Abstract

Despite rapid adoption of social media as a means of music listening, little is known about users' motivations. This study applies the Uses and Gratifications approach to users' motivations for using music listening applications on Facebook. Participants completed an online survey, and 153 out of 576 respondents indicated that they used a Facebook music listening application. A principal axis factor analysis identified three different motivations for this usage, namely entertainment, communication, and habitual diversion gratifications. The entertainment and communication gratifications replicate those found in prior Uses and Gratifications research concerning other social networking features, illustrating the strong similarity between uses of music and social media. However, the habitual diversion gratification may serve to distinguish listening applications from other features. Identifying and explaining these factors is relevant to social media users, musicians and application designers, as they explain what motivates a means of music listening that is gaining prominence.

Highlights

- This study examines motivations for using music listening applications on Facebook.

- A principal axis factor analysis identified three different motivations.

- Communication and entertainment gratifications exist, as for other SNS features.

- The habitual diversion factor may be unique to music listening applications.

The Uses and Gratifications of Using Facebook Music Listening Applications

Rapid technological developments mean that people have the ability to use music in ways that did not exist barely a decade ago (Lonsdale & North, 2011). Music is more accessible and cheaper than before; and the Internet and social media have transformed the opportunities to discover, share, and consume digital music (Leong & Wright, 2011). 2013 statistics indicate an even greater shift towards digital music technology as the primary way people listen to and discover music (British Recorded Music Industry, 2014). In the U.S., music and entertainment app use in 2013 grew 78% in 2013 over 2012 (Khalaf, 2014) and U.S. teens have approximately seven music apps on their smartphones (Neilsen Company, 2014). The Neilsen company (2014) reported that streaming consumption grew 32% in 2013 over 2012 in the U.S., with 68% of U.S. consumers streaming music in 2013; and in the U.K., listeners streamed 7.4 billion songs in 2013, double the amount in 2012, leading the value of music streaming to surpass 100 million pounds (BPI, 2014). Moreover, musicians are also engaging with fans via social media (Burns, 2009). Indeed, in 2013, nine out of the 10 most-liked people on Facebook and seven of the 10 most followed people on Twitter were musicians (International Federation of the Phonographic Industry, 2013). Thus, there is a cultural shift in music and social media due their reciprocal influence on each other (Burns, 2009). As such, it is impossible to understand the role of music in the modern social world without an understanding of music in the context of social networking (web)sites (SNSs). However, the recency of this development means that it is not well understood.

In 2011, the popular SNS Facebook allowed users to enable third-party applications (apps) to publish activity to Facebook (San Pascual, 2013). In doing so, Facebook and online music services aimed to transform music discovery and sharing (San Pascual, 2013). This change allowed users to listen to music and display their music listening history, share links

to particular pieces of music, and even join in on friends' listening sessions. After only a year, 62.6 million songs had been involved in a striking 22 billion plays (Kirn, 2012) via these methods, such that it represents a significant, new means of listening to, discovering, and recommending music, especially among those who are regular SNS users. For instance, as of March 2014, there were over 34 million monthly active users of the Spotify Facebook application (http://www.statista.com/statistics/241424/dau-and-mau-of-spotifys-facebook-app/). While the number of active users demonstrates that SNS users are embracing this feature, the uses for and gratifications resulting from such behavior are unknown.

Uses and gratifications theory (U&G) is an approach to understanding how and why people seek out specific media. As a communication theory that assumes that audience members are not passive, it provides a useful paradigm to analyze media choices and consumption (Ruggiero, 2000). Well established as a framework for explaining audience motives for using mass media (Cheung, Chiu, & Lee, 2011; Ruggiero, 2000), U&G theory can be applied to web 2.0 media, and SNSs in particular. Simultaneously a form of communication and media (Marshall, 2010), SNSs are intriguing subject matter for the study of the motivations, or gratifications underlying their use. The increasing popularity and expanding capabilities of SNSs strongly suggest that people infer functionality and receive gratifications from their use; however, we have very little understanding of why people are motivated to use certain SNS features. U&G theory aptly addresses these questions.

