HUMAN SUBTRACTED: SOCIAL DISTORTION OF MUSIC TECHNOLOGY

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ABSTRACT

The social functions of music have been broken by successive music technology advances, bringing us to the current "boundless surfeit of music" (Schoenberg) navigated with only the faintest traces of common interests retained in personalised music recommendation systems. This paper recounts the desocialisation of music through sound recording, private listening, and automated recommendation, and considers the consequences of music's persistent cultural and interpersonal power through this changing use.

1. WHAT MUSIC HAS BEEN

Humanity developed and developed with musical behaviours when these sounds had to come from people in physical and social proximity. Today, much if not most of our musical experiences involves listening alone to sounds constructed in the past by people we will never meet [12], sounds often chosen for us according to inferred individual preference. Consumer behaviour demonstrates that this change is easy to adopt, but convenience does not guaranty the shifts are benign. Despite the impacts of technology, cross-cultural studies of modern musical practices show that music continues to carry social weight in a number of ways [18]. From a few claims about music before recording technology, we can contextualise their impacts on our current listening cultures. For most of our species history, the following held true:

- 1. **Proximity to source**: Heard music is made by nearby humans, people known to the hearer either personally or by a role justifying their physical proximity.
- 2. **Open broadcast signal**: This music is also heard by everyone else within earshot.
- 3. **Effortful sound**: Music is present when it is worth the physical effort of producing it, whether for lullabies, group entertainment, solitary distraction, intimidation, etc.

- 4. **Cultural affinity**: Most music heard is by members of the hearer's culture and it expresses that shared identity with familiar sound and structures.
- 5. **Social interpretability**: The hearer easily interprets the performers' purpose from their sounds: to calm, play, mourn, etc.
- 6. **Group distinction**: Music that sounds different and is hard to interpret is by people from a different group or culture.

Constrained by acoustics and mobility, music has predominantly been an insular social practice. Sound recording and reproduction technology broken the requirement of physical proximity between music producers and listeners, personal playback devices divided listeners from each other, and personalised music recommendation is loosening the last cultural/social constraints on musical exposure in pursuit of preference within a narrow range of uses.

2. SEPARATING MUSICIANS FROM LISTENERS

Separating sound and source has not removed the social and cultural relationships previously associated with musical contact. Instead the identities of musicians are amplified and opened up to interpretation without practical constraints like physical proximity and voluntary interaction. Only a speaker away, they never refuse to "Play it again!"

Creators of favourite and famous music engage our attention and care because we are free to "know" them through a medium that articulates cultural belonging, mutual trust, and intentional engagement. Repeated exposure to specific tracks extends familiarity from baseline social interpretability to the intimacy of co-performers. This sensitivity permits dedicated listeners to hear recording artists as friends, peers, family, developing deep parasocial attachments. When a performer is perceived to contradict the image their followers have inferred, whether on grounds of musical skill [2] or social failings, betrayal of these unidirectional bonds challenge listeners appreciation of their works. Social factors define the value of recorded music.

Ease of distribution has exposed listeners to a greater diversity of music styles, crossing the boundaries of time, geography, and socio-economic stratification. While music can promote cross-cultural understanding and respect, exposure to new genres and artists exclusively via recordings may be having undesirable consequences. Humans

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infer rules of musics quickly by ear, and repeated exposure to recordings shift what is heard as "foreign" to sounds listeners claim as part of their own cultural practice. This intuitive appropriation encourages audiences to feel entitled to the cultural work and products of other communities without acknowledging all the differences (and disparities) between them. A genre enthusiast can feel vague empathy and affiliation for those making the music and yet never confront conflicting bigotries such as racism [15]. Beyond the problem of enjoying music without respecting the musicians, this pattern of appropriation has financial costs to the communities from whom musical styles and works have been stolen. Musical genres and works originating from Black musicians in North America have repeatedly been taken up by White musicians who go on to have hugely impactful and profitable recording careers [9].

3. LISTENING ALONE

Solitary listening has become common practice, for some the most common context for music listening [12], contrary to historical acoustic conditions and presumed uses for group bonding and coordination. Listening to music over headphones is a convenient way to isolate a listener from their environment [11], to find entertainment without bothering others. Besides discouraging interpersonal interactions, tailoring music to one person's interests has facilitated substantial changes in musical use.

Musical subcultures within larger communities are not new phenomena, but technology and solitary listening practices has shifted the membership from the people gathered for live events to individuals picking up associations independent of their predominant cultural environment. Intergenerational conflict over musical taste is cliche, but the contrast in preference is exaggerated by uneven exposure to new genres. Family and neighbours can grow deep cultural investment in musical styles without allowing each other to develop even superficial understanding through passive exposure.

Self-actualisation is a notable aspects of teenage music consumption choices [17], using this medium to articulate personality and identity against the norms of their immediate social environment. Like other cultural signifiers, genres carry stereotypes about their listeners [14], and peer opinions seem to have more weight in determining listening preferences for students than many structural qualities [8]. And yet, private listening also allows people access to music they'd rather not admit enjoying, for fear of being judged by association with the musicians or culture [5]. When music is a mechanism for defining ourselves as well as our community, the implications of association become personal.

Many of today's recorded music consumers report selecting tracks strategically, to change their mood or explore and resolve feelings [10]. Independent music consumption allows individuals to focus music's power to move a crowd on themselves, using dance music to stay awake or be inspired by a favourite love song, free of having to consider what might be overheard or the musicians own goals in performing. For some, music has become a tool to optimise their behaviour and feelings, compensating for undesirable emotional challenges [1]. Although physically removed from musicians and other listeners, music can still carry the feeling of company. Like other forms of sociallyloaded media, music is often used as a social surrogate to sooth loneliness, reminding people of community, identity, and past interpersonal connections [16].

4. PASSIVE EXPOSURE

It's always been common for music we hear to be chosen by others. Most musical sounds heard would have been culturally familiar and socially situated in who was making them and why. Some circumstance would oblige engagement, but if the music was not in someway intended for the hearer, they would be free to ignore the musicians' efforts. While the range of relationships to music overheard is much the same, technology has changed the reasons for it to be in our environment, including who is responsible for music's presence.

With recorded tracks came new cultural contexts for the introduction of new music. DJs with cultural authority program offering with information about the pieces or artist while expressing personal assurances of the music's quality. Videos present music with extra-auditory narratives. And friend or expert mixtapes became playlists shared online with social value informing consumers' relationship to the sound before hearing it [6].

Automated music recommendation systems cut away this last layer of social context from new works. Tracks are offered mysteriously, anonymously, presenting the illusion of understanding through personalization without a story as to why the music is to be heard here and now. And without interpersonal pressure to pay attention and use one's reactions, these sounds are easy to ignore. Some tracks may catch our attention with novelty, but many will be overlooked as comfortably interpretable but not special unless a social connection gives it worth. Instead of investing in musical works to forge lasting affective meaning, services like Spotify Discover parade an array of new pieces to be heard without context, hassle free. As one user reported: "... Spotify has changed the way I listen to music. When previously I would stick to the music I had always listened to due to the high level of work required to source new music that I like, I now enjoy large varieties of music and get bored quickly of the same music over and over." [4]

Casual listening to fresh material is fine for some purposes, but it is not an efficient path experiencing the powerful emotions many consumers look for in music [13]. Comparisons of self-selected vs expert-selected music consistently shows that music people choose themselves have stronger impacts on how they feel [19]. Personalised recommendation may try to give listeners music that fits their cultural affiliations and general mood, but without social emphasis, it may be hard for consumers to build the associations so useful for triggering stronger feelings.

If novelty is easier to serve than emotