

TITLE

The utilitarian and hedonic outcomes of music information seeking in everyday life

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Post-print version of an article published in *Library and Information Science Research*.

Reference to the published version:

Laplante, A., & Downie, J. S. (2011). The utilitarian and hedonic outcomes of music information seeking in everyday life. *Library and Information Science Research*, 33(3), 202-210. doi: 10.1016/j.lisr.2010.11.002

ABSTRACT

This qualitative study focuses on what contributes to making a music information seeking experience satisfying in the context of everyday life. Data were collected through in-depth interviews conducted with 15 younger adults (18-29 years). The analysis revealed that satisfaction could depend on both hedonic (i.e., experiencing pleasure) and utilitarian outcomes. It was found that two types of utilitarian outcomes contributed to satisfaction: (1) the acquisition of music, and (2) the acquisition of information *about* music. Information about music was gathered to (1) enrich the listening experience, (2) increase one's music knowledge, and/or (3) optimize future acquisition. This study contributes to a better understanding of music information-seeking behavior in recreational contexts. It also has implications for music information retrieval systems design: results suggest that these systems should be engaging, include a wealth of extra-musical information, allow users to navigate among music items and encourage serendipitous encountering of music.

The utilitarian and hedonic outcomes of music information seeking in everyday life

Audrey Laplante, J. Stephen Downie

1. INTRODUCTION

During the last decade, the availability of music recordings in digital form has exploded. With that came the need to develop new retrieval systems specifically designed for music. Researchers from various disciplines have worked on developing complex algorithms aiming at automatically extracting music content to build systems which, for instance, can recognize a hummed melody, provide personalized recommendations or group different versions of a given song. While people are beginning to appropriate these new systems, they continue to use more traditional tools and strategies. People still visit music stores, seek music recommendations from friends, or read music magazines. Evaluating the capacity of these different strategies and tools to meet users' needs is key in improving new music information retrieval (MIR) systems. A first step in that direction is to assess what makes an interaction with a music information system (traditional or innovative) successful or not. This was the main objective of the research project reported here.

2. PROBLEM STATEMENT

Despite the high interest of researchers and users for MIR systems, very few studies have focused on user behavior in real-life settings. Indeed, most studies aiming at evaluating the performance of MIR systems have adopted a quantitative approach and focused exclusively on the external behavior. These studies, which consist for the most part in experimental studies (Barrington, Oda, & Lanckriet, 2009, p. 92; Salamon & Rohrmeier, 2009) or in the analysis of transaction logs of a specific system (Bainbridge et al., 2002), are limited in many ways. In studies with an experimental design, participants are assigned a specific task that might not be representative of the tasks people need to accomplish in everyday life, not to mention that real interactions with MIR systems might not even be task driven at all. As a matter of fact, previous studies have shown that music information seeking was mainly exploratory rather than goal oriented (see Section 3). As for transaction logs, although they capture interactions between a system and a real user, they offer few insights into the context of the search. Since they do not provide direct information about the motivation of the user, the information need behind a search can only be *inferred* by the researcher. It is therefore impossible to truly assess the relevance of the information retrieved. Moreover, it does not allow the researcher to know if the users enjoyed their experience with the system, if they listened to the music retrieved and, if so, if they liked it. As a result of this lack of knowledge of music information behavior in context, developers have relied mainly on their personal experience and intuition to design MIR systems (Futrelle & Downie, 2003).

This research project was designed to bridge this gap, its main objective being to examine the complete music information-seeking experience from the user's perspective. More specifically, this study aimed at addressing the following questions:

- What makes a music information-seeking experience satisfying?

- What are the utilitarian outcomes (e.g., finding music, gathering information about music) that contribute to making a music information-seeking experience satisfying? How and why do these outcomes contribute to satisfaction?
- What are the hedonic outcomes (e.g., feeling of engagement, pleasure) that contribute to making a music information-seeking experience satisfying? How and why do these outcomes contribute to satisfaction?
- What makes a music information-seeking experience unsatisfying?

The value of this study lies in the fact that it provides a rich understanding of the way younger adults perceive their interactions with the different systems and sources they use to discover music. By doing so, it contributes to inform MIR systems design and, at a theoretical level, to expand our knowledge of the utilitarian and hedonic aspects of information-seeking behavior.

3. LITERATURE REVIEW

Traditionally, the performance of an information retrieval (IR) system has been evaluated by its capacity to retrieve documents (or document surrogates) that correspond to the query of a user—relevant documents—for instance by using recall and precision measures (Lancaster, 1979, p. 10). In other words, it has been assumed that a human/system interaction through which a perfect match between a query (the expression of a recognized need) and a set of document surrogates was established was a successful interaction. But what does success *really* mean for a user?

In the past 15 years, several researchers have disputed the traditional conception of relevance, promoting a broader (and subjective) view of the phenomenon that would encompass both the ‘external context’ (i.e., the situation, task, or problem) and the ‘internal context’ (i.e., the cognitive and affective states of the user) (Park, 1994; Saracevic, 2007). The term ‘relevance’ has even been replaced by ‘utility’ or ‘pertinence’ by some authors (Lancaster, 1979; Schamber, 1994) to reflect this change. But this view remains limited in the sense that it focuses exclusively on the utilitarian outcomes of the information-seeking process, that is on the information processing and use. Although some researchers have urged greater attention on affective and emotional dimensions in information behavior (Nahl & Bilal, 2007), the focus has been mainly on information reception and use. As a result, cases where there is no information need, such as when people seek information solely for the pleasure they take in the activity, have received little attention.