Prior research has highlighted broad social reasons for using SNSs, such as a general sense of motivation to participate or of belonging and influence (Freyne, Jacovi, Guy, & Geyer, 2009), and more specific factors such as staying in touch with friends and family members, meeting with people with common hobbies or interests, and reading comments by public figures (Chen, 2011; Joinson, 2008; Smith, 2011). However, this prior research examining uses and gratifications at the site usage level does not detail how people use

specific SNS features (including those related to music). In particular, we must recognize that SNSs support a range of social activities, and that usage, motivations, and gratifications are not uniform across users (Joinson, 2008; Smock, Ellison, Lampe, & Wohn, 2011). Moreover, as SNSs add additional features, there is a need for greater consideration of the use of particular SNS features (Baek, Holton, Harp, & Yaschur, 2011; Karnik, Oakley, Venkatanathan, Spiliotopoulos, & Nisi, 2013; Smock et al., 2011; Wohn, Lampe, Vitak, & Ellison, 2011). By applying U&G theory to specific feature use, research can account for the fact that people choose their level of participation, and choose to engage in some activities or site features and not others (Baek et al., 2011; Smock et al., 2011). In turn, developers interested in improving and enhancing the users' SNS experiences can use this detailed information when designing new features.

There are four studies that, in response, have examined the uses and gratifications for specific SNS features. The features considered include sharing links on Facebook (Baek et al., 2011), engaging in Facebook groups (Park, Kee, & Valenzuela, 2009), playing SNS games (Lee, Lee, & Choi, 2012), and participating in a music video sharing Facebook group (Karnik et al., 2013). In particular, the Karnik et al. (2013) study is of particular relevance to the present research, as it provides some data concerning a music activity. Table 1 (and the discussion of the present research) details the uses and gratifications identified by these four studies in detail. Commonalities of the gratifications across the selected features include entertainment and communication/ social interaction—which mirror motivations for more general usage of Facebook/ SNSs also (e.g., Joinson, 2008; Urista, Dong, & Day, 2009). Additionally, although framed slightly differently depending on the feature, another gratification was indicative of sharing information or promoting oneself or work. Other gratifications, however, were unique to the specific features in question. For instance, a competition motivation underlies playing SNS games, and a discovery motivation underlies

participation in a Facebook group dedicated to sharing music videos. While these studies

have begun to examine specific feature use, research has not yet addressed music listening

within the SNS context, which is particularly surprising given the apparent degree of linkage

between SNSs and music.

Therefore, the objective of the current research was to determine the motivations for

using music listening applications, as a particular Facebook feature, from the perspective of

U&G theory. An application of U&G theory to this topic can address this research gap from

a perspective that recognizes the need for specific feature-use investigations. Moreover, a

better understanding of users' motivations benefits application developers. Therefore, the

research question was as follows: What are the uses and gratifications associated with

Facebook members' usage of music listening applications?

Given that using a music listening application can be conceptualized as an

entertainment practice, it is possible that the reasoning behind music behaviors on SNSs will

mirror the gratifications identified previously for participating in a music video sharing

group, posting links, and playing SNS games. In particular, as both entertainment and

communication were relevant to the four different features, it seems reasonable to expect that

both will relate also to using Facebook music listening applications. The passing time

motivation for sharing links and playing SNS games likely also applies, as all three behaviors

are a way to fill time on the site. The gratifications may even mirror those associated with

broad SNS use as it involves communication as well: this might manifest as gratifications

related to sharing information and interacting with other users through this specific site

feature. It is possible that the entertainment reason may be a stronger reason for usage of

apps, because a highly cited reason for listening to music is, in fact, for entertainment or as a

diversion (Lonsdale & North, 2011). However, because this involves music listening, a

popular pastime in its own right, there could be unique reasons for using music listening apps

within the Facebook platform. For example, Lonsdale and North (2011) showed that offline music listening has social psychological uses and gratifications (including, for example, projecting the individual's identity to others), and so similar factors might well also be identified in SNS music listening.

Method

Participants

Participants were recruited online via the author's website, the university's student research participation program, and dedicated online research participation websites. Participation was voluntary; however, students enrolled in the university student research participation programs received course credit for their participation.

In total, 576 individuals (36.28% USA, 15.10% UK, 48.61% Australia) provided data as a part of a larger investigation (reported in [reference removed to facilitate blind review]). (Data from an additional 73 individuals was excluded as they resided in other countries.) The data analyses presented in the present study concern those participants who indicated that they used at least one Facebook music listening application ($N = 153$; 26.56% of the total sample). Table 2 details sample characteristics.

