THE EMERGENCE OF MUSIC STREAMING APPLICATIONS AND ITS EFFECT ON CHANGES IN PERSONAL INFORMATION MANAGEMENT AND PRIVACY RELATED ISSUES [ABSTRACT]

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ABSTRACT

Aim/Purpose	In this exploratory study we examine personal information management within music streaming applications. Also, we investigate the sense of ownership over songs being played on music streaming applications and whether the use of these services may be considered a social activity. In addition, we explore the extent of user privacy concern in using music streaming applications.
Background	This paper represents the second phase of the article titled *Usage Habits in Music Streaming Applications and their Influence on Privacy Related Issues [Research in Progress]* (Weinberger & Bouhnik, 2019).
Methodology	The research is conducted using a mixed methodology and consists of two phases: qualitative and quantitative. The qualitative stage is a pilot which includes semi-structured interviews with three music streaming application users in order to explore the possible change in personal information management, following the emergence of these applications (e.g., changes in classification and song retrieval methods). The quantitative phase includes the distribution of closed ended questionnaires among 192 users of music streaming applications (Male – 72.9%, Female – 27.1%; Age: 18-58), aiming to explore personal information management issues and privacy related issues that emerge while using these applications.
Contribution	As far as we know, this is the first academic research to investigate the issue of personal information management among music streaming applications and the

	also the first to use a mixed methods approach to examine digital music consumption. In addition, it is the first study that takes into account privacy related issues among the users of music streaming applications.
Findings	We found major changes between personal musical information management in the past and in the present. As most of the participants (85.4%) prefer nowadays to sort musical items in playlists or not to sort them at all. Out of the participants who chose to sort in folders in the past, only 42.7% still do it at present and out of the participants who chose to sort by alphabetical order in the past, only 15.7% do it at present. Also, we found that the participants have medium sense of ownership over the songs being stored on their streaming applications (M=2.78, SD=1.46) and medium sense that those applications may be used as social activity (M=2.75, SD=1.25). Interestingly, the choice of "sophisticated" genres (e.g. Blues, Jazz or Classical) as favorite music genre predicts the perception of using music streaming applications as part of social activity (R^2=0.044, p<0.05). As for privacy concern, it was found that although the participants are moderately concerned about privacy within music streaming applications (M=2.67, SD=1.15), they are willing to pay for higher privacy protection services if they will be offered to them (r=0.49, p<0.001). In general, participants were found to be moderately willing to pay for premium services (M=2.44, SD=1.01), with ad-free service (M=3.07, SD=1.54) being the highest ranked premium service.
Impact on Society	The research may drive music streaming applications operators to offer premium services that provide various benefits, such as: ad-free usage, higher privacy protection or better social features, as participants are willing to pay for those features. They may also personalize their users by preferred music genres, to adapt the specific service being offered to them.
Keywords	music streaming applications, personal information management, privacy, music genre, social activity

REFERENCES

Weinberger, M., & Bouhnik, D. (2019). Usage Habits in Music Streaming Applications and Their Influence on Privacy Related Issues [Research in Progress]. *In Proceeding of: InSITE 2019: Informing Science + IT Education Conferences*, Jerusalem, Israel.

BIOGRAPHIES

Maor Weinberger is a doctoral student at the Information Science Department in Bar-Ilan University (BIU), Israel. His professional interests include online privacy and anonymity and information security.

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