ ] Listening to a radio station (offline) that I frequently listen to.
- [ ] Listening to live radio online.
- [ ] Referred to the song(s)/artist by a mobile application (e.g. Discovr, Shazam).
- [ ] Referred to the song(s)/artist by a post shared on a social networking site.
- [ ] Referred to the song(s)/artist by an online service (a service that tries to match recommendations to users' preferences).
- [ ] Using a file-sharing network/service (e.g. BitTorrent, LimeWire)
- [ ] Watching a film in which the song/artist was featured as part of the sound track.
- [ ] Watching a TV program in which the song/artist was featured as part of the sound track.
- [ ] Watching a TV commercial in which the song/artist was featured.
- [ ] Watching a music video on television (e.g. MTV).
- [ ] Watching a music video on the Internet (e.g. YouTube).

The following is a list of ways to introduce new music to other people. In general (not specific to any particular song/CD/album), when you want to make recommendations or provide information regarding new music to others. How do you typically spread such music?

Please rate how often you spread new music through the following ways by placing a check mark in the appropriate box.

	Never	Rarely	Sometimes	Often	Very Often
I am an employee of a music store and recommended the song/album/artist to customers.	○	○	○	○	○
I give the song/album/artist to a personal acquaintance as a gift.	○	○	○	○	○
I lent a disk or recording of the song/album/artist to a personal acquaintance.	○	○	○	○	○
I make a CD/tape compilation for a personal acquaintance.	○	○	○	○	○
I recommend the song/album/artist to a personal acquaintance in person.	○	○	○	○	○
I recommend and give my opinion on the song/album/artist on a forum.	○	○	○	○	○
I recommend and give my opinion on the song/album/artist on an online shopping website (e.g. Amazon).	○	○	○	○	○
I recommend the song/album/artist to a personal acquaintance via a social networking site.	○	○	○	○	○
I recommend and give my opinion on the song/album/artist on a personal website/blog.	○	○	○	○	○

Please rate how often you spread new music through the following ways by placing a check mark in the appropriate box.

	Never	Rarely	Sometimes	Often	Very Often
I write stories about the song/album/artist for a printed newspaper/magazine.	○	○	○	○	○
I write stories about the song/album/artist for an online newspaper/magazine.	○	○	○	○	○
I send the song(s) to a personal acquaintance via the Internet.	○	○	○	○	○
I make comments and react on other comments to music videos online.	○	○	○	○	○
Playing the song to a personal acquaintance.	○	○	○	○	○
Sharing playlists online.	○	○	○	○	○
Sharing the song/album/live performance of an artist on a social networking site.	○	○	○	○	○
Sharing the song/album/live performance of an artist on a video sharing website.	○	○	○	○	○
Using a file-sharing network/service (e.g. BitTorrent, LimeWire)	○	○	○	○	○

Please rank your top three ways of spreading new music in order of preference by typing the ranking number before the item (most preferred item = number 1; second most preferred item = number 2; third most preferred item = number 3).

- [ ] I am an employee of a music store and recommended the song/album/artist to customers.
- [ ] I give the song/album/artist to a personal acquaintance as a gift.
- [ ] I lent a disk or recording of the song/album/artist to a personal acquaintance.
- [ ] I make a CD/tape compilation for a personal acquaintance.
- [ ] I recommend the song/album/artist to a personal acquaintance in person.
- [ ] I recommend and give my opinion on the song/album/artist on a forum.
- [ ] I recommend and give my opinion on the song/album/artist on an online shopping website (e.g. Amazon).
- [ ] I recommend the song/album/artist to a personal acquaintance via a social networking site.
- [ ] I recommend and give my opinion on the song/album/artist on a personal website/blog.
- [ ] I write stories about the song/album/artist for a printed newspaper/magazine.
- [ ] I write stories about the song/album/artist for an online newspaper/magazine.
- [ ] I send the song(s) to a personal acquaintance via the Internet.
- [ ] I make comments and react on other comments to music videos online.
- [ ] Playing the song to a personal acquaintance.
- [ ] Sharing playlists online.
- [ ] Sharing the song/album/live performance of an artist on a social networking site.
- [ ] Sharing the song/album/live performance of an artist on a video sharing website.
- [ ] Using a file-sharing network/service (e.g. BitTorrent, LimeWire).