

# **Gratifications from using freemium music streaming services: Differences between basic and premium users**

*Completed Research Paper*

**Matti Mäntymäki**  
Turku School of Economics  
University of Turku  
FI-20014  
matti.mantymaki@utu.fi

**A.K.M. Najmul Islam**  
Turku School of Economics  
University of Turku  
FI-20014  
najmul.islam@utu.fi

## **Abstract**

*Online music streaming services have become popular in listening to music. Most online music streaming services employ the freemium business model. The specific gratifications from online music streaming are not well understood. Moreover, research examining the freemium model from a user experience perspective remains scant. We employ uses and gratifications theory and examine four gratifications, namely ubiquity, social connectivity, discovering new music, and enjoyment, as the predictors of continuance intention. We examine the differences in these gratifications between the basic and premium users with data from 374 Spotify users. The results demonstrate that enjoyment, discovering new music, and ubiquity, are the main drivers of the continuance intention. Interestingly, social connectivity has no effect on continuance intention. Furthermore, premium users experience higher levels of enjoyment and ubiquity than the non-paying basic users. Finally, enjoyment is the only predictor of continuance intention among basic users, but has no effect among premium users.*

**Keywords:** music, streaming, freemium, continuance

## **Introduction**

Online music streaming services such as Spotify, Pandora, Rdio, Deezer, and SoundCloud have become popular ways to listen to music. Spotify, the most popular service, has more than 60 million active users globally, of which 15 million pay for its premium service<sup>1</sup>. The rapid proliferation of online streaming has had a profound impact on both the consumption and distribution of music<sup>2</sup>.

Currently, the online music streaming service providers are facing intensifying competition as new services such as Google Music and Apple Music enter the market. Hence, retaining existing is becoming increasingly important for online music streaming services. Fostering customer retention requires understanding the factors that drive people's future usage decisions in order to manage and develop the user experience.

Despite its topicality, the user experience in online music streaming services has received little academic scrutiny, although prior research has examined the drivers of downloading (Kunze and Mai 2007; Molteni and Ordanini 2003) and sharing music online (Bhattacharjee et al. 2006). Krause et al. (2014) identified three gratifications obtained from using music applications on Facebook, namely communication, entertainment and habitual diversion. These gratifications, however, are rather generic and similar to the ones identified with respect to e.g. social network sites (Park et al. 2009; Raacke and Bonds-Raacke 2008)). Thus, there is a clear need for research that investigates the specific features of online music streaming and the respective gratifications.

Furthermore, most online music streaming services employ the freemium business model (Anderson 2013; Teece 2010). In the freemium model a basic or downgraded version of the software is offered free of charge, while users who wish to have more features can purchase a premium version (Anderson 2009). Consequently, there are two groups of users with two types of user experience: the ones who use the free basic version, i.e. the basic users, and the ones who use the premium version, i.e. the premium users.

Considering the widespread adoption of the freemium model, only a few studies (Mäntymäki and Salo 2015; Vock et al. 2013; Wagner et al. 2014; Wang et al. 2011) have empirically examined the user experience in freemium services and even fewer (Oestreicher-Singer and Zalmanson 2013; Wagner et al. 2014) have done so in the online music streaming context. According to Wagner et al. (2014) attitudes toward the free version do not correlate with attitudes toward the premium version in online music streaming. This implies that online music service providers need to have customized intervention plans, depending on the account type if they want to retain both types of users.

Hence, this study contributes to the research on online music streaming and the freemium business model by empirically examining 1) the key gratifications driving online music streaming, and 2) to what extent experiencing these gratifications differs between basic and premium users.

To this end, we employ uses and gratifications theory (U & G) (Katz et al. 1974) and identify four gratifications, namely ubiquity, social connectivity, discovering new music, and enjoyment, as the predictors of the continuance intention. Furthermore, we examine the differences in experiencing these gratifications between the basic and premium users with data collected from 374 users of the leading online music streaming service, Spotify, and analyze the data using structural equation modeling (SEM) and analysis of variance (ANOVA).

---

<sup>1</sup> <https://press.spotify.com/us/information/>

<sup>2</sup> Sisario, Ben (2013) "As Music Streaming Grows, Royalties Slow to a Trickle" *New York Times*, 28 January 2014 <http://www.nytimes.com/2013/01/29/business/media/streaming-shakes-up-music-industrys-model-for-royalties.html>

The SEM results demonstrate that enjoyment, discovering new music, and ubiquity, are the main drivers of the continuance intention. Interestingly, social connectivity has no effect on continuance intention. The ANOVA results reveal that premium users experience higher levels of enjoyment and ubiquity than the non-paying basic users. In addition, the results show that while enjoyment is the only predictor of continuance intention among basic users, it has no effect among premium users.

The remainder of the paper proceeds as follows, after the introductory section we discuss how the freemium model has been applied in online music streaming and present the theoretical background of the study. In the third section, the research hypotheses are presented. The fourth section covers the empirical research and the results. In the fifth section, we discuss the main findings of the study, summarize the theoretical and practical contribution, unveil the limitations of the study, and suggest areas for future research.

## Background

### *Freemium business model*

The term freemium is a combination of free and premium that describes a business model in which a basic product or service is made available for free, while the users who wish to receive additional features and/or an enhanced user experience can either purchase a premium subscription or make purchases within the service (Anderson 2009; Anderson 2013; Teece 2010). Additionally, the service provider can use advertising to cover the costs from offering the basic version for free. In online music streaming services such as Spotify and Rdio, the basic version typically includes advertising and one benefit of the premium membership is an ad-free, uninterrupted listening experience.

