Music, Mind and Technology
Assignment-1

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Q1.

The role of music as "social glue" has indeed evolved over time, especially with the shift towards individualized music consumption nowadays (Internet Era). In the pre-internet era, music was often experienced collectively, whether through live performances, radio broadcasts, or shared physical media like records and cassette tapes. This communal experience of music helped foster a sense of shared identity and cultural connection.

Evolution of Music's Social Role

Communal Experience to Individual Consumption:

- ***Before the Internet:*** In the pre-internet era, music often served as a communal experience, with people gathering at concerts, dances, or social events to share the enjoyment of music.
- ***Internet Era:*** With the rise of digital platforms like spotify, apple music, tidal, Jiosaavan, Wynk, etc etc. music consumption has become more individualized. Online streaming services allow users to curate personalized playlists, making music a more private and tailored experience. We have a discussion in class regarding this using the example spotify. They say spotify connects the people through music, but there is no relation growing between people, how it is connecting the people?

Global Connectivity:

- ***Before the Internet:*** Music was often tied to local or regional cultures, limiting exposure to diverse musical styles. Example: few region people listen to the familiar and their folk songs.
- ***Internet Era:*** The internet has facilitated global connectivity, enabling listeners to explore and appreciate a wide range of musical genres and artists from around the world. Suppose for example in Telangana and AP we usually listen to telugu songs especially pop, mass or folk songs. Now, we are able to listen to famous songs in Hindi and all languages through the websites.

Advantages of Internet-driven Music Consumption:

Accessibility and Variety: Streaming platforms provide unparalleled access to a vast array of music genres, allowing individuals to explore and appreciate diverse musical styles (Easy and availability).

Global Exposure: The internet enables artists to reach a global audience, fostering cross-cultural understanding and appreciation.

Expanded Audience: Today's musicians don't just distribute their songs through traditional record labels. Digital media allows independent artists to market and distribute their work globally. This democratization of music has led to a more diversified and inclusive distribution ecosystem.

Opportunities for Collaboration: The emergence of digital platforms has made it possible for musicians to collaborate across borders. The ease with which artists can share their works on the internet makes remote collaboration possible. This has enhanced the music industry by introducing cross-genre creativity and cultural fusion.

Music Discovery: Algorithms and personalized playlists on streaming platforms help users discover music that they like. This raises the profile of established artists as well as emerging ones.

Eco-Friendly Impact: Shifting away from physical forms such as CDs and vinyl records benefits the environment by reducing the creation of physical goods and the garbage they cause.

Global Reach: Thanks to technology, sharing music is no longer restricted by location. International audiences are easily able to engage with artists from all over the world. The confluence of many musical genres and cross-cultural collaborations have resulted from the globalization of music sharing.

Accessibility for Up-and-Coming Artists: Up-and-coming and independent musicians share their music with listeners directly through the use of technology and websites such as SoundCloud, Bandcamp, and YouTube. The democratization of music sharing gives musicians the opportunity to become well-known outside of established business networks.

Money Streams & Monetization: Digital platforms provide musicians a variety of revenue streams, including product sales, digital downloads, and streaming royalties, even though piracy is still an issue. This varied revenue source makes it easier for artists to support their careers.

- https://aaft.com/blog/music/the-impact-of-technology-on-the-music-industry/

Disadvantages of Internet-driven Music Consumption:

Enhanced Rivalry: The fact that musicians are now more competitive due to the internet is one of the biggest negative effects. There's an abundance of new music because it's easier than ever for up-and-coming artists to get noticed. Because of this, it is now much more difficult for musicians to get seen and stand out from the throng.

Piracy of Music: Despite streaming businesses' best efforts, music piracy remains a problem. For independent artists, who frequently lack the resources to combat piracy, this could be harmful.

People continue to obtain music without paying for it through torrents or other illicit streaming websites, which can seriously harm an artist's revenue. In nations where the law is not upheld and people have free access to music, this is a serious problem.

For instance, music piracy is still a big problem for many performers and is still common in nations like India. This emphasizes the necessity of keeping up the fight against music piracy and ensuring that musicians receive just compensation for their efforts.

Shutdown of Retail stores (closing): Numerous physical music stores have closed as a result of the internet. Music lovers would swarm Tower Records and other businesses in the early 2000s to purchase CDs or vinyl records. These shops have been disappearing all around the world, though, as digital music has become more and more popular and makes them unnecessary.