Research on shopping behavior has also long focused exclusively on the utilitarian aspects of the shopping experience, depicting the consumer as a “logical thinker who solves problems to make purchasing decisions” (Holbrook & Hirschman, 1982, p. 132). In the 1970s, however, researchers started to abandon the utilitarian view, and models encompassing both utilitarian and hedonic aspects of consumer behavior emerged. Hirschman and Holbrook, who were the first to coin the term ‘hedonic consumption,’ defined it as the “facets of consumer behavior that relate to the multisensory, fantasy and emotive aspects of one’s experience with products” (1982, p. 92). As indicated by this definition, Hirschman and Holbrook focused on the hedonic aspects of the consumption experience, that is on the pleasure one derives from “direct usage or distanced appreciation of goods and services” as Mathwick, Malhotra and Rigdon put it (2001, p. 41). Other aspects of consumer behavior, of greater relevance to the present study, have also been the focus of attention of researchers.

As a matter of fact, the utilitarian and hedonic outcomes of shopping experiences have been studied by many, both in physical stores (Arnold & Reynolds, 2003; Babin, Darden, & Griffin, 1994; Jones,

Reynolds, & Arnold, 2006; Tauber, 1972; Wakefield & Baker, 1998) and online (Childers, Carr, Peck, & Carson, 2001; Mathwick, et al., 2001; Menon & Kahn, 2002). The shopper is thus portrayed as both an intellectual *and* an emotional person who can shop to seek pleasure, enjoyment, or sensory stimulation in addition to, or in lieu of, seeking to satisfy a functional or economical need. Some researchers went beyond the utilitarian/hedonic dichotomy and proposed more elaborate typologies. For instance, Babin, Dardin and Griffin, who developed and validated a scale designed to measure consumers' perception of the utilitarian and hedonic values of a shopping experience, identified *pure enjoyment, excitement, captivation, escapism, and spontaneity* as expressions of hedonic shopping value. In contrast, they found the utilitarian value of a shopping experience to be related to task completion (1994). Closely related to the utilitarian/hedonic values of a shopping experience are the concepts of extrinsic/intrinsic values, which have also been used by researchers to understand shopping behavior (Holbrook, 2006; Monsuwe, Dellaert, & Ruyter, 2004; Shang, Chen, & Shen, 2005). While the extrinsic value of an experience lies in its tangible outcomes, its intrinsic value is inherent to the activity and, as mentioned by Deci and Ryan, "even though there may be secondary gains, the primary motivators are the spontaneous, internal experiences that accompany the behavior" (1985, p. 11). Some shopping situations are obviously more prone to yield hedonic outcomes than others. For instance, grocery shopping, which is typically strongly goal oriented, is likely to produce mostly utilitarian outcomes. On the contrary, recreational shopping situations will create higher expectations as to the hedonic outcomes that they are supposed to bring.

Researchers have also studied consumer information-seeking behavior and found that this part of consumer behavior could also produce hedonic outcomes. Early models presented the information seeker as someone who look for product- or service-related information to make better purchasing decisions, hence proposing "an image of the consumer as a problem solver engaged in the goal-directed activities of searching for information, retrieving memory cues, weighing evidence, and arriving at carefully considered judgmental evaluations" (Holbrook & Hirschman, 1982, p. 135). These 'information processing models' were later enriched to encompass the experiential aspects of the information-seeking process, acknowledging that people do not always search for information about products and services in anticipation of a purchase, but also for the immediate pleasure and gratification it brings them (Bloch, 1986; Hirschman & Holbrook, 1982; Peterson & Merino, 2003). Such information-seeking behavior was described as being intrinsically motivated, mainly undirected and therefore more exploratory in nature (Peterson & Merino, 2003). It is also often related to the information seeker's enthusiasm for the product. Bloch and Bruce, who focused on the concept of 'product enthusiasm,' defined it as "a strong, abiding, hobby-like interest in the product class in question which transcends the temporary purchase process arousal investigated in most involvement research" (1984, p. 197). These product enthusiasts (e.g., wine connoisseurs, car aficionados) were found to exhibit enduring involvement with a product class, which often results in ongoing information search and perceptual vigilance (Bloch, 1986; Bloch & Bruce, 1984).

Previous research has shown that the utilitarian/hedonic view that has been adopted by consumer behavior researchers could also find applications in the realm of information behavior, at least in some situations: researchers found that newsreading, when performed for leisure purposes, could also be intrinsically motivated in such a way that 'getting' becomes part of the 'reward' (Stephensen, 1988; Toms, 1999; Watters, Shepherd, & Burkowski, 1998). Similar conclusions were drawn by Cunningham, Reeves, and Britland (2003) who studied the searching and browsing strategies used by music store customers and public library users of recorded music collections. They observed that music shopping was often a group activity that allowed friends to "spend time together and to affirm their relationships by demonstrating their knowledge of each others' tastes, styles, and interests" (p. 10). As a result, music shopping in group is mainly exploratory and

undirected rather than task oriented. To reflect the findings enumerated here, this research project focuses on both the utilitarian and the hedonic outcomes of the music information-seeking experience in order to capture the whole experience as perceived by the individual.

4. CONCEPTUAL FRAMEWORK

A great variety of conceptual models of information behavior, which can guide data collection and analysis, can be found in the literature. Wilson’s 1996 model (Wilson & Walsh, 1996) was considered the most appropriate for the present research. Unlike most models, it encompasses active and passive information seeking, which was considered important since music information retrieval is not always a goal- or task-oriented activity in everyday life. The model also has the advantage of incorporating all stages of information behavior, from the context in which the need for information arises to information-seeking behavior to information processing and use, with a feedback loop in case the information need has not been satisfied. Information behavior is therefore divided in three stages involved in a triangle-shaped relation (see Figure 1). However, as mentioned before, the literature on shopping behavior informs us that both utilitarian and hedonic outcomes are sought when shopping. As it seems reasonable to believe that people engage in information-seeking activities for similar reasons, the “Information processing and use” box in Wilson’s model was substituted with an “Outcomes” box which represent what an individual gets out of the information-seeking process. This new box is itself composed of two elements: the “Utilitarian outcomes” (information processing and use) and the “Hedonic outcomes” (pleasure) (see Figure 2). This revised model of information behavior provided a theoretical background for the development of the data collection instrument and for data analysis (see Section 5).