When employing the freemium model, the service provider's ability to retain the paying users and convert the non-paying users into paying ones is a critical success factor (Kumar 2014). As a result, employing the freemium model requires constant optimization to maintain the delicate balance between the content of the free and premium offerings. The free version should deliver enough value to attract new users and retain the current ones. The premium version should offer sufficient value-added compared to the basic version to justify its cost. Hence, employing the freemium model leads to two standards of the user experience. To illustrate the issue in the online music streaming context, Table 1 summarizes the added benefits of a Spotify premium user account compared to a basic account. We choose Spotify as it is the market leader in online music streaming.

Added benefits	Description
No commercials	Commercials do not interrupt premium account listeners.
Unlimited listening time	The listening time for a premium account is unlimited (but only 20 hours for the basic account).
Ability to select individual songs when using the mobile application	The basic account only offers shuffle play for mobile devices.
Enhanced audio quality	Premium account includes improved audio quality (320 vs. 160 kb/sec).
Offline listening	Playlists can be downloaded to a mobile phone, tablet device or computer for offline listening.
Exclusive new releases	New songs and albums are pre-released for premium account holders.

Prior research on the freemium model in online music context offers insights on the factors that may explain upgrading from the basic version to the premium user account (Oestreicher-Singer and Zalmanson 2013; Wagner et al. 2014; Wang et al. 2011). Sustained user engagement in turn has received less scholarly attention.

### Uses & Gratifications theory

U & G (Katz et al. 1973; Katz et al. 1974) is a theoretical framework that is used to study how people choose and use new media (Rayburn and Palmgreen 1984; Ruggiero 2000; Stafford et al. 2004). According to U & G, people distinguish between different forms of media based on the needs they expect to satisfy through their media use (Katz et al. 1973). U & G posits that 1) media use is goal-directed behavior, aimed at fulfilling one’s individual set of needs (Blumler 1979), 2) people are aware of their needs (Blumler 1979), and 3) people actively seek and use media.

U & G views needs as “the combined product of psychological dispositions, sociological factors, and environmental conditions” (Katz et al. 1973, p. 516-517). Gratifications in turn are the perceived fulfillment of a need through an activity, such as media use (Rayburn and Palmgreen 1984). Rather than providing a predefined set of factors and constructs, U & G offers a guiding framework for context-specific theorization (see e.g. Eisenbeiss et al. 2012; Mäntymäki and Riemer 2014). Thus, understanding the use context of a media provides the basis for the successful employment of U & G.

Prior U & G research has identified several broad types of benefits people can derive from media use. For example, Nambisan and Baron (2009) suggested four gratifications that predict participation to virtual customer environments, (1) cognitive benefits that relate to information acquisition and strengthening of the understanding of the environment; (2) social integrative benefits that relate to strengthening consumer’s ties with relevant others; (3) personal integrative benefits that relate to strengthening the credibility, status, and confidence of the individual; and (4) hedonic or affective benefits such as those that strengthen aesthetic or pleasurable experiences (Katz et al. 1974; Nambisan and Baron 2009).

Stafford et al. (2004) identified three generic gratifications from using the Internet, namely content gratifications, process gratifications and social gratifications. Content gratifications relate to the outcomes from using the media whereas process gratifications stem from the enjoyment and pleasure experienced when using the media. Social gratifications in turn stem from establishing and maintaining connections with other people.

Online music streaming services have unique properties that are distinct from listening to downloaded audio files with a mobile device or a computer. These properties enable certain context-specific gratifications. As a result, we employ social connectivity value, discovery value, ubiquity and enjoyment as the gratifications from using online music streaming services. Our dependent variable is continuance intention (i.e. the intention to use the service in the future). The focal constructs will be discussed in detail in the following section. Table 2 below offers a summary of the constructs and their definitions.

Construct	Definition	Reference
Social connectivity	The extent to which using the online music streaming service helps to attain gains in obtaining information about other people's music preferences and the sharing of favorite music with others.	(Dholakia et al. 2004)
Discovery of new music	The extent to which using an online music streaming service helps to discover new music and broaden musical taste.	(Sheth et al. 1991; Sweeney and Soutar 2001)
Ubiquity	The extent to which using the online music streaming service helps to attain gains in accessing music irrespective of time and place.	(Okazaki and Mendez 2013)
Enjoyment	The extent to which using the online music streaming service is perceived as enjoyable in its own right.	(Davis et al. 1992)
Continuance intention	Intention to use the online music streaming service in the future.	(Bhattacharjee 2001)

## Hypotheses

First, online music streaming services include social features that allow users to create playlists and to follow the playlists of others. Moreover, users can share their playlists via Facebook and allow Spotify to give automatic updates on the music they are listening to. The social features allow users' music preferences more visible and help to get in touch with other users with similar music taste. Hence, the social features and direct integration to social network sites is a factor that differentiates online music streaming services from listening to downloaded audio files.

From a U & G perspective, social connectivity facilitated by using an online music streaming service can be considered as social gratification related to establishing social ties with other people (Katz et al. 1974). Prior research has found that social relationship support predicts purchasing digital products (Kim et al. 2011) and participating virtual customer environments (Nambisan and Baron 2009). As a result, it is meaningful to investigate to what extent the social interaction facilitated by the online music streaming service predicts the continuance intention. Consequently, we put forward the following hypothesis:

*H1: Social connectivity will positively affect the continuance intention.*

Second, as the digital music libraries of online music streaming services include millions of songs, the services include recommendation agent features (Xiao and Benbasat 2007). The recommendation agent features offer customized recommendations based on user's listening history. This helps users to better utilize the large media library and find or discover music that fits their preferences.