-Tables 2 and 3-

Measure

Individuals indicated their age, sex, and country of residence, estimated the number of hours they listened to music and interacted with technology on average daily, and rated how important music and technology were in their life (separately on seven-point scales, from 1 = *not at all* to 7 = *extremely*). Participants were also asked to state respectively the extent to

which each of "Music", "Music technology", "Technology", and "Cloud-based technology" "is central to my identity" on seven-point scales (1 = *not at all*, 7 = *completely*). Responses on these four statements, developed by Krause and North (2013), were then entered into a principal components analysis with varimax rotation. One factor accounted for 62.99% of variance (see Table 3), consistent with previous uses of the measure (Krause & North, 2013, 2014; Krause, North, & Heritage, 2013). The resultant factor scores are used as music-technology identity scores in analyses (Cronbach's alpha = .80).

Participants responded to the direct question, "Do you use a music app on Facebook?" Participants who answered, "Yes" then stated the specific application and completed a uses and gratifications measure. This measure asked participants to rate their agreement with each of 29 reasons for using music apps on Facebook on a five-point Likert scale (anchored by *Not at all* and *Very much true*). The individual items were adapted to address music listening applications from prior internet technology-focused uses and gratifications research (Baek et al., 2011; Papacharissi, 2002; Papacharissi & Rubin, 2000), and included possibilities such as, "To share information that might be useful to others," "To promote my own music," and "Because it's entertaining." All items appear in the Appendix alongside the formulations used in the original research.

Procedure

Upon accessing the online questionnaire, participants first read information about the study and were required to indicate their consent. They were then guided through the questionnaire as a series of webpages, with instructions provided for each section, and were directed to a debriefing page upon completion (typically approximately 15 minutes later).

Results & Discussion

Music Listening Application Use

The 26.56% (N = 153) of participants who indicated that they used at least one

Facebook music listening application also had the opportunity to state specifically which

application(s) they used. Six of these participants listed more than one application. Spotify

and Pandora were cited most often (101 and 36 times, respectively), reflecting their particular

current market dominance (http://www.appdata.com/facebook_apps). In contrast,

SoundCloud was listed six times, LastFM was listed three times, and ReverbNation, Deezer,

and YouTube each were cited once.

Music Application Uses and Gratifications

To answer the research question and so describe why individuals use music apps, the

29 uses and gratifications items were subjected to a principal axis factor analysis with

promax rotation. Prior to running the principal axis factoring, improvements to univariate

normality for the items were made with algebraic transformations. One item, "Because

I had to use Facebook to create an account," demonstrated a low communality;

therefore, it was removed and the analysis was re-run. Consequently, the KMO value

was .87, Bartlett's Test was significant (p < .001), all MSA values were above .60, and all

items demonstrated reasonable communality values. Based on eigenvalues greater

than 1 and visual inspection of the scree plot, three factors were retained. These three

factors accounted for 50.58% of the total variance (shown in Table 4). The factors were

labeled "communication" "entertainment," and "habitual diversion," respectively.

To check the reliability of the factors, the item loadings for each factor were entered

into reliability analyses (one per factor). The resulting Cronbach alpha values for each factor

were .94, .82, and .65 respectively. While the reliability for the habitual diversion grouping

was lower than the other factors, it still demonstrates good reliability for a scale with fewer than ten items (it consists of seven; Loewenthal, 2001) and appears coherent.

-Table 1 and 4-

As Table 1 illustrates, there are strong similarities between the uses and gratifications found for using a music listening application and other SNS features considered by recent research. As anticipated, the entertainment and communication/ social interaction components (common to all four specific features, as well as Facebook and SNS use generally) were also evident in the context of music application use. That these motivations apply to different site features is logical since these are the basis of such platforms: SNSs function simultaneously as a form of communication and media (Marshall, 2010). As usage of the apps occurs in a social media context, it follows that the communication factor explained the greatest portion of the variance in participants' practices. The second factor, entertainment, does confirm the suspicion that music app usage on Facebook has a strong entertainment focus. This perhaps implies that social media are, to a considerable extent, merely the host for a gratification that could be obtained via other (non social) media. Perhaps this is because current SNS music apps are optimized for desktop computers, whereas much of people's everyday music listening otherwise occurs on portable devices, which allow music to facilitate the achievement of other in situ goals in a manner that cannot be achieved as easily on a desktop device.

Moreover, within the communication motive exists Park et al.'s (2009) self-status motive for participating in groups, Baek et al.'s (2011) promoting work reason for posting links, and Lee et al.'s (2012) self-presentation reason for playing SNS games. Similarly, also covered in the communication category are Karnik et al.'s (2013) contribution motive and

Baek et al.'s (2011) interpersonal utility, since they are characterized in part by wanting to contribute to a discussion and interaction with other people.