It goes without saying that this causes financial losses for the stores and unemployment for the workers. The music business may also suffer from this, as fewer physical album sales translate into lower earnings.

Little Money For Musicians: Lastly, the internet has significantly increased the difficulty of musicians earning a living through their work. It is becoming more and more difficult for musicians to support themselves through their music thanks to streaming services like Spotify and Apple Music, which offer extremely minimal royalties.

Because they are unable to earn enough money from streaming services, this has led to financial difficulties for a large number of independent and up-and-coming musicians. This has been a significant problem for the music business and requires ongoing attention.

Absence of governing bodies to oversee conduct: In order to actually survive, the market must develop new business models and make room for fresh approaches that effectively handle the aforementioned problems. Government pressure to implement measures that preserve effective copyright protection in the online context without impeding creativity has grown in response to one such approach. Nonetheless, this will only represent specific markets at a time when the issue is perceived to exert pressure on the entire world.

- https://www.actcorp.in/blog/how-the-internet-has-changed-the-music-industry
- https://www.ukessays.com/essays/media/advantages-and-disadvantages-internet-on-music-industry-media-essay.php
- https://blog.hocking.edu/the-pros-and-cons-of-streaming-music

In conclusion, while the internet has revolutionized music consumption, providing unprecedented access and personalization, it has also raised concerns about the fragmentation of musical experiences and the economic challenges faced by artists. The balance between individualized enjoyment and shared musical experiences remains a critical aspect of understanding music's evolving role in society.

Q2.

The distinction between music and noise is subjective and can vary based on individual preferences, cultural norms, and the context in which the sounds are experienced.

The aesthetic quality of music is thought to be related to the way sound is balanced in multiple dimensions, including time, space, and frequency. According to this perspective, musical information is balanced so that listeners can distinguish relevant musical information in a unique way. Contrarily, noise is generally more uncontrolled and less restrained. As a result, it carries a lot of negative implications that apply to both subjective evaluations and auditory descriptions. Furthermore, there are three main uses for the term "noise":
(1) noises that may be extremely loud
(2) undesired sounds; and
(3) statistical processes that result in random and uncorrelated events and sounds whose waveforms follow such a statistical distribution.

Here are considerations for when music might be perceived as noise in two different scenarios:

1. When Listening to Music as an Individual Activity:

Familiarity/Favourite:

- We usually listen to the familiar songs which were previously or those usually listened by our region's people or family or friends.

Subjective Preferences:

- Threshold of Tolerance: What one person considers enjoyable music, another might find disruptive. The threshold for tolerable sound varies widely among individuals.
- Personal Context: The appropriateness of the music for the listener's mood, activities, or personal preferences plays a significant role. For instance, calming music might be appreciated during focused work, while energetic music might be disruptive.

Volume and Intensity:

- Decibel Levels: Excessive volume can transform music into noise. The World Health Organization (WHO) suggests that prolonged exposure to sound levels above 85 decibels can lead to hearing damage. Individual comfort levels may vary.
- Intrusiveness: If the music is so loud that it interferes with concentration, relaxation, or other activities, it may be perceived as noise.

Distraction and Focus:

- Task-Dependent Perception: The appropriateness of the music depends on the individual's task. While certain genres may enhance concentration for some, they might be distracting for others.

Resources:

- https://www.helloleads.io/blog/all/productivity-ideas-and-tools/will-listening-to-music-improves-productivity/
- https://unacademy.com/content/difference-between/sound-noise-music/
- https://www.frontiersin.org/articles/10.3389/fpsyg.2019.01153/full
- https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4900497/

2. When Listening to Music in Public Settings:

Familiarity/folk songs of that region:

- We usually listen to the familiar songs which were previously or those usually listened by our region's people or family or friends. We explore all the genre songs and all type of metal based music songs.

Cultural Norms:

- Acceptability: In public spaces, there are often cultural norms regarding the type of music considered acceptable. For example, loud and energetic music might be more tolerated in a nightclub than in a library.
- Time and Place: The appropriateness of music can depend on the time of day and the specific setting. What is acceptable during a lively event might be intrusive in a quiet neighborhood.

Public Considerations:

- Shared Space: When music is played in a shared public space, consideration for others becomes crucial. Conflicting musical tastes may lead to discomfort or annoyance.
- Volume Regulation: Public spaces often have regulations or informal norms regarding acceptable sound levels to maintain a harmonious environment.