As a result, the features affording discovering new music offer the user cognitive gratifications as described in U & G (Katz et al. 1973). In addition, from a customer value perspective, discovery of new music can be related to epistemic value, i.e. a service's capacity to arouse curiosity, offer novelty or satisfy a desire from knowledge (Sheth et al. 1991; Sweeney and Soutar 2001). This type of gratification is particularly important for experiential services (cf. Sheth et al. 1991) such as music streaming. Thus, we examine the discovery of new music as a gratification from online music streaming and hypothesize the following:

*H2: Discovery of new music will positively affect the continuance intention.*

Third, with online music streaming services the users does not need to possess the music files in any physical or digital format as they can access the tracks via the Internet. In addition to this, Spotify and Rdio premium users for example have the option to download their music to a device for offline listening. Considering also the size of the music library available for the users, we hold that ubiquitous access to music is a gratification salient to online music streaming.

From a U & G perspective, ubiquity can offer personal integrative gratifications through reinforcing one's sense of self-efficacy related to music listening (Katz et al. 1974; Nambisan and Baron 2009). As a result, we employ the concept of ubiquity (Okazaki and Mendez 2013; Tojib and Tsarenko 2012) to predict continuance intention.

*H3: Ubiquity will positively affect the continuance intention.*

Fourth, online music streaming is likely to be enjoyable as such as listening to one's favorite music can in general consider a hedonic experience. Extensive prior U & G research has acknowledged enjoyment as a gratification arising from consuming various types of media (Katz et al. 1974; Nambisan and Baron 2009), including online music (Krause et al. 2014). In addition, extensive prior research has found enjoyment to predict the use of hedonic IT applications (van der Heijden 2004) such as social virtual worlds (Mäntymäki and Riemer 2014), online games (Li et al. 2015) and social networking sites (Cheung et al. 2011). Hence, we examine enjoyment as a gratification resulting from online music streaming as a predictor of continuance intention.

*H4: Enjoyment will positively affect the continuance intention.*

To investigate the influence of the freemium model on the user experience, we examine to what extent the four gratifications differ between the basic and premium users. The recommendation and social features of Spotify are similar for both basic and premium accounts. However, it is possible that the two user groups evaluate these two gratifications differently.

The premium users spend money on their use of online music streaming. This may imply that they consider music in general, or the online music streaming in particular, more important than the basic users. Therefore, premium users, may consider the social features that help to find other users with similar music taste more valuable than the basic users

With respect to discovery of new music, the premium users have unlimited monthly listening time and are thus likely to use the service more than basic users. Consequently, they can also derive more value from the recommendation features. In addition, when using the mobile application, premium Spotify users can freely select the songs they want to listen whereas basic users can only use the shuffle play mode and skip only a limited number of songs per hour. These features are likely to increase the value the premium version in social connectivity and discovering value compared to the basic version.

*H5: Users with a premium account experience higher levels of social connectivity than users with a basic account.*

*H6: Users with a premium account experience higher levels of discovery of new music than users with a basic account.*

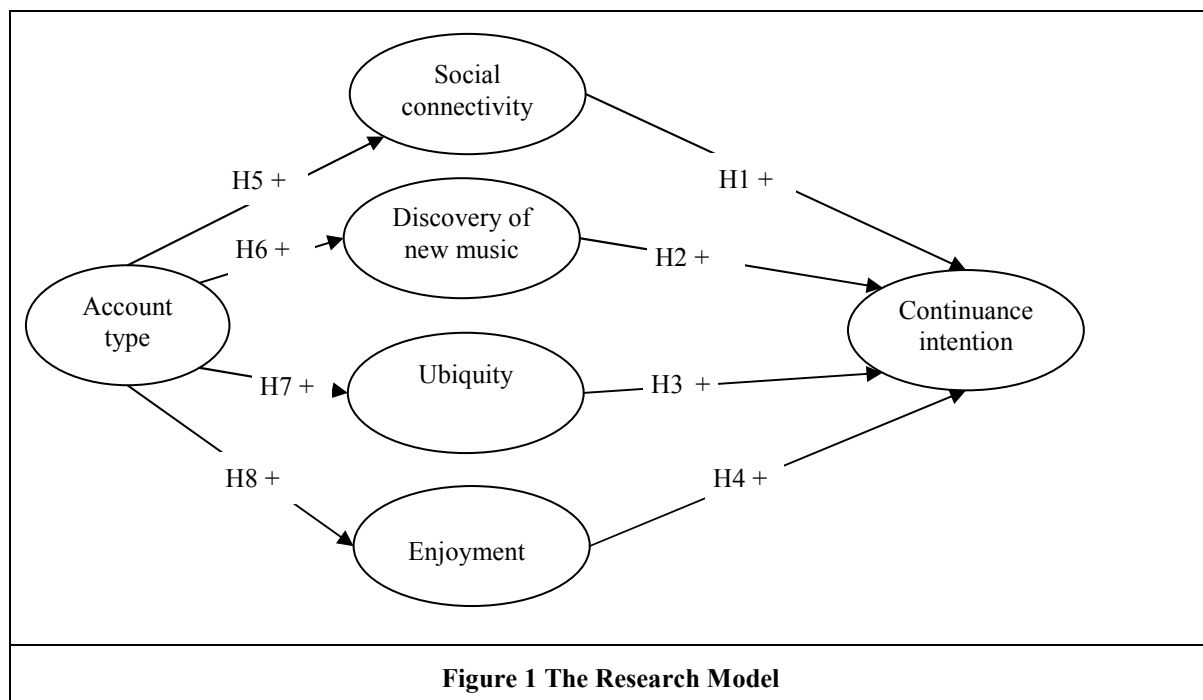
As discussed earlier, Spotify's premium users have the option to download their playlists for offline listening. In addition, when using the mobile application, the premium users can freely select the songs they want to listen and skip any song when using the shuffle play mode or radio features. Because of these value-added features, premium users are likely to experience higher levels of ubiquity than basic users.