With regard to the habitual diversion gratification, passing time, as hypothesized, applied to listening to music via a Facebook app, just as it did to sharing links and playing SNS games. This gratification, however, does seem to represent a gratification that does not map well onto previous research. Perhaps the habitual aspect of the factor relates to convenience, as it pertained to sharing links (Baek et al., 2011). It could also be that the Facebook integration has simply made it easy for users to integrate listening into their SNS use, creating a habit of doing so when on the site.

Three generalized linear mixed method analyses ($\alpha = .017$) considered whether characteristics of the sample were associated with varying scores on these three gratifications. In each analysis, sex, age, country of residence, university degree, music importance rating, technology importance rating, average daily listening amount, average daily technology use, and music-technology identity scores were entered as predictor variables.

Concerning factor 1, communication, sex, technology hours, and music-technology identity score were significant predictors (see Table 5). Results indicate that participants with stronger music-technology identities were more likely to nominate this particular gratification. This finding complements the aspect of this factor concerning the expression of one's opinions and communication of information. Individuals who score highly on this factor have an identity based on music-technology, and so it is plausible that these individuals would use social media for music listening and appreciating the communication aspect of that behavior. Average daily technology use was negatively associated with this factor: it could be that one's appreciation for the communicative aspect of technology wanes with increased time spent using said technology. The pairwise comparison for sex indicated that males were

significantly more likely to express this gratification from their listening application use (β = -0.38 [-0.68, -0.08], t (137) = -2.51, $p < .05$, η^2 = .044).

Scores on the second factor, entertainment were significantly related to the music importance rating (see Table 5). As this gratification concerns the entertainment aspect of listening to music, this finding is not surprising: those that consider music to be important in their lives would likely appreciate a gratification based on enjoying music. None of the predictor variables were significantly related to scores on the third, habitual diversion factor at the adjusted alpha level (see Table 5). As this factor represents habitual use, it might reflect a passive use of available technology to simply provide an audio soundtrack while using social media. However, as it represents a factor that we do not believe has been identified in previous research, it might be something that future studies should consider further: for instance, personality or how one behaviorally uses music (and technology) could be related to the habitual diversion factor.

-Table 5-

Conclusions

As researchers have begun to conduct more specific and detailed investigations of how individuals use different aspects of social media (e.g., Baek et al., 2011; Karnik et al., 2013; Smock et al., 2011), the major contribution of this study is in defining the motivations behind music listening Facebook applications. The three uses and gratifications underlying using Facebook listening applications (communication, entertainment, and habitual diversion) indicate that while some individuals derive pleasure from listening or do so as a leisure interest, there are also more communicative and personal motivations, such as using the tool to promote not only a musician or group, but also to express one's own identity.

Joinson (2008) remarked that content gratifications (like using apps) contributed to the "stickiness" of SNSs, or the notion that SNS use is self-reinforcing. The current research supports this idea: app users are experiencing positive gratifications that are likely supporting and deepening SNS use.

Moreover, the apparent importance of 'entertainment' suggests one manner in which the present results differ from previous findings. Other recent work, like diary studies of music usage in everyday life (e.g., Krause, North, & Hewitt, 2013), has indicated that people often take advantage of digital technology so that their primary reason for listening to music is to serve a variety of very specific, practical purposes that reflect the listening situation (such as listening to calming music on the evening commute home). In contrast, the present finding concerning the importance of the entertainment and habitual diversion gratifications indicates that social media music app usage, which typically occurs on a fixed desktop computer, is less utilitarian. As such, it will be important to consider how music-related social media behaviors fit into a theoretical perspective that explains everyday music interactions.

Additionally, this study has practical implications for those involved commercially in both music and social media. A detailed understanding concerning the reasons why individuals use listening applications benefits application designers who are working to increase the number of users and improve user experience. Understanding the perceived gratifications associated with listening via these online applications is similarly useful for the music industry, which in recent years has attempted to reduce illegal copying and distribution of music by developing online business models. Data such as that presented here are necessary in order to develop current business practices.

This research is not without limitations, however. While the uses and gratifications items used in the present study were developed from prior research concerning online

technology in particular, it may be beneficial to also consider those uses and gratifications associated with listening to music specifically. Factor analyses are sensitive to the variables included, and so it may be useful to further examine the items included in future scale development. Moreover, future research should consider music-related SNS practices with a larger and more diverse sample. The present study's convenience-based sample included people from the U.K., U.S.A., and Australia, but was disproportionately female and young. That acknowledged, the analyses that considered sex, gender, country of residence, and music engagement variables in relation to the three gratifications do provide an interesting indication of how these gratifications may be appreciated by different users. Therefore, an interesting approach could also involve comparing the gratifications experienced by certain users, such as listener-users and musician-users.

Furthermore, music SNS practices are not limited to online listening applications. For instance, links and videos are shared and discussed, and many musicians maintain pages to interact with and disseminate information to their fans. Music behaviors on Facebook (and other SNS platforms) include behaviors beyond listening applications, and additional research is required to understand how individuals make use of SNSs as fans. It is possible that online music behaviors could be considered in terms of creating a sense of social connectedness, as derived from online interaction (Grieve, Indian, Witteveen, Tolan, & Marrington, 2013): SNS users may make use of music listening applications to feel connected to others, an idea that is supported by the existence of the communication gratification identified in the present study.

Finally, from the perspective of fandom research, simply identifying the uses and gratifications of a behavior is limited, so that the current study represents a starting point for additional work. In recent years, fandom research has moved towards researching what fan practices can tell us about fans situated in modern, technological, daily life. Thus, rather than

describing gratifications, future research might consider whether SNS music-usage meets

certain specific psychological needs such as validation of the self or providing a basis for

social interaction. The present data suggest that it might. Nonetheless, this study is valuable

in that it outlines the uses and gratifications of Facebook music listening applications. Social

media users, musicians, and application designers all can benefit from findings such as these.

References

Baek, K., Holton, A., Harp, D., & Yaschur, C. (2011). The links that bind: Uncovering novel motivations for linking on Facebook. *Computers in Human Behavior, 27*, 2243-2248. doi:10.1016/j.chb.2011.07.003

British Recorded Music Industry. (2014). Surge in streaming gives further impetus to digital music growth in 2013. Retrieved from http://www.bpi.co.uk/home/surge-in-streaming-gives-further-impetus-to-digital-music-growth-in-2013.aspx

Burns, K. S. (2009). *Celeb 2.0: How social media foster our fascination with popular culture*. Santa Barbara, CA: ABC-CLIO, LLC.

Chen, G. M. (2011). Tweet this: A uses and gratifications perspective on how active Twitter use gratifies a need to connect with others. *Computers in Human Behavior, 27*, 755-762. doi:10.1016/j.chb.2010.10.023

Cheung, C. M. K., Chiu, P.-Y., & Lee, M. K. O. (2011). Online social networks: Why do students use facebook? *Computers in Human Behavior, 27*, 1337-1343. doi:10.1016/j.chb.2010.07.028

Freyne, J., Jacovi, M., Guy, I., & Geyer, W. (2009). Increasing engagement through early recommender intervention. *Proceedings of the third ACM conference on Recommnder Systems (RecSys'09)*, 85-92. New York, NY: ACM. doi:10.1145/1639714.1639730

Grieve, R., Indian, M., Witteveen, K., Tolan, G. A., & Marrington, J. (2013). Face-to-face or Facebook: Can social connectedness be derived online? *Computers in Human Behavior, 29*, 604-609. doi:10.1016/j.chb.2012.11.017

International Federation of the Phonographic Industry. (2013). IFPI digital music report 2013: Engine of a digital world. Retrieved from http://www.ifpi.org/content/library/DMR2013.pdf.

Joinson, A. N. (2008). 'Looking at', 'looking up' or 'keeping up with' people? Motives and

uses of Facebook. *Proceedings of SIGCHI Conference on Human Factors in

Computing Systems 2008*, 1027-1036. New York, NY: ACM.

doi:10.1145/1357054.1357213

Karnik, M., Oakley, I., Venkatanathan, J., Spiliotopoulos, T., & Nisi, V. (2013). Uses &

gratifications of a Facebook media sharing group. *Proceedings of the 2013 conference

on Computer supported cooperative work (CSCW '13)*, 821-826. New York, NY:

ACM. doi:10.1145/2441776.2441868

Khalaf, S. (2014). Mobile use grows 115% in 2013, propelled by messaging apps. Retrieved

from http://blog.flurry.com/?Tag=Usage+Statistics

Kirn, P. (2012). As Facebook users hit 1 billion, music listening is socially-connected online

[Numbers]. Retrieved from http://createdigitalmusic.com/2012/10/as-facebook-users-

hit-1-billion-music-listening-is-socially-connected-online-numbers/.

Krause, A. E., & North, A. C. (2013). Music listening in everyday life: Devices, selection

methods, and digital technology. *Manuscript submitted for publication.*

Krause, A. E., & North, A. C. (2014). Pleasure, arousal, dominance, and in situ responses to

music. *Manuscript submitted for publication*.

Krause, A. E., North, A. C., & Heritage, B. (2013). Psychological correlates of online music

fan practices. *Manuscript submitted for publication.*

Krause, A. E., North, A. C., & Hewitt, L. Y. (2013). Music listening in everyday life:

Devices and choice. *Psychology of Music. Advance online publication*.

doi:10.1177/0305735613496860

Lee, J., Lee, M., & Choi, H. (2012). Social network games uncovered: Motivations and their

attitudinal and behavioral outcomes. *Cyberpsychology, Behavior, & Social

Networking, 15*(12), 643-648. doi:10.1089/cyber.2012.0093

Leong, T. W., & Wright, P. (2011). Music in households in the digital economy. *In Proceedings? Of the Digital Engagement Conference, Digital Engagement '11, November 15 – 17, 2011 (np). Newcastle upon Tyne, UK: Publisher. Retrieved from* http://de2011.computing.dundee.ac.uk/?page_id=197.

Loewenthal, K. M. (2001). *An introduction to psychological tests and scales (2nd ed.).* London: UK: UCL Press.

Lonsdale, A. J., & North, A. C. (2011). Why do we listen to music? A uses and gratifications analysis. *British Journal of Psychology, 102*(1), 108-134. doi:10.1348/000712610X506831

Marshall, P. D. (2010). The promotion and presentation of the self: celebrity as marker of presentational media. *Celebrity Studies, 1*(1), 35-48. doi:10.1080/19392390903519057

Neilsen Company. (2014). U.S. music industry year-end review: 2013. Retrieved from http://www.nielsen.com/content/dam/corporate/us/en/reports-downloads/2014 Reports/nielsen-us-music-year-end-report-2013.pdf

Papacharissi, Z. (2002). The self online: The utility of personal home pages. *Journal of Broadcasting & Electronic Media, 46*(3), 346-368. doi:10.1207/s15506878jobem4603_3

Papacharissi, Z., & Rubin, A. M. (2000). Predictors of internet use. *Journal of Broadcasting & Electronic Media, 44*(2), 175-196. doi: 10.1207/s15506878jobem4402_2

Park, N., Kee, K. F., & Valenzuela, S. (2009). Being immersed in social networking environment: Facebook groups, uses and gratifications, and social outcomes. *CyberPsychology & Behavior, 12*(6), 729-733. doi:10.1089=cpb.2009.0003

Ruggiero, T. E. (2000). Uses and gratifications theory in the 21st century. *Mass Communication & Society, 3*(1), 3-37.

San Pascual, M. (2013). Facebook music: A big vision, mostly unrealized. In K. Bylin (Ed.),

  Divergent Streams (pp. 102-107): Leanpub.

Smith, A. (2011). Why Americans use social media. Washington, DC: Pew Research Center.

  Retreived from http://www.pewinternet.org/Reports/2011/Why-Americans-Use-

  Social-Media.aspx.

Smock, A. D., Ellison, N. B., Lampe, C., & Wohn, D. Y. (2011). Facebook as a toolkit: A

  uses and gratification approach to unbundling feature use. *Computers in Human*

  Behavior, 27, 2322-2329. doi:10.1016/j.chb.2011.07.011

Urista, M. A., Dong, Q., & Day, K. D. (2009). Explaining why young adults use MySpace

  and Facebook through uses and gratifications theory. *Human Communication, 12*(2),

  215-229.

Wohn, D. Y., Lampe, C., Vitak, J., & Ellison, N. B. (2011). Coordinating the ordinary: Social

  information uses of Facebook by adults. *Proceedings of the 2011 iConference*, 340-

  347. New York: NY: ACM. doi:10.1145/1940761.1940808

List of Tables

Table 1.