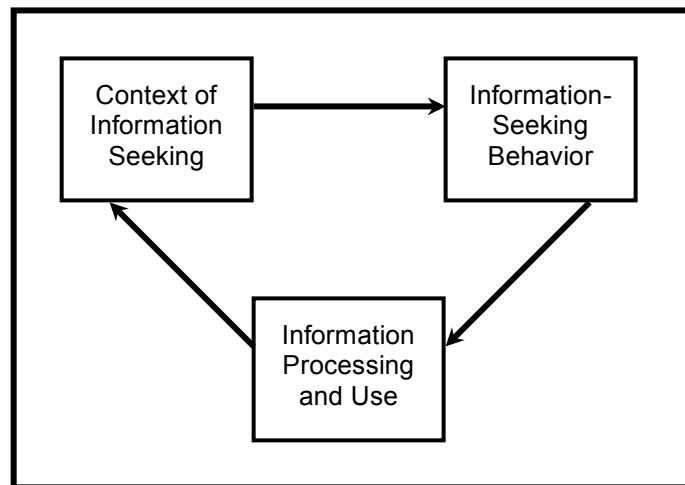


Figure 1. The three stages of information behavior according to Wilson’s 1996 model

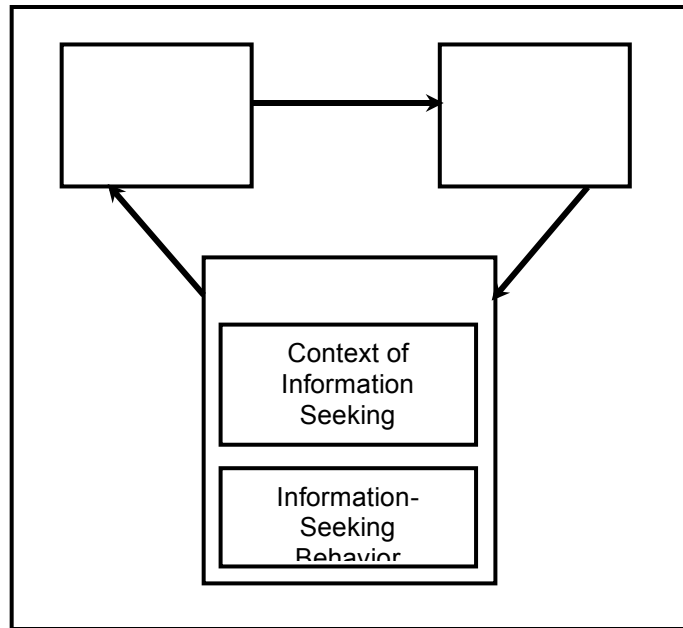


Figure 2. A revised version of Wilson's 1996 model

5. PROCEDURE

This study focuses on what contributes to making a music information-seeking experience satisfying in the eyes of the users¹. To study this complex and subjective nature of human behavior, a qualitative approach was adopted. According to this approach, a phenomenon should be studied holistically and in its natural setting (Lincoln & Guba, 1985). While early research on information behavior focused on the external behavior of an individual interacting with an information system at a specific moment, a shift occurred in the 1980s and researchers started to concentrate on the user. With this shift came the need to replace quantitative methods by qualitative methods. Several authors urged researchers to adopt a qualitative approach to study information behavior (Park, 1994; Wang, 1999; Wilson, 2003). As stressed by Wilson (2003), it allows the researcher to perform a “deep analysis of what the information seeker believes s/he is doing, of what the intention is in the acts employed to discover information, and in what the information found means to the information user” (p. 448). Current research in this area shows that the call for a shift from quantitative to qualitative approach has been heard since qualitative research methods are now widely accepted in the library and information science community and their popularity are growing (Park, 1994; Wang, 1999). According to Wilson (2003), the qualitative perspective is now predominant in information research, especially in research on information behavior.

For this project, in-depth interviewing was used to question 15 younger adults' (18-29 years old) about their perception of real-life music information-seeking experiences with all sorts of information systems and sources as defined by Wilson (1981, pp. 4-5). This includes computer-based systems, specialized in music or not (e.g., digital libraries, IR systems); manual systems (e.g.,

¹ This study was part of a larger project aiming at examining the music information behavior of younger adults. This allowed the researchers to study the individual stages of information behavior in context and to view these stages as interrelated.

browsable stacks in music stores or libraries); as well as other sources of music information such as people (e.g., librarians, colleagues, friends) and media (e.g., magazines, newspapers, radio).

5.1 Participants

The population studied was composed French-speaking younger adults (18-29 years) of the Montreal metropolitan community. Participants ($n=15$) were recruited between April 1, 2006 and August 8, 2007 following the maximum variation sampling strategy as described by Lincoln and Guba (1985). The aim of this strategy is to maximize the diversity in the sample to ensure, as much as possible, that the different experiences related to the phenomenon under study are represented. A review of the literature was performed to identify the characteristics and factors that are known to influence music taste and consumption. As a result, the criteria that initially guided the selection process were the following: education level, age, gender and socio-economic background. However, the socio-economic criterion was discarded since the annual income, which had been used as an indicator, turned out to be imperfect, a significant proportion of the target population being students.

Recruitment was accomplished by distributing flyers in the hall of the Grande Bibliothèque, a large Montreal public library which is part of Bibliothèque et Archives nationales du Québec (BAnQ). The extraordinary popularity of the Grande Bibliothèque since its opening in 2005, its downtown location, and its proximity to the Université du Québec à Montréal (UQÀM) contributed to make it an excellent place to find people from different socioeconomic background who corresponded to the sought profile. Recruitment continued until the saturation point was reached, that is when the information obtained through interviews started to be redundant so that no new themes or patterns were emerging from the analysis (Lincoln & Guba, 1985).

Among the fifteen participants, ten were male. Participants' ages ranged from 19 to 29 years, with a mean age of 24 years. At the time of the interview, five were full-time students, seven were full-time workers, and three had no current occupation. All had a high school diploma, 13 had a college diploma (or the equivalent), and ten had a university degree or were currently enrolled in a university program. None of them were professional musicians but six affirmed playing at least one musical instrument. The group comprised a majority of avid music listeners, although the sample also included a few light or moderate music consumers.

5.2 Data Collection

Data were collected through in-depth semi-structured interviews. The interview guide that was developed was designed to collect data about all stages of music information behavior, with a special emphasis on the utilitarian and hedonic outcomes people get out of their music information-seeking experiences with different systems and sources.

The guide followed the structure of the conceptual framework. It was composed of five sections. In the first section, participants were asked questions about their music taste and the place music occupies in their lives. The objective was to set the context for the information-seeking behavior and to put the participants at ease. In the second section, the interviewees were asked to recall the last music artist or genre they had discovered and liked, and then to try to recall how it happened. The third section included questions regarding the music information sources they use and how they interact with them. In the fourth section, participants were asked more specifically to talk about the outcomes—hedonic and utilitarian—that contribute to making an interaction with a

music IR system satisfying or not when seeking music for leisure purposes. Finally, the fifth section was used to collect background information to be able to describe the participants in the study.

A preliminary version of the guide was tested during a pre-test to ensure the wording of the questions was clear, the sequence of the questions was coherent, and to make sure the instrument would allow the researchers to collect the information needed. After some minor changes, the guide was finalized. The use of an interview guide ensured that all relevant topics were covered in each interview without precluding the possibility of making unforeseen discoveries by asking additional questions. It was also a way to maintain a certain uniformity in the way data were collected, which in turns facilitated comparisons among participants.

5.3 Data Analysis

The interviews were recorded and transcribed. Each interview lasted between 38 and 62 minutes, for a total of 724 minutes of recording and over 120,000 words of transcriptions and notes. The software package NVivo 7 by QSR International was used to facilitate the encoding and analysis process.

The data were analyzed inductively using the constant comparative method (CCM) as defined by Maykut and Morehouse (1994). CCM consists in a step-by-step method according to which the researchers (1) prepare the data for analysis by subdividing the transcripts into units of meaning (in this case into paragraphs); (2) read through the data to identify emerging themes and patterns in order to create a provisional set of categories; (3) categorize each unit of meaning into a category, forming new categories as needed; (4) refine the categories by comparing all units comprised into each category in order to identify the common properties or characteristics, merging, subdividing, or restating categories as needed; and (5) explore relationships and patterns across categories.

The results of this analysis are presented in the following two sections. Sections 6 and 7 are respectively dedicated to the utilitarian and the hedonic outcomes of the music information seeking process. Pseudonyms are used to preserve confidentiality. The quotes were translated from French to English, while maintaining as much as possible the level of language used by the participants.

6. FINDINGS: UTILITARIAN OUTCOMES

The most obvious motivation for entering a music store or visiting a music digital library is to acquire music. It is therefore not surprising that having found “good music”—a utilitarian outcome – was considered a very satisfying experience by many participants. This was not, however, the only type of utilitarian outcome mentioned. The analysis revealed that gathering information *about* music, without having the clear, specific intention of getting the music itself, could also contribute to satisfaction with a music information-seeking experience. Findings related to these different types of utilitarian outcomes are presented below and summarized in Figure 3.

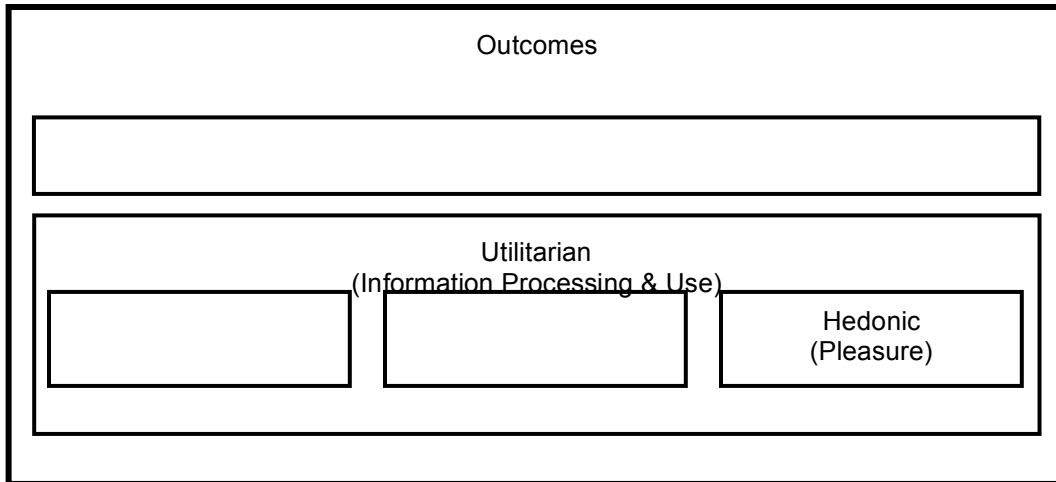


Figure 3. Utilitarian outcomes of music information-seeking behavior

6.1 Acquisition of Music

Many interviewees affirmed that finding music that meets their need was one reason for considering an interaction satisfying. The need could be vague, for instance wanting to find “good music” to renew a personal music collection that has been heard too many times, or to satisfy an insatiable craving for new music. One participant (Hervé, male, 27 years old) explained that seeking music in a digital music library was something he does when he becomes tired of his current playlist; whereas another (Alexandre, male, 29) reported being constantly on the look-out for “*non-recycled music*” to add to his personal collection. In these cases, the degree of satisfaction depends on how good they consider the music found to be, but also, and more importantly, on how much of a discovery they feel they have made. Hence, for many, discovering a “*real gem*” (Nicolas, male, 23), a “*small, little known artist*” (Élise, female, 23), something one has “*never heard of before*” (Gabriel, male, 27), yields the most satisfaction.

Information seeking can also originate from the need to find music to fulfill a particular function. One interviewee (Christian, male, 23) reported, for instance, that the recent death of two relatives led him to the library to look for music that would be completely new to him to “*try to forget.*” Another (Gabriel, male, 27) explained having recently searched for music for his “*housewarming party.*” In these cases, the success is linked to the capacity of the music found to fulfill the function for which it has been acquired: Christian said he was pleased by the music he had discovered and liked it to the point of being completely absorbed by it; whereas Gabriel was happy to report that his guests danced to the music he had selected. Seeking music to meet such a specific need, however, was more occasional than typical.

Interestingly, although the acquisition of music that meets one’s needs and tastes appeared to play an important role in the perceived success of a music information-seeking experience, not finding anything interesting was not necessarily considered a negative experience. For a majority of participants, when this happens to them, it is offset by other outcomes (utilitarian and/or hedonic). Indeed, only four participants affirmed being sometimes disappointed when they considered they had not discovered enough—if any—good music, two of them nimbly adding that their mood, more than the systems, was probably to blame:

“Sometimes, I think it’s because of me. Out of cowardice, or maybe just because I’m not ready to listen to something new” (Jean-Sébastien, male, 23).

“There are days, it’s as if nothing seemed interesting” (Fannie, female, 18).

6.2 Acquisition of Information about Music

Apart from the capacity of a system to meet the rather vague desire to find ‘good music’ or the need to find music for a special occasion or situation, other utilitarian outcomes emerged as participating in making a music information-seeking experience satisfying. It appeared that the desire to acquire information *about* music or music artists also enticed participants to use music IR systems, the need to actually acquire some music being often non-existent, imprecise, or not recognized. Hence, when asked what makes an interaction with a system pleasurable, one participant (Adrien, male, 26) answered: *“It is the discoveries. And the information.”* In the same way, another participant (Alexandre, male, 29) explained that even when he does not find any interesting music, he considers that searching for music on the Web is a *“constructive”* activity, as opposed to *“playing golf on a Playstation,”* which would make him feel that *“I’m wasting my time.”*

As a matter of fact, several participants reported getting satisfaction from acquiring new knowledge when interacting with music IR systems, for instance through the reading of a musician’s biography in a digital music library, the names of the contributors on the back of a CD in a music library, or the reviews of other users in an online music store. But why do participants get satisfaction solely from acquiring information about music? Three main reasons emerged: (1) to increase one’s cultural knowledge; (2) to enrich one’s listening experiences; and, (3) to gather information for future acquisitions.

6.2.1 Increase Cultural Knowledge

One of the reasons given by participants for wanting to acquire information about music was to increase their general knowledge, which could be motivated by curiosity or the desire to keep up-to-date. For instance, one interviewee (Gabriel, male, 27) affirmed frequently going to music stores only *“to see what has been released,”* often to walk out the door empty-handed yet satisfied. Motivated by a similar objective, another participant (Adrien, male, 26) reported adopting a different strategy: he visits the *Allmusic* website (a guide to music recordings) on a regular basis: *“It’s the type of site [Allmusic] I visit out of habit, not necessarily with the objective of downloading music. I go there first and foremost to get informed.”*

But what truly motivates these younger adults to want to increase their music knowledge? Although very few participants explicitly admitted it, it seems that this could be socially motivated. For example, one participant (Christian, male, 23), who reported spending hours gathering information on music from the 1960s, seemed to be driven by the desire of being accepted by the persons he admires the most, that is his parents and his boss. For others, being able to actively participate in conversations with friends is a motivation: *“It allows me to better discuss about it in conversations, and to bring my own personal base in music, so that it facilitates communication between people. It gives me the little something in my social relationships”* (Hervé, male, 27).

Reading about music is also a way for some to ensure that the music they find corresponds to what they consider to be “legitimate tastes.” During the interviews, several participants confessed judging others on the basis of their music preferences, for instance by looking at their music collection:

"I think it tells a lot about them. [...] If I have a date, for example, I will go check what she listens to!" (Nicolas, male, 23).

Considering that, it was not surprising to hear many of them expressing concerns about being judged on the basis of their music taste. As a result, making sure that the values and beliefs associated with the music found corresponded to what they wanted to communicate about themselves was important to them. For example, one participant (Karine, female, 26) admitted regularly reading music reviews to get the point of view of someone who she believes is "objective" and more knowledgeable than she is in music, as she does not feel confident enough to judge the quality of music herself. The same participant also mentioned having kept hidden from her friends her taste for what she considers to be "kitsch" music.

Related to the previous comment, how 'mainstream' a particular type of music is seemed to greatly affect the appreciation of music of most participants. While adolescents are known to have a preference for commercial and popular music, 11 of the adults interviewed expressed a strong penchant for underground music and obscure, unknown (or not yet known) bands. Although very few participants clearly explained why they preferred underground to commercial music, there are indications that having personal and unique music taste allows them to better express who they are or who they aspire to be. It is also a way to distinguish themselves from others, that is from the common people (those who like mainstream music). Acquiring information about music is, again, a way to ensure that the music found is not too mainstream for them. It is interesting to note that with this preference for underground music often comes an aversion for popular music, as reflected in the following quote from a participant (Benoît, male, 22): *"I sort of hate popular songs. I tend to want to be unique, not only as a person but as a personality, in my clothing or anything else. Even in terms of music, I prefer being different. [...] I like hip-hop music, but if I can find underground hip-hop music, I will like it better than, for instance, 50 Cent."*

6.2.2 Enrich Listening Experiences

Several participants talked about the need to learn about music and artists to fully appreciate and understand music. Information such as what the artists want to convey with their music, what professional critics see in it, or in which context it was composed, deeply affect their perception of music. To use one participant's words, it gives them the "little details" that allow them "to better understand the music" (Hervé, male, 27).

For instance, knowing about what artists have to say about their music—why and when a particular song was composed, what it means, etc.—can allow one to better understand it. One participant (Benoît, male, 22) compared music to ecology to explain why knowing about the background and values of music artists is so important to him: *"[Ecology] is a combination of a large number of sciences, and all these sciences together allow us understand the whole. So I believe that I'll never be able to understand a particular music group if I didn't read about it, if I didn't know what their inspirations were, where they come from, what their social background is... the music alone is empty!"*

Movement also had its importance for some, such as for one participant (Ian, male, 29) who reported going regularly on *YouTube*, a video sharing service on the Web, to watch excerpts from live performances because, for certain artists, listening to their music is "nice" but incomplete as seeing them on stage "is part of the show."

6.2.3 Gather Information for Future Acquisitions

Gathering information about music is also a way to gain the knowledge required to assess the value of the music that will be encountered in the future. All the reviews one has read, all the information concerning the artists and their music one has collected, all that remains in one's memory can potentially be useful when actually comes the time to acquire music. Hence, the analysis of the interviews revealed that collecting information about music without any specific goal often result in a wish list; a list of music-related items one would like to acquire. Some take the time to put it on paper, whereas others simply keep it in their mind. Then, when offered the opportunity to acquire music, they often draw suggestions from their list, at least to start their search. For instance, one participant (Fannie, female, 18) affirmed always having with her *"a list of CDs I need to buy,"* a list she takes out whenever she goes to a music store.

This information can also be used to recommend others. Indeed, although the interview guide did not include any questions about that, a few participants mentioned that they were a source of music recommendations for others. One interviewee (Nicolas, male, 23), for example, explained that he liked the *"challenge"* and prided himself upon his ability to find the right music for the right person: *"I think I'm good at figuring out the music tastes of people quite quickly."* He later added that he sometimes look for music information with the specific intention of finding something his brother would like. Similarly, another participant (Gabriel, male, 27) was pleased to report that his previous roommate *"still relies on me for music discoveries."* The pride and/or pleasure these participants and others seemed to take in recommending friends or relatives suggest that this might motivates them to gather information on music and thus contributes to making them feel satisfied with their information-seeking experience, even if it does not yield immediate, tangible results.

7. FINDINGS: HEDONIC OUTCOMES

In addition to utilitarian outcomes, participants tended to associate high levels of hedonic value to their music information-seeking experiences. Hedonic outcomes could take different forms, from pure enjoyment to physical arousal and absorption.

7.1 Pleasure

In his model of shopping behavior (as in the models of several other researchers as mentioned in Section 3 of this paper), Bloch (1986) includes "Experience fun and pleasure" as a motive for acquiring information regarding products one does not have the intention to buy, at least in the short term. When asked how they perceived their music information-seeking experiences, participants consistently reported taking pleasure in the activity in such a way that several even considered that going to a music store or on the web to search for music was a pastime in itself. One participant (Jean-Sébastien, male, 23) considered that it was a *"hobby"* and affirmed that even if he can get a record for less on *eBay*, an online auction service, he still buys some in brick-and-mortar music stores, simply because of the inherent pleasure of shopping for music. For another participant (Laura, female, 27), going to a music store is something she does when she wants to take time for herself: *"I like music stores because it's like... it's like a moment to myself [...] It's like eating a slice of apple pie alone on a Wednesday afternoon. It's in the same area of pleasure."* One participant (Gabriel, male, 27) reported feeling *"like a seven-year-old at Toys'R'Us"* when entering a music store, whereas others mentioned being *"excited"* (Christian, male, 23) or filled with *"eager anticipation"* (Fannie, female, 18) before going to the library or on the Web to look for music, thinking about the pleasure they would take in the activity.

7.2 Feeling of Engagement

The level of engagement, a concept that has been defined by O'Brien and Tom as "a quality of user experiences with technology that is characterized by challenge, aesthetic and sensory appeal, feedback, novelty interactivity, perceived control and time, awareness, motivation, interest, and affect" (2008, p. 949), seemed to play an important part in making a music information-seeking experience satisfying. Participants' accounts of their experiences frequently included aesthetic and sensory components such as the "*calming atmosphere*" (Martin, male, 20; Christian, male, 23) of music stores or libraries, or the pleasure of handling and looking at "*beautiful cover jackets*" (Gabriel, male, 27). Several also reported being deeply absorbed when seeking music or music information, especially on the Web, to the point where they were losing the sense of time and were having difficulty finding the courage to put an end to it. Some felt they were devoting "*too much time*" to it, up to several hours per day for one participant (Christian, male, 24) who confessed that "*Sometimes [...] I'd like to do something else,*" adding "*it's ridiculous how quickly time passes doing that!*" Another participant (Fannie, female, 18) goes as far as talking about addiction: "*I'm a little addicted, sometimes. There are evenings where I can... I have to get up at 5 am to go to school, and I should have gone to bed at 8 pm, and it's midnight and I'm still at my computer!*"