Cohesiveness vs. Disruption:

- Cohesive Atmosphere: In certain public settings, music can contribute to a cohesive atmosphere. In others, it might disrupt the desired ambiance, leading to a perception of noise.
- https://www.helloleads.io/blog/all/productivity-ideas-and-tools/will-listening-to-music-improves-productivity/

In both scenarios, the key factor is the impact of the sound on the listener's experience and the surrounding environment. Whether music is considered enjoyable or noise depends on a complex interplay of individual preferences, contextual appropriateness, and cultural norms.

Resources:

- https://courses.lumenlearning.com/suny-esc-communicationforprofessionals/chapter/interference-in-communication-processes/
- https://open.lib.umn.edu/communication/chapter/5-2-barriers-to-effective-listening/

Q3

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Factor Loadings Matrix for 6 components:
                    0         1         2         3         4         5
Alternative -0.124370 -0.005580  0.086785  0.591779  0.036656  0.192214
Jazz         0.141798 -0.433977  0.266368 -0.131867 -0.362593  0.099536
Rock        -0.291160  0.021793  0.440223  0.207143 -0.064098  0.025003
Folk        -0.151204  0.226426 -0.042945 -0.007645 -0.112801  0.671461
Religious   -0.116164  0.004275  0.105634 -0.610641  0.074563  0.213920
Blues        0.099408 -0.619972 -0.056670  0.272225  0.245155  0.096124
Heavy Metal  0.022680 -0.056580  0.633396 -0.100540 -0.053012 -0.047597
Soundtracks -0.317143 -0.560990 -0.116591 -0.195503 -0.095890 -0.151107
Dance       -0.681377  0.010239 -0.141622 -0.153683  0.101643 -0.050250
Pop         -0.171761  0.047586 -0.163228  0.210544 -0.535959 -0.283775
Soul        -0.046002 -0.088422 -0.460432 -0.006543 -0.163067  0.084385
Rap         -0.468493 -0.022572  0.161326  0.153931 -0.031443  0.101888
Classical    0.072139 -0.214865 -0.109150  0.023576  0.036973  0.546288
Country      0.108335  0.027034 -0.009174 -0.043404 -0.667947  0.150247

Factor Loadings Matrix for 4 components:
                    0         1         2         3
Alternative -0.551437 -0.194077  0.127881  0.066831
Jazz         0.113901 -0.401416  0.177713 -0.170545
Rock        -0.268273 -0.043931  0.433788 -0.190999
Folk        -0.016695 -0.467323 -0.107269  0.066358
Religious    0.590309 -0.101014  0.094473 -0.135625
Blues       -0.085298 -0.327572  0.088950 -0.002357
Heavy Metal  0.072823 -0.032380  0.585139 -0.032039
Soundtracks  0.174167 -0.107867 -0.043799 -0.577059
Dance        0.060966  0.158960 -0.045125 -0.557540
Pop         -0.388736  0.119183 -0.273329 -0.327660
Soul        -0.012570 -0.123971 -0.469228 -0.123270
Rap         -0.218545 -0.082104  0.196810 -0.342489
Classical    0.077054 -0.545774 -0.091861  0.106541
Country     -0.103089 -0.302051 -0.217142 -0.105278

Total variance explained by the first 6 components: 0.7309431601749387
Total variance explained by the first 4 components: 0.5697662376972595
(base) user@user-Vostro-3590:~/Desktop/gender_making$
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My output for 6-components, varimax-rotated solution's :

Genre	Rhythms 'n' blues	Hard Rock	Bass heavy	County	Soft rock	Classical
Jazz	**0.1417**	-0.4339	**0.2663**	-0.1318	-0.3625	**0.0995**
Blues	**0.0994**	-0.6199	-0.0566	**0.2722**	**0.2451**	**0.0961**
Soul	-0.0460	-0.0884	-0.4604	-0.0065	-0.1630	**0.0843**
Heavy Metal	**0.0226**	-0.0565	**0.6333**	-0.1005	-0.0530	-0.0476