A Comparison of the Uses and Gratifications of Specific Facebook Features

Study	Current Study - Facebook music listening applications	Karnik et al. (2013) – music video sharing Facebook group	Park et al. (2009) – participating in groups	Baek et al. (2011) – Sharing links	Lee et al. (2012) – SNS games
Factors	Communication, entertainment, habitual diversion	Contribution, discovery, social interaction, entertainment	Socializing, entertainment, self-status seeking, information	Information sharing, convenience and entertainment, to pass time, interpersonal utility, control, and promoting work'	Social interaction, self-presentation, fantasy/role playing, passing time/escapism, entertainment, and challenge/competition
Communication - Communicating and discussing and sharing information with others		Social interaction – receiving appreciation (likes) (authors state match to Park et al.'s	socializing needs are generally interested in meeting and talking with others	Information Sharing -- respondents as posting links on Facebook to share information with	Social interaction -- represents a player's motive to get others' support and maintain

socializing)	as well as getting peer support and a sense of community	other users	one's relationship
	Self-status? -- seeking and maintaining their personal status/look cool/peer pressure	? Promoting Work -- characterized posting links to promote their works	Self-presentation -- a motive to make a good impression on others
		? Interpersonal utility -- described posting links as a tool for interacting and socializing with others	

Entertainment - Using music applications for enjoyment, entertainment, fun, and to discover new musicians	Discovery of new music (& valued re-discovering music they had not listened to in a long time) Entertainment – appreciated the music genre the group represented (authors state match to Park et al.'s entertainment)	Entertainment -- refers to engagement in Facebook Groups for leisure and amusement needs	Convenience and Entertainment -- respondents post links because it is easy and entertaining	Entertainment -- a motive to have entertaining gaming experiences
Habitual diversion - Passing the time, use from boredom or as a distraction, as a habit		Entertainment also?	Pass Time -- represented by posting links to pass time Convenience?	Passing time/ escapism -- a motive to pass time when bored and to escape from their real-life problems

Table 2.

Sample Characteristics

Sample		Age	Music importance rating	Technology importance rating	Average daily listening amount (hours)	Average daily technology use (hours)
Total [a]	*M*	23.65	6.14	6.05	4.35	8.19
	Mdn	20	6	6	3	7.75
	SD	8.60	1.06	0.98	3.29	4.03
U.S.A. [b]	*M*	23.15	6.23	6.18	5.43	9.42
	Mdn	20	7	6	4	9.25
	SD	7.53	1.17	0.89	3.97	4.50
U.K. [c]	*M*	23.61	6.12	5.94	4.33	7.17
	Mdn	20	6	6	3	7
	SD	8.28	0.96	1.00	3.28	2.78
Australia [d]	*M*	24.17	6.05	5.98	3.28	7.54
	Mdn	20.5	6	6	3	7
	SD	9.81	1.00	1.05	1.98	3.88

[a] N = 153; 69.30% female; 24.20% held university qualifications

[b] N = 60; 61.70% female; 23.30% held university qualifications

[c] N = 33; 72.70% female; 27.30% held university qualifications

[d] N = 60; 75.00% female; 23.30% held university qualifications

Table 3.

Principal Components Analysis of the Identity Items

Item	Loading
Music technology is central to my identity.	0.89
Technology is central to my identity.	0.83
Music is central to my identity.	0.72
Web-based cloud technology is central to my identity.	0.72
Eigenvalue	2.52
% of Variance Explained	62.99

Table 4.

Factor Loadings for the Principal Axis Factor Analysis With Promax Rotation of the

Uses and Gratifications Items

Item	1	2	3
To meet people with similar interests as me	0.89		
To share information about my special interests	0.87		
To promote the music/ musicians I like	0.80		
To express myself freely	0.72		
To get feedback on information I have found	0.70		
To share information that might be useful to others	0.68		
To participate in discussions	0.65		
To provide information	0.65		
To promote the musician/band I work for	0.59		
To share knowledge with others	0.58		
To tell others what to do	0.56		
Because I want someone to do something for me	0.52		0.31
To promote my own music	0.51		
Because it's a popular thing to do	0.47		
Because it's an easy way to stay in touch with people	0.40		
Because everyone else is doing it	0.39		0.35
To communicate with friends and family	0.33		
Because it's enjoyable		0.92	
Because it's entertaining		0.77	
Because I just like to use it		0.74	
To relax		0.64	

To see what is out there/ discover new music	0.64		
Because it's easy to use		0.46	0.40
Because I have nothing better to do			0.84
Because I'm bored			0.63
Because it's a habit			0.57
Because it provides a distraction			0.55
Because it's fun to try out new things like this			
Eigenvalue	9.50	3.04	1.62
% of Variance Explained	33.92	10.86	5.80

Note. Loadings < .30 were supressed.

Table 5.