With regards to enjoyment, premium users are not distracted by the commercial breaks included in the basic version. The commercial breaks interrupt the listening and are thus likely to decrease the enjoyment of the user experience. Second, premium users receive exclusive access to new releases before they are officially available and also receive enhanced audio quality and features for multi-room music distribution. Third, the monthly listening time for premium users is unlimited which allows them to use the service more than the basic users. Together, these benefits are likely to make the premium version more enjoyable than the basic version. As a result, we put forward the last two hypotheses:

*H7: Users with a premium account experience higher levels of ubiquity than users with a basic account.*

*H8: Users with a premium account experience higher levels of enjoyment than user with a basic account.*

Figure 1 below summarizes the hypothesized research model.



## **Empirical research**

### ***Measurement development and data collection***

The measures for ubiquity, enjoyment, and the continuance intention were adopted from existing scales. The survey instrument used in the measurement is presented in Appendix A. The measures for discovering new music and social connectivity were developed for this study. We interviewed seven Spotify users and asked them to elaborate on why they use the service and what features of the service they consider particularly valuable. The respondents stated that the artist recommendations and information about new releases offered by Spotify help in discovering new music. With respect to social interaction, the respondents considered the possibility to follow other users and receive information about other people's music preferences a unique feature of Spotify.

Based on the information obtained from the users, we established a list of 12 candidate items measuring the discovery of new music and social connectivity. This list was thereafter presented to a group of four experienced Spotify users and two senior academics. Finally, six items measuring discovering new music and three items measuring social interaction qualified for use in the measurement. All constructs were measured with reflective indicators since the direction of causality was from constructs to their items (Cenfetelli and Bassellier 2009). The items were measured on a five-point Likert scale anchored from strongly agree to strongly disagree.

The data were collected with an online survey from Finnish Spotify users. Therefore, the survey instrument was translated into Finnish by the first author who is a native Finnish speaker and checked by another native Finnish-speaking scholar. To collect the data, we first randomly selected a group of one thousand respondents from our university's database. The database includes students at bachelor's, master's and PhD levels as well as graduates who take additional courses to complement their degrees. In addition, we published an invitation to participate in the survey on two Facebook groups. Altogether, the survey was opened 637 times and 376 respondents proceeded to the final page and submitted the survey, leading to a completion rate of 58.7 per cent. After omitting two responses with clearly incorrect data, the final sample consisted of 374 responses, 227 respondents were female and 147 male. The age of the respondents varied between 18 and 57, the mean age of the respondents being 25. Altogether, 165 (44 %) respondents held the basic account and 209 (56 %) the premium account. We also examined the amount of time spent on the service with 1) a computer, 2) a mobile phone, and 3) a tablet device. The average overall listening time per day was 60 minutes for basic users and 110 minutes for premium users. To test the possible non-response bias, we compared the earliest 20 percent and the last 20 percent of the responses. A t-test did not detect any statistically significant difference between the demographic profile of the early and late responses.

### ***Analysis and results***

We started the analysis by exploring the gratifications using a principal component analysis with Varimax rotation. Four factors with eigenvalues greater than 1 representing each gratification emerged from the rotated solution.

As a result, we proceeded to confirmatory factor analysis. We first examined the factor loadings and composite reliabilities. We deleted items with loadings less than 0.7 to the respective construct. The composite reliability values ranged from 0.864 to 0.966 and the average variance extracted (AVE) values ranged from 0.632 to 0.726. These values clearly exceeded Fornell and Larcker's (Fornell and Larcker 1981) minimum criteria of 0.7 for composite reliability and 0.5 for AVE. Item means, standard deviations, loadings, composite reliabilities and AVEs are presented in Table 3 below.

Table 3 Item means, standard deviations, loadings, composite reliabilities and AVEs					
Item	MEAN	S.D.	LOADING	Composite reliability	AVE
UBI1	4.032	1.185	0.811	0.938	0.684
UBI2	3.850	1.185	0.959		
UBI3	4.168	1.007	0.764		
DISCO1	4.262	0.861	0.757	0.932	0.726
DISCO2	4.051	0.969	0.807		
DISCO3	4.123	0.909	0.866		
DISCO4	4.259	0.935	0.821		
SOC3	2.898	1.111	0.855	0.888	0.644
SOC2	2.471	1.019	0.768		
SOC1	3.297	1.056	0.699		
HED1	4.115	0.789	0.747	0.864	0.632
HED2	4.222	0.758	0.795		
HED3	3.904	0.848	0.726		
CI1	4.543	0.790	0.880	0.966	0.723
CI2	4.545	0.786	0.975		
CI3	4.492	0.866	0.944		

The highest bivariate correlation was 0.453 (between future use and enjoyment), which was clearly lower than the square root of the weakest AVE value (0.795 for enjoyment). The correlations between research constructs are presented in Table 4 below.