Alternative	-0.1244	-0.0056	**0.0868**	**0.5918**	**0.0367**	**0.1922**
Rock	-0.2912	**0.0218**	**0.4402**	**0.2071**	-0.0640	**0.0250**
Rap	-0.4685	-0.0226	**0.1613**	**0.1539**	-0.0314	**0.1019**
Dance	-0.6814	**0.0102**	-0.1416	-0.1536	**0.1016**	-0.0501
Country	**0.1083**	**0.0270**	-0.0092	-0.0434	-0.6678	**0.1502**
Folk	-0.1512	**0.2264**	-0.0429	-0.0076	-0.1128	**0.6715**
Pop	-0.1717	**0.0475**	-0.1632	**0.2105**	-0.5359	-0.28377
Soundtracks	-0.3171	-0.5609	-0.1166	-0.1955	-0.0958	-0.1511
Classical	**0.0721**	-0.2148	-0.1092	**0.0236**	**0.0369**	**0.5463**
Religious	-0.1162	**0.0043**	**0.1056**	-0.6106	**0.07456**	**0.2139**

Observations based on the provided factor loadings matrix:

R&B (Rhythms 'n' Blues): It has strong positive loadings on Component 1, suggesting a positive association with this component. Genres like Jazz and Blues also have strong positive loadings on Component 1.

Hard Rock, Bass Heavy, and Heavy Metal: These genres have strong positive loadings on Component 2, indicating a commonality among them.

Country and Folk: They exhibit positive loadings on Component 4, implying a potential similarity between these genres.

Soft Rock and Pop: Both genres have positive loadings on Component 5, suggesting a shared characteristic.

Classical and Soundtracks: These genres show positive loadings on Component 6, indicating a similarity between them.

Genres with High Positive Loadings:

- R&B, Jazz, Blues (Component 1)
- Hard Rock, Bass Heavy, Heavy Metal (Component 2)
- Country, Folk (Component 4)

- Soft Rock, Pop (Component 5)
- Classical, Soundtracks (Component 6)

Based on these observations, to make STOMP relevant to current times, you might consider adding genres that align with the identified components. For example, incorporating genres similar to R&B, Jazz, Blues, Hard Rock, Bass Heavy, and potentially exploring a blend of Country and Folk could enhance the relevance of STOMP. Genres like Pop, Soft Rock, Classical, and Soundtracks also play a role and should be considered.

Keep in mind that these interpretations are based on the factor loadings and the assumed associations between genres and components. Actual preferences may vary, and it's advisable to consider audience feedback and current music trends for a more accurate assessment.

4 components, varimax rotated solution:

	Acoustic Foundation	Hard rock	Bass foundation	Soft rock
Folk	-0.016695	-0.467323	-0.107269	**0.066358**
Country	-0.103089	-0.302051	-0.217142	-0.105278
Religious	**0.590309**	-0.101014	**0.094473**	**0.135625**
Blues	-0.085298	-0.327572	**0.088950**	-0.002357
Classical	**0.077054**	-0.545774	-0.091861	**0.106541**
Rock	-0.268273	-0.043931	**0.433788**	-0.190999
Heavy metal	**0.072823**	-0.032380	**0.585139**	-0.032039
Alternative	-0.551437	-0.194077	**0.127881**	**0.066831**
Rap	-0.218545	-0.082104	**0.196810**	-0.342489
Dance	**0.060966**	**0.158960**	-0.045125	-0.557540
Soul	-0.012570	-0.123971	-0.469228	-0.123270
Jazz	**0.113901**	-0.401416	**0.177713**	-0.170545
Pop	-0.388736	**0.119183**	-0.273329	**0.327660**
Soundtracks	**0.174167**	-0.107867	-0.043799	-0.577059

Note: Highlighted ones are positive loads.

Observations from Component 0(Acoustic foundation):

- Similar emphasis on "Acoustic Foundation" in both tables.
- Negative loadings for Rock, Rap, Dance, Jazz, Pop etc.

Observations from Component 1(Hard Rock):

- Emphasis on "Hard Rock" with positive loadings for Rock, Heavy Metal, and Alternative.
- Negative loadings same as Acoustic Foundation genres etc.

Observations from Component 2(Bass foundation):

- Connection between genres and "Bass Foundation."
- Positive loadings for Rock, Rap, Dance, Soul, Pop, and Soundtracks.

Observations from Component 3(Soft rock):

- Identification of the "Soft Rock" component.
- Positive loadings for Religious, Classical, Pop etc.
- Negative loadings for Rock, Heavy Metal, Rap, Dance, and Soul.

Recommendations for STOMP:

- Consider adding genres with elements of electronic, indie, hip-hop, and R&B.
- Genres like Pop, and contemporary artists from Rap, Dance, and Pop could enhance playlist appeal.
- Ensure diversity and reflection of current musical trends for broader audience appeal.