Novelty was also very often mentioned as a reason for spending more time than planned interacting with a system. When asked why they liked *MySpace Music*, a music-oriented social network, one participant (Nicolas, male, 23) explained, "*You check the groups, you discover things, you click, you open pages and pages and pages...*" whereas another (Jean-Sébastien, male, 23) described, "*I go there and I check all the friends of the group I listen to... it never ends!*"

Conversely, participants' accounts of what makes a music information-seeking experience disappointing, frustrating or, in other words, unsatisfying, often corresponded to what prevents engagement or engenders disengagement. Some complained about technical problems, such as being unable to get sound and listen to a music excerpt (Élise, female, 23), or coming across a webpage that takes too long to load (Alexandre, male, 29). Aesthetic and sensory characteristics were also mentioned, for the most part to explain how these could sometimes spoil an experience. One interviewee (Jean-Sébastien, male, 23) mentioned the "*ugliness*" of the *MySpace Music* interface. Others complained about music stores with "*unpleasant staff*" (Laura, female, 27), or that are "*too crowded*" (Gabriel, male, 27) or filled with people that are "*in a hurry*" (Martin, male, 20).

8. DISCUSSION

8.1 Utilitarian outcomes

The findings of this study indicate that there were two types of utilitarian outcomes that could contribute to making a music information-seeking experience satisfying in the eyes of the participants in this study: (1) the acquisition of music itself; and, (2) the acquisition of information *about* music.

8.1.1 Acquisition of music.

Participant accounts suggest that, for younger adults, a music information-seeking experience that resulted in the discovery of underground music or little-known artists was considered especially satisfying. This speaks to the notion of, and potential importance of, the "Long Tail" (Anderson, 2006). Indeed, by bringing into reach an exceptional selection of music, online stores and file-sharing networks have revealed a high demand for non-commercial music, placing the peak of the

“hit-driven culture” era behind us. As Anderson observes, “Given the option to pick a boy band or find something new, more and more people are opting for exploration, and are typically more satisfied with what they find” (p. 33).

8.1.2 Acquisition of information about music.

Participants repeatedly affirmed that the acquisition of information about music that resulted from a music shopping experience or an interaction with a music-related Web site influenced positively their feeling of satisfaction. The information acquired this way seemed to benefit them in three different ways: it allows them to (1) increase their cultural knowledge; (2) enrich their listening experiences; and, (3) gather information for future acquisitions.

Increase cultural knowledge. Music knowledge appeared to act as a socializing agent. It allows them contribute to conversations about music, which is consistent with the research conducted in the fields of music psychology and sociology. Rentfrow and Gosling (2006) found that music was the most common conversation topic between younger adults who are given the task of getting acquainted. And this does not seem to be new: in 1971, Brown and O’Leary also came to the conclusion that adolescents who were considered knowledgeable about popular music had more chances of being perceived as popular by their peers. In addition to provide people with a conversation topic, music knowledge and preferences are used, in particular during adolescence, to convey information about oneself and make inferences about others (North & Hargreaves, 1999), a phenomenon that has become even more marked with the advent of social networking sites in which users are asked to list their musical interests in their profile (Liu, 2007). Hence, music preferences act as a ‘social badge’ by which people express who they are—their attitudes, values, and opinions—while seeking prestige and distinction.

The use of music tastes as a sign of distinction has also been documented by other researchers, most notably by Pierre Bourdieu. Bourdieu (1984), who surveyed 1,217 adults about their likes and dislikes in painting, music and literature in the 1960s, found a strong correlation between social class/education and musical tastes. He identified three “zones of taste” that roughly correspond to social classes: (1) Legitimate (e.g., classical or jazz music), associated with the dominant class; (2) “middle-brow” (e.g., popular classical works or classical popular songs), associated with the middle class; and (3) “popular” (e.g., mainstream music), associated with the working class (1984, p. 16). Music tastes being the product of social conditions, it comes with no surprise that Bourdieu also found that people used tastes as a tool for aesthetic discrimination (1984, pp. 56-57). Cultural tastes allow people to affirm their belonging to a social group and, most importantly, to distinguish themselves from others, hence the sometime strong aversion people manifest towards other people’s tastes.

These findings have resonance with the present study. Although it was not possible to examine the correspondence social class/zone of taste, the idea that there exists a hierarchy of tastes emerged from the participants accounts. Most participants considered that some tastes were more legitimate than others, which for some resulted in them looking down on popular music, and for others in being reluctant to publicly expose music tastes that did not correspond to what they considered to be an ‘appropriate’ zone of taste. One thing that differs from Bourdieu’s results is that legitimate tastes were not associated with classical or jazz music but with independent, underground music, which, they were proud to say, is not as “easy” or “accessible” as popular music. The time laps between the two studies and/or the young age of the participants could potentially explain this.

Enrich listening experiences. Participants reported that acquiring information about music helped them appreciate the music. Again, this finding is consistent with the research that has been done in music sociology. Several researchers, such as Adorno (1976) and Frith (1996), affirm that music perception is not only the result of intrinsic characteristics of music, but also of many other external features. Shepherd and Giles-Davis (1991) write that the meaning of music is “a consequence of an intense dialectical interaction between text, other adjacent texts (lyrics, images, movement) and social, cultural and biographical contexts.”

Gather information for future acquisitions. Participants affirmed that the information about music they had gathered while looking for music had helped them evaluate the music they had encountered afterwards, or allowed them to make suggestions to acquaintances. Bloch (1986), who surveyed more than 700 persons on their shopping behavior, came to similar conclusions: apart from searching with the clear objective of purchasing an item, people also engage in ongoing search with the aim of increasing “product expertise, but for reasons other than to optimize the outcome of a planned purchase” (p. 121). By doing so, people build what Bloch calls an “information bank” they might use for future purchases, or to help friends or family make purchase decisions.