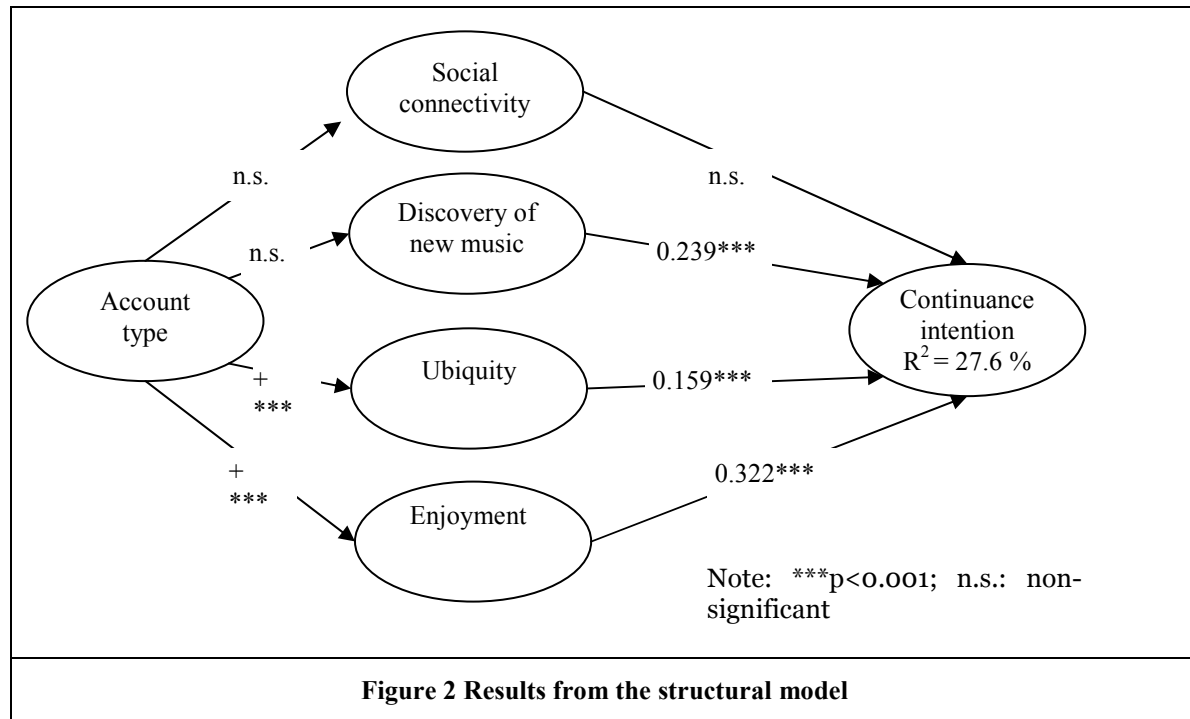
Table 4 Correlations between the constructs (bolded items in the main diagonal square roots of AVEs)					
	DISCO	UBI	SOC	ENJ	CI
DISCO	<b>0.852</b>				
UBI	0.148	<b>0.827</b>			
SOC	0.293	0.033	<b>0.803</b>		
ENJ	0.421	0.244	0.091	<b>0.795</b>	
CI	0.370	0.269	0.009	0.453	<b>0.851</b>

Altogether, the measurement exhibited good convergent and discriminant validity. The model fit indices ( $\chi^2/DF$  2.085; GFI 0.939; AGFI 0.912; CFI 0.972; RMR 0.044; RMSEA 0.054) for the measurement model clearly indicated a good fit.

Finally, we tested the risk of common method bias (CMB) was examined with a confirmatory factor analysis using the single-factor approach presented by Malhotra et al. (2006). The single-factor model exhibited a very poor fit, indicating that CMB is unlikely to be a concern.

After having verified the reliability and validity of the measurement, we proceeded to testing the structural model. The control variables, respondent age and gender did not have a significant effect on

continuance intention. The results showed that enjoyment was the principal determinant of continuance intention, followed by the discovery of new music and ubiquity. As a result, H2, H3, and H4 were supported. Contrary to our hypotheses (H1), social connectivity did not have a significant effect on continuance intention. Figure 2 below summarizes the results from testing the structural model.



To investigate the differences in our focal constructs between the basic and premium users, we conducted a series of one-way ANOVAs. The results are presented in Table 5. The ANOVAs detected a statistically significant difference between the two groups in ubiquity ( $p < .001$ ), enjoyment ( $p < .01$ ) as well as in the dependent variable, continuance intention ( $p < .001$ ). For these constructs, the scores were higher among premium users. Thus, H5 and H6 were rejected whereas H7 and H8 were supported.

Table 5 ANOVA results					
		Basic	Premium	F-value	Sig.
Continuance intention	Mean	12.927	14.092	24.604	.000
	S.D.	2.723	1.821		
Ubiquity	Mean	10.752	13.077	9.629	.000
	S.D.	3.220	2.433		
Discovering new music	Mean	16.406	16.923	2.464	.117
	S.D.	3.329	3.029		
Social connectivity	Mean	8.624	8.699	.068	.794
	S.D.	2.681	2.76483		
Enjoyment	Mean	11.879	12.526	63.250	.002
	S.D.	2.152	1.879		
Use per day (min)	Mean	60.152	110.971	16.588	.000
	S.D.	85.130	87.980		

Taken together, the data offered empirical support for five out of our eight hypotheses. Table 6 summarizes the results of testing the research hypotheses.

Hypothesis	Outcome
<i>H1: Social connectivity will positively affect the continuance intention.</i>	Not Supported
<i>H2: Discovery of new music will positive affect the continuance intention.</i>	Supported
<i>H3: Ubiquity will positively affect the continuance intention.</i>	Supported
<i>H4: Enjoyment will positively affect the continuance intention.</i>	Supported
<i>H5: Users with a premium account experience higher levels of social connectivity than users with a basic account.</i>	Not supported
<i>H6: Users with a premium account experience higher levels of discovery of new music than user with a basic account.</i>	Not Supported
<i>H7: Users with a premium account experience higher levels of ubiquity than users with a basic account.</i>	Supported
<i>H8: Users with a premium account experience higher levels of enjoyment than user with a basic account.</i>	Supported

Finally, we conducted a post-hoc analysis to examine the possible moderating effect of account type by running the structural model separately for basic and premium users. Interestingly, enjoyment was the only significant predictor of continuance intention among basic users. In contrast, for premium users, continuance intention was predicted by discovering new music and ubiquity while the effect of enjoyment and social connectivity was not significant. We used a z-test to examine the statistical significance of the differences in the standardized path coefficients between basic and premium users. The z-test indicated that the effects of enjoyment ( $p < .001$ ), ubiquity ( $p < .001$ ), and discovering new music ( $p < .05$ ) on continuance intention were statistically different between basic and premium users. Table 7 summarizes the from the post-hoc analysis.

