The effect of the shift to streaming applications on music consumers' taste and listening habits / Noa Yomtovyan

Abstract

Throughout the years, various ways have emerged for people to listen to music. Technological advancements have consistently brought forth new methods of listening, causing previous ones to become obsolete. The latest of those is streaming technology. Streaming technology is a method of content consumption that allows users to access media through a server, without the need to purchase or download individual files. Streaming is primarily known for providing media of video and various audio types. This study explores the effects streaming usage had on music streaming consumers in particular.

In the early stages of the internet, the pioneering development of downloading files replaced the act of going to physical stores. This has allowed music consumers to download files to their personal devices and alleviated their need to purchase music at physical stores. Some of these downloads were legal (e.g. through iTunes) and others weren't (e.g. through Napster). The download method was replaced by streaming, another internet technology, which as previously mentioned – lets end users access content directly from a server without the need to purchase or download it. Popular examples of such apps that provide access to musical content include Spotify, YouTube, and Apple Music. Music streaming services generally use a "freemium" business model. This model lets base users consume content for free, with advertisements sponsoring the providers. Users can upgrade to a premium account which not only plays no ads but also lets them access music on levels previously unavailable for a small monthly fee.

There are several implications for the use of streaming for music consumption. One is the fact that listeners no longer need to make purchase decisions, and they can expand their musical repertoire at a relatively low price. It also means they can access their musical collection from anywhere at any time, provided they can connect to the internet. There are also some psychological effects related to this change. First, the redundancy of actively collecting musical items thanks to streaming has affected the listeners' sense of ownership over their collection. Furthermore, the constant availability of such vast amounts of content causes a

decline in the value people assign to the music in their lives, cheapening it in the eye of the consumer.

The present study investigated the differences in music listeners' experiences following the shift to streaming, specifically regarding their musical preferences, listening behaviors, and collecting habits. Through an online survey, participants were presented with open-ended questions, prompting them to share their experiences freely. The questions were written in Hebrew and so were the responses accordingly. The questions presented to the participants were: "Did your music collecting and listening habits change following the shift to streaming? And how did these changes affect your musical taste?". The survey was distributed on social media as well as a mailing list consisting of participants from previous research by Prof. Bergman which looked into the practice of listening to music through streaming services. Overall, 152 responses were collected.

The responses were analyzed qualitatively via three processes, manual thematic tagging, sentiment analysis and narrative analysis. The thematic aspect was performed by grouping different topics mentioned by respondents into subjects. Meaning, each response was tagged for the topics its writer mentioned, and once the tagging process concluded, a list of all topics along with their respective frequency in the data was produced. The topics were then aggregated into larger categories. Another process in the analysis involved respondents' polar sentiments regarding their experience. A sentence (or group of sentences) that expressed a detectable emotion clearly in the text, was tagged for either positive, negative, or mixed sentiment accordingly. Finally, interesting narratives found in the data were explored in accordance with other tags as well as relevant literature.

The research findings focus on the following categories, grouped with the mentioned topics detected in respondents' words: Listening Habits and Experience, Taste Change, Change in Collecting Habits, Commendation, Complaint, Collection Size, and Other. For example, the category of Collection Size includes two topics: increase and decrease, indicating an increase or a decrease in respondent's collection size following the adoption of a streaming service, respectively.

The findings point to several trends. The first category, Listening Habits and Experience, is the most abundant both in terms of the number of topics it encapsulates, and the high frequency of many of said topics. Listening Habits presents various aspects central to the streaming experience, such as algorithm

recommendations and the volume of available content. Interestingly, this category holds several pairs of contrasting trends found in the data. For example, regarding the issue of exposure to new music, most participants felt more exposed to new music than they used to be. Or, while some participants report a decrease in their daily listening time, the majority of comments discussing this matter note the opposite.

Under the category Taste Change, which deals with respondents' taste diversity, most participants mentioned that the new collection method enriched their musical taste. Another substantial number of respondents say they sense no difference between their taste before and after using a streaming application, and only a small minority feel that their taste has somehow become less diverse.

The following category, Change in Collecting Habits, looked into potential shifts in participants' collection tendencies due to streaming. Here, many respondents noted the absence of the need to download or purchase music to collect it, and some mentioned that they create more playlists than before. Regarding the rate with which respondents collect music, majority of participants mentioning this topic reported that they collect more than they did in the past.

Similarly to the latter finding, in terms of Collection Size, participants largely felt that there has been an increase in the size of their music collection following the shift to streaming. This stands in contrast to evidence found in previous research, indicating the opposite effect, but this discord is possibly explained by the differences in the participants' ages in each study

Finally, there are the categories Commendation, Complaint and Other, which point to different topics discussed by participants, such as accessibility, repetitiveness and app usability.

Regarding participants' feelings, most responses from which sentiment could be discerned were positive and related to topics like expanding one's musical repertoire as well as specific components of their streaming service. These components include the content's accessibility, the app's usability, the organization it affords and the volume of its music library. In contrast, some respondents did express negative emotions in their words, primarily relating to dissatisfying aspects of the service in their use. Such discontent related to topics like repetitiveness of some musical items, as well as a feeling of restriction caused by the algorithm which made some users feel unable to step out of their known musical bubble and engage with new music.

Other than the identification of topics, categories, and sentiment was another qualitative phase of the analysis that revolved around notable quotes made by respondents. A shared experience that was not strongly expressed as any topic was noted by itself, outside of the tags, and analyzed in depth during the discussion. This was a symbiotic process that involved quotes, related trends found in the data as well as support from the literature in some cases. This resulted in the description of aspects of the music streaming experience as coherent storylines, all detailed in depth in the discussion. These aspects include openness to new music, the role of playlists in consumers' listening habits, the development of independence and personal taste, some listeners' need for a physical product, and the bonds between listener and music.

The first element discussed in this regard is the way people seem to be more open to listening to new music. This can be explained by the immediate availability of each musical item on the apps, which allows anyone to explore different recommendations – which was not afforded in the past when people had to go to greater lengths to fulfill their curiosities.

Next, the study notes the importance of playlists in modern listening habits. The creation of playlists has become so simple and accessible that users not only listen to them when compiled, but the practice of compiling also serves as a method ofdiscovery in and of itself. Literature also shows the value of playlists for setting the tone of an activity, for functional needs as well as for maintaining the listener's mental well-being.

Additionally, participants have noted how streaming has helped them develop their personal taste in various ways. The aforementioned playlists are one reason for said development, but others include the autonomy provided to users within the app, their complete control over their collection as well as the personalization of the content they're exposed to.

Some of our respondents expressed a need for a physical product for listening and as an expression of the bond between them and their personal collection. It appears that some participants are satisfied with their ability to listen to music through strictly

digital, intangible means. However, others shared that to them, the buying and owning of a physical product were essential elements of their listening experience and that they find it difficult to adjust to the voids created by the redundancy of purchasing music.

Finally, regarding a person's relationship with their music collection and with music in general, two trends were noted. On one hand, some may consider the digital music-to-listener relationship weaker than pre-streaming dynamics. This weakening in musical links is expressed through a more casual, less intense characterization of listening than before, as well as less knowledge of the artist and less commitment to the music. On the other hand, relationships with music can also be strengthened thanks to streaming, via the ability to listen to wider arrays of content and increased daily listening overall. It is interesting to note that these two trends don't necessarily contradict one another as their names suggest. All of the experiences noted here can exist alongside each other, and weave the unique tapestry of the musical experience afforded exclusively by streaming thus far.

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