8.2 Hedonic Outcomes

Participants’ accounts revealed that hedonic outcomes also contributed greatly to their satisfaction with a music information-seeking experience. This reinforces the idea that strong similarities exist between information behavior and shopping behavior, which reiterates the relevance of shopping behavior models for the study information-seeking behavior. Hence, just like Bloch’s shoppers (1986), participants experienced ‘fun and pleasure’ while searching for music on the Web or browsing the stacks in a library. Pleasure, however, should not be interpreted in its strict sense: it could take different forms, from mere fun to sheer absorption accompanied by a lack of awareness of physical surrounding and the impression that time passes very quickly. Hence, the model of engagement proposed by O’Brien and Toms (2008) was particularly helpful in understanding participants experiences. Moreover, this model does not only help understand the process through which people become engaged with systems, but also why they remain engaged, why they disengage and, potentially, why they reengage with it. This view tallies with the results obtained by Van der Heijden, who surveyed people about their usage intentions for an hedonic information systems and concluded that “perceived enjoyment and perceived ease of use are stronger determinants of intention to use a hedonic information system than perceived usefulness” (Van der Heijden, 2004, p. 699).

8.3 Implications for MIR System Design

Most IR systems assume that users have an articulated information need and seek to achieve a specific goal. This research revealed that, on the contrary, users searching for music for everyday-life purposes are often motivated by a vague or ill-defined need. This difference has major implications for the design of MIR systems that aim to serve these users. These systems should be designed to allow users to navigate among music items using a variety of facets and techniques so that those who have no specific need can browse the collection without having to enter an initial query into the system. Moreover, this would also encourage the serendipitous encountering of music. The fact that the participants greatly valued novelty indicates that this would be appreciated by users, along with other techniques that would facilitate the discovery of new lesser-known artists or music that belong to the “Long Tail.” The presence of “featured artists/albums” on the welcome page of a website, for instance, was mentioned by a few participants as an interesting way to discover a completely new sound.

This study also revealed that people use MIR systems not only to retrieve music but also as a primary source of music information. This reaffirms the need to include a wealth of extra-musical information already identified by other researchers (Inskip, Butterworth, & MacFarlane, 2008; Lee & Downie, 2004). In addition to providing users with extended searching capabilities, it would allow people to use these systems to increase their music knowledge. Metadata that should be provided include information about music and music artists, reviews, and associated works (e.g., movies, commercials, music videos). Also, given the use of music preferences as a social badge, there does appear a strong need to increase the social networking aspects in all types of MIR systems.

Finally, the present study uncovers the fact that the pleasure people take in using an IR system deeply affects their perception of how satisfying an experience is. The descriptions participants gave of a pleasurable experience corresponded to the definition of an engaging experience as defined by O'Brien and Toms (2008). Hence, designers of MIR systems should put efforts into developing systems able to capture and maintain the attention of its users. Not only will such systems participate in making the experience enjoyable for its users, it will also increase the likelihood that they will return to the system in the future.

Engagement being the result of an interaction between a user and a system, both components are partly responsible for creating an engaging experience. Hence, factors that are independent from systems, such as being hungry or sleepy, or having obligations, might prevent engagement or occasion disengagement. At other times, however, poor system design can constitute a barrier to engagement or precipitate disengagement. To avoid that, designers should be aware of what the characteristics of an engaging system are. According to O'Brien and Toms (2008), in addition of being convenient and easy to use, an engaging system should, among other things, be aesthetically pleasant, maintain the interest of its users through the presentation of novel information, interactivity and feedback, and offer sensory appeal through the use of different media (e.g., text, graphics, sound, images).

9. LIMITATIONS AND DELIMITATIONS

The findings presented in this paper are based on interviews conducted with a small, carefully selected sample. Dealing with a small sample allowed the researchers to obtain rich descriptions from each participant, which is essential to better understand complex behaviors. Although the sampling technique used was meant to capture a wide variety of behaviors, thus increasing the degree of transferability of the findings, it does not provide the possibility of generalizing them to the whole population.

It is also relevant to emphasize that this study focused only on everyday life music information behavior. As such, it does not include work- or school-related music information behavior. It is also confined to the population studied, namely young adults of the French-speaking Montreal metropolitan community. More research is certainly needed to study music information behavior of different populations and in different contexts.

10. CONCLUSION

A satisfying interaction between a user and an IR system is typically pictured as a situation where a user comes to a system with a specific information need (e.g., finding music for a romantic dinner), translates his/her need into a query, waits for the system to return one or more documents corresponding to the query, takes the documents and ends the session, satisfied. Real-life

scenarios, however, as revealed by the present study, are much more diverse than that. It can take the form of a person entering a music store to kill time; the person looks at the best-sellers display rack, wanders around the aisles, goes to a favorite section to flick through the CDs, and walks out the door later than planned without having purchased a thing but feeling content. Or it could take the form of a music lover visiting an online music store to check for new releases, listen to a few excerpts and to read other users' reviews to keep up-to-date with the music scene.

In other words, the findings of this study highlight the fact that satisfaction, in the context of information seeking, can take different forms, which is something that has often been overlooked by both information scientists and information system designers. Models of information behavior and information retrieval systems have focused primarily on utilitarian outcomes. The importance participants attributed to how pleasurable or engaging an information-seeking experience was suggests that more attention should be paid to hedonic outcomes, perhaps particularly in recreational contexts in which information is not always sought with the objective of accomplishing a specific task. Moreover, the fact that the participants reported appreciating increasing their knowledge of music and music artists through their interactions with information retrieval systems reveals that these systems are also used as sources of information. While providing rich metadata in information retrieval systems is known to improve access to documents and support relevance judgment about these documents, the role of systems as information providers has generally remained unnoticed and unexplored.

ACKNOWLEDGEMENTS

The authors gratefully acknowledge the financial support of the Social Sciences and Humanities Research Council of Canada and the Andrew W. Mellon Foundation.

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