Relationship	Whole data	Basic account	Premium account	z-score
Discovering new music → Continuance intention	0.239***	<b>0.131 n.s.</b>	<b>0.421***</b>	<b>1.784*</b>
Social connectivity → Continuance intention	-0.096 n.s.	-0.035 n.s.	-0.149 n.s.	-0.635 n.s
Ubiquity → Continuance intention	0.159***	<b>0.006 n.s.</b>	<b>0.269***</b>	<b>2.261***</b>
Enjoyment → Continuance intention	0.322***	<b>0.468***</b>	<b>0.071 n.s.</b>	<b>-3.821***</b>

\*\*\*  $p < .001$ ; \*\*  $p > .01$ ; \*  $p < .05$ ; n.s. not significant

## Discussion

This study set out to contribute to the research on online music streaming and the freemium business model by empirically examining 1) the key gratifications driving online music streaming, and 2) whether basic and premium users experience different levels of gratifications. In addition, we investigated to what extent the effect of these gratifications differs in predicting future usage decisions between basic and premium users.

The results show that enjoyment is the principal predictor of continuance intention, followed by discovery of new music and ubiquity whereas social connectivity has no effect. The strong role of enjoyment aligns with the findings by Krause et al. (2014) from Facebook's music applications.

Second, the results demonstrate that premium users perceive higher levels of ubiquity, enjoyment and continuance intention than basic users. This implies that the added benefits of the premium user account reinforce customer retention.

Third and finally, our post hoc analysis revealed that the factors driving usage intention differ considerably between basic and premium users (see Table 4). For basic users, enjoyment is the only predictor of continuance intention. Furthermore, discovering new music is strongest predictor of the continuance intention for premium users but had no effect on basic users. Hence, yet the features enabling the discovery of new music are similar across account types, the premium users who use the service more also benefit from the recommendation agent functionalities more than basic users, whose monthly listening time is limited to 20 hours

From a customer decision-making perspective, purchasing the premium user account involves a monetary investment compared to the free basic version, the premium users are likely to consider the benefits against the associated costs more carefully than the basic users. This can be explained by the theory of human information processing (Payne 1982; Payne et al. 1988). According to the theory, humans have limited cognitive capacity to process information. Hence, they tend to optimize the amount of information processing allocated to a task. Since using the basic version does not include a monetary cost, identifying sufficient benefits to justify the usage requires less cognitive effort compared to the premium subscription. Thus, for the basic users, enjoyment alone appears to be sufficient to justify the usage decision. The premium users in turn are likely to be more deliberately aware of the benefits that they get in return from the subscription fee.

### ***Implications for research***

Considering the dearth of prior research on the motives for using online music streaming services (Krause et al. 2014) as well as user experience in services employing the freemium model (Mäntymäki and Salo 2015; Vock et al. 2013; Wagner et al. 2014) the present study makes two main contributions to the literature.

First, by identifying the four gratifications from using online music streaming services, the present study adds to the prior literature on people's motives to consume music online (Bhattacharjee et al. 2006; Kunze and Mai 2007; Molteni and Ordanini 2003; Sanchez-Franco and Rondan-Cataluña 2010). By identifying the differences in the level as well as in relative effect of enjoyment, our study adds on prior research (Krause et al. 2014) and advances the understanding of hedonic gratifications in consuming music online.

Second, by examining the differences in the gratifications between the basic and premium users, the present study adds on the current research on the freemium model. Our results show that the levels of gratifications and their impact on continuance intention differ considerably between the basic and premium users. To the best of our knowledge, this issue has not been taken up by prior research examining the freemium model.

Furthermore, based on an analysis of rankings, customer ratings, and sales of freemium applications in Google Play (marketplace for Android applications), Liu et al. (2014) pointed out that the quality of the free version is the principal heuristic driving the sales of the paid version. Our results add a customer perspective to this line of inquiry by showing that enjoyment is a focal factor in determining users' continuance with the free version of online music streaming services.

### ***Implications for practice***

The results highlight the importance of managing the user experience differentially for basic and premium users in order to successfully employ the freemium model. The higher levels of the continuance intention, enjoyment and ubiquity among the premium users indicate that the additional features and benefits that come with the premium account elevate the user experience. This in turn may motivate the purchase of the premium version of the service. These observations are critical from the managerial standpoint as they

imply that Spotify has been successful in forming and communicating a freemium offering that includes a value increment for premium users.

We point out two main practical implications from the study. First, ensuring that the user experience is enjoyable plays a key role in fostering continuance among the basic users. Obtaining and maintaining a large base of non-paying users to be converted into paying customers is essential when employing the freemium model (Kumar 2014). Thus, ensuring that the free offering meets users' expectations is pivotal in sustaining the user base.

Second, the low scores for social connectivity alongside its non-significant impact on continuance intention imply that the social features of Spotify do not create value for the users. Prior research on content websites suggests that the degree of interaction between users is associated with desirable consequences for example subscribing a premium version of the service (Oestreicher-Singer and Zalmanson 2013). Following this logic, services offering digital content today typically also include features for user-to-user interactions either within the service or through integration to social media.

The non-significant effect of social connectivity suggests that the social features of Spotify may be an unnecessary add-on and do not create the desired lock-in effect. Put in a broader perspective, the designers of online music streaming services should consider what kind of social features add to the user experience and whether the users are ready for social listening. For example, automatic Facebook updates generated by Spotify may even increase the amount of low value information in one's newsfeed on Facebook and hence mostly irritate the users. Thus, we encourage system designers to critically evaluate to what extent the integration to social network sites adds or reduces value.

Our results imply that mechanistic implementation of social features to digital content services may not be an advisable course of action. The service operators should closely evaluate the value propositions and the use context of their services based on the gratifications the users look for. As pointed in U & G (Katz et al. 1973), people emphasize different gratifications in their choice of media. For example, when consuming digital media, users' willingness to interact with other users can be highly context and situation-specific.

Altogether, our findings align with Oestreicher-Singer and Zalmanson (2013) who called for a more strategic approach to integration social interaction to digital content services. In the worst case, social features can even have an adverse effect on the user experience. Thus, the social aspects of listening music should be infused in online music services in such a way that the users do not consider them as an add-on. Alternatively, considering the widespread adoption of social features and social media integration among digital content services, offering a clean, streamlined user experience without pseudo-social clutter could be means to differentiate and gain competitive advantage.

To recap, we advise service operators to critically evaluate whether their offering really benefits from social features and whether the content provided in the service can form a common interest that can sustain social interaction with other users.

### ***Limitations & future research***

The study has several limitations. First, the data were collected only from users of one service, Spotify, and from one country, Finland. Thus, we recommend future research with a broader contextual coverage. Second, behavioral intentions do not always translate into actual behavior. Hence, future research could employ the objective measurement of the use of a service as the dependent variable. Third, in addition to the future usage intention examined here, future research could examine the reasons behind upgrading a basic account to premium as well as discontinuing the premium subscription.

Appendix A The Survey Instrument		
Construct	Items	
	Using Spotify...	
Ubiquity (Okazaki and Mendez 2013)	UBI1	...allows me to listen to music with the device I prefer at that moment
	UBI2	...allows me to listen to music wherever I am
	UBI3	...allows me to listen to music when it best suits me
	UBI4	...allows me to find and listen to a song that I have just thought about *
	UBI5	...makes me not dependent on having music downloaded to a device*
Discovery of new music (new scale)	DISC1	...helps me to find music to fit my music taste
	DISC2	...broadens my musical taste
	DISC3	...helps me to discover music I would not normally listen to
	DISC4	...allows me to discover artists/bands that I have not been aware of before
	DISC5	...provides me with music recommendations that suit my preferences*
	DISC6	...helps me to stay updated with new releases by my favorite artists*
Social connectivity (new scale)	SOC1	...allows me to see what kind of music other people listen to
	SOC2	...allows me to connect with other people with similar music preferences
	SOC3	...allows me to share my favorite music with other people
Enjoyment (Davis et al. 1992)	ENJ1	...is enjoyable
	ENJ2	...pleasant
	ENJ3	...is fun
Continuance intention (Bhattacharjee 2001)	CI1	I plan to continue using Spotify in the next three months.
	CI2	I will continue using Spotify in the next three months.
	CI3	I intend to continue using Spotify in the next three months.

\*Item omitted from measurement due to loading < 0.7

## References

- Anderson, C. 2013. *Free: How Today's Smartest Businesses Profit by Giving Something for Nothing*, Random House.
- . 2009. *Free: The Future of a Radical Price*, Random House.
- Bhattacharjee, S., Gopal, R., Lertwachara, K., and Marsden, J. R. 2006, "Whatever Happened to Payola? an Empirical Analysis of Online Music Sharing," *Decision Support Systems* (42:1), pp. 104-120.
- Bhattacharjee, A. 2001, "Understanding Information Systems Continuance: An Expectation-Confirmation Model," *MIS Quarterly* (25:3), pp. 351-370.
- Blumler, J. G. 1979, "The Role of Theory in Uses and Gratifications Studies," *Communication Research* (6:1), pp. 9-36.