GLMM Analyses Predicting Scores on the Three Uses and Gratifications Factors for Using Facebook Music Listening Applications

Predictor variable	Factor 1: Communication		Factor 2: Entertainment		Factor 3: Habitual diversion	
	F	η_p^2	F	η_p^2	F	η_p^2
Country of residence	$F(2, 137) = 1.24, p = .292$	.018	$F(2, 137) = 0.89, p = .414$	.013	$F(2, 137) = 0.52, p = .593$	.008
Gender	$F(1, 137) = 6.31, p = .013$	.044	$F(1, 137) = 2.40, p = .123$	.017	$F(1, 137) = 4.76, p = .031$	.034
University qualification	$F(1, 137) = 0.52, p = .474$	.004	$F(1, 137) = 0.04, p = .852$	.000	$F(1, 137) = 1.11, p = .293$	.008
Age	$F(1, 137) = 0.01, p = .941$	.000	$F(1, 137) = 0.02, p = .884$	.000	$F(1, 137) = 4.60, p = .034$	.032
Music importance rating	$F(1, 137) = 4.87, p = .029$	.034	$F(1, 137) = 6.15 \, p = .014$	.043	$F(1, 137) = 0.24, p = .626$	.002
Technology importance rating	$F(1, 137) = 0.01 \, p = .910$	.000	$F(1, 137) = 0.26, p = .611$	.002	$F(1, 137) = 0.41, p = .521$	.003
Average daily listening amount (hours)	$F(1, 137) = 3.57, p = .061$	.025	$F(1, 137) = 0.17, p = .683$	.001	$F(1, 137) = 0.19, p = .664$	.001
Average daily technology use (hours)	$F(1, 137) = 6.30, p = .013$	.044	$F(1, 137) = 1.04, p = .310$	.008	$F(1, 137) = 0.29, p = .590$	.002
Music-technology identity score	$F(1, 137) = 17.50, p = .001$	.113	$F(1, 137) = 0.01, p = .936$	.000	$F(1, 137) = 3.56, p = .061$	.025

Note. $N = 148$; the following variables were coded as follows: country of residence: 1 = *USA*, 2 = UK, 3 = Australia; gender: 1 = *females,* 2 = *males*; and university qualification: 1 = *no*, 2 = *yes*.

Appendix

Uses and Gratifications Items As They Appeared in the Present and Past Research

Current Study item	Baek, et al. (2011) item	Papacharissi (2002) item	Papacharissi & Rubin (2000) item
To share knowledge with others	To share practical knowledge or skills with others		To give my input
To express myself freely	To express myself freely		To express myself freely
To provide information	To provide information	To provide information	
To share information that might be useful to others	To share information that might be useful to others	To share information that might be of use to others	To help others
	To share information that might be entertaining to others		
	To share hard-to-find information		
To share information about my special interests	To share information about my special interests	To share information on my special interests	
		To provide personal information	

		about myself	
To get feedback on information I have found	To get feedback on information I have found		To participate in discussion
			To get more points of view
To participate in discussions			To participate in discussion
			To give my input
			To belong to a group
To see what is out there/ discover new music			To see what is out there
			To look for information
To communicate with friends and family	To communicate with friends and family	To keep in touch with friends and family	To communicate with friends, family
		To communicate with distant friends	
Because it's an easy way to stay in touch with people	Because it's an easy way to stay in touch with people		To communicate with friends, family
Because it's easy to use	Because it's easy to use		It is easier

Because it's enjoyable	Because it's enjoyable		It is enjoyable.
Because I just like to use it	Because I just like to use it		I just like to use it
Because it provides a distraction	Because it provides a distraction		
To relax	To relax		
Because it's entertaining		Because it's entertaining	It is entertaining
Because it's fun to try out new things like this		Because it is fun to try out new things like this	
Because I'm bored	Because I'm bored	Because it passes the time away when bored	
		To occupy my time	
Because I have nothing better to do	Because I have nothing better to do	When I have nothing better to do	
Because everyone else is doing it	Because everyone else is doing it	Because everybody else is doing it	
Because it's a popular thing to do	Because it's a popular thing to do	Because it is the thing to do	
Because it's a habit	Because it's a habit		
To meet people with same interests	To meet people with same interests		To meet new people

as me	as mine		
	To meet people with similar backgrounds		
Because I want someone to do something for me	Because I want someone to do something for me		I want someone to do something for me
To tell others what to do	To tell others what to do		To tell others what to do
To promote the musician/band I work for	To promote the organization I work for		
To promote my own music	To promote my personal work	To put my professional resume on the web	
	To share news	To help get me a job	
To promote the music/musicians I like	To provide information		
	To express myself freely		
Because I had to use Facebook to create an account	(new item)		