- Cenfetelli, R. T., and Bassellier, G. 2009, "Interpretation of Formative Measurement in Information Systems Research," *MIS Quarterly* (33:4), pp. 689-707.
- Cheung, C. M. K., Chiu, P., and Lee, M. K. O. 2011, "Online Social Networks: Why do Students use Facebook?" *Computers in Human Behavior* (27:6), pp. 2322-2339.
- Davis, F. D., Bagozzi, R. P., and Warshaw, P. R. 1992, "Extrinsic and Intrinsic Motivation to use Computers in Workplace," *Journal of Applied Social Psychology* (22:14), pp. 1111-1132.
- Dholakia, U. M., Bagozzi, R. P., and Pearo, L. K. 2004, "A Social Influence Model of Consumer Participation in Network- and Small-Group-Based Virtual Communities," *International Journal of Research in Marketing*, (21:3), pp. 241-263.
- Eisenbeiss, M., Blechschmidt, B., Backhaus, K., and Freund, P. A. 2012, "The (Real) World is Not enough: Motivational Drivers and User Behavior in Virtual Worlds," *Journal of Interactive Marketing* (26:1), pp. 4-20.
- Fornell, C., and Larcker, D. F. 1981, "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error," *Journal of Marketing Research* (18:1), pp. 39-50.
- Katz, E., Blumler, J. G., and Gurevitch, M. 1974, "Utilization of Mass Communication by the Individual," *The use of Mass Communications: Current Perspectives on Gratifications Research*, J. G. Blumler and E. Katz (eds.), Beverly Hills, CA: Sage, .
- Katz, E., Haas, H., and Gurevitch, M. 1973, "On the use of the Mass Media for Important Things," *American Sociological Review* (38:2), pp. 164-181.
- Kim, H., Gupta, S., and Koh, J. 2011, "Investigating the Intention to Purchase Digital Items in Social Networking Communities: A Customer Value Perspective," *Information & Management* (48:6), pp. 228-234.
- Krause, A. E., North, A. C., and Heritage, B. 2014, "The Uses and Gratifications of using Facebook Music Listening Applications," *Computers in Human Behavior* (39:0), pp. 71-77.
- Kumar, V. 2014, "Making "Freemium" Work," *Harvard Business Review* (92:5), pp. 27-29.
- Kunze, O., and Mai, L. 2007, "Consumer Adoption of Online Music Services: The Influence of Perceived Risks and Risk-Relief Strategies," *International Journal of Retail & Distribution Management* (35:11), pp. 862-877.
- Li, H., Liu, Y., Xu, X., Heikkilä, J., and van der Heijden, H. 2015, "Modeling Hedonic is Continuance through the Uses and Gratifications Theory: An Empirical Study in Online Games," *Computers in Human Behavior* (48:0), pp. 261-272.
- Liu, C. Z., Au, Y. A., and Choi, H. S. 2014, "Effects of Freemium Strategy in the Mobile App Market: An Empirical Study of Google Play," *Journal of Management Information Systems* (31:3), pp. 326-354.
- Malhotra, N. K., Kim, S. S., and Patil, A. 2006, "Common Method Variance in IS Research: A Comparison of Alternative Approaches and a Reanalysis of Past Research," *Management Science* (52:12), pp. 1865-1883.
- Mäntymäki, M., and Riemer, K. 2014, "Digital Natives in Social Virtual Worlds: A Multi-Method Study of Gratifications and Social Influences in Habbo Hotel," *International Journal of Information Management* (34:2), pp. 210-220.
- Mäntymäki, M., and Salo, J. 2015, "Why do Teens Spend Real Money in Virtual Worlds? A Consumption Values and Developmental Psychology Perspective on Virtual Consumption," *International Journal of Information Management* (35:1), pp. 124-134.
- Molteni, L., and Ordanini, A. 2003, "Consumption Patterns, Digital Technology and Music Downloading," *Long Range Planning* (36:4), pp. 389-406.
- Nambisan, S., and Baron, R. A. 2009, "Virtual Customer Environments: Testing a Model of Voluntary Participation in Value Co-Creation Activities," *Journal of Product Innovation Management* (26:4), pp. 388-406.
- Oestreicher-Singer, G., and Zalmanson, L. 2013, "Content Or Community? a Digital Business Strategy for Content Providers in the Social Age," *MIS Quarterly* (37:2), pp. 591-616.
- Okazaki, S., and Mendez, F. 2013, "Perceived Ubiquity in Mobile Services," *Journal of Interactive Marketing* (27:2), pp. 98-111.
- Park, N., Kee, K. F., and Valenzuela, S. 2009, "Being Immersed in Social Networking Environment: Facebook Groups, Uses and Gratifications, and Social Outcomes," *CyberPsychology & Behavior* (12:6), pp. 729-733.
- Payne, J. W. 1982, "Contingent Decision Behavior." *Psychological Bulletin* (92:2), pp. 382.

- Payne, J. W., Bettman, J. R., and Johnson, E. J. 1988, "Adaptive Strategy Selection in Decision Making." *Journal of Experimental Psychology: Learning, Memory, and Cognition* (14:3), pp. 534-552.
- Raacke, J., and Bonds-Raacke, J. 2008, "MySpace and Facebook: Applying the Uses and Gratifications Theory to Exploring Friend-Networking Sites," *Cyberpsychology & Behavior* (11:2), pp. 169-174.
- Rayburn, J. D., and Palmgreen, P. 1984, "Merging Uses and Gratifications and Expectancy-Value Theory," *Communication Research* (11:4), pp. 537-562.
- Ruggiero, T. E. 2000, "Uses and Gratifications Theory in the 21st Century," *Mass Communication & Society* (3:1), pp. 3-37.
- Sanchez-Franco, M., and Rondan-Cataluña, F. J. 2010, "Connection between Customer Emotions and Relationship Quality in Online Music Services," *Behaviour & Information Technology* (29:6), pp. 633-651.
- Sheth, J. N., Newman, B. I., and Gross, B. L. 1991, "Why we Buy what we Buy: A Theory of Consumption Values," *Journal of Business Research* (22:2), pp. 159-170.
- Stafford, T. F., Stafford, M. R., and Schkade, L. L. 2004, "Determining Uses and Gratifications for the Internet," *Decision Sciences* (35:2), pp. 259-288.
- Sweeney, J. C., and Soutar, G. N. 2001, "Consumer Perceived Value: The Development of a Multiple Item Scale," *Journal of Retailing* (77:2), pp. 203-220.
- Teece, D. J. 2010, "Business Models, Business Strategy and Innovation," *Long Range Planning* (43:2-3), pp. 172-194.
- Tojib, D., and Tsarenko, Y. 2012, "Post-Adoption Modeling of Advanced Mobile Service Use," *Journal of Business Research* (65:7), pp. 922-928.
- van der Heijden, H. 2004, "User Acceptance of Hedonic Information Systems," *MIS Quarterly* (28:4), pp. 695-704.
- Vock, M., van Dolen, W., and de Ruyter, K. 2013, "Understanding Willingness to Pay for Social Network Sites," *Journal of Service Research*.
- Wagner, T. M., Benlian, A., and Hess, T. 2014, "Converting Freemium Customers from Free to Premium--the Role of the Perceived Premium Fit in the Case of Music as a Service," *Electronic Markets* (24:4), pp. 259-268.
- Wang, H., Chin, A., and Wang, H. "Social Influence on being a Pay User in Freemium-Based Social Networks," *Advanced Information Networking and Applications (AINA), 2011 IEEE International Conference On*, Anonymous 2011, pp. 526-533.
- Xiao, B., and Benbasat, I. 2007, "E-Commerce Product Recommendation Agents: Use, Characteristics, and Impact," *MIS Quarterly* (31:1), pp. 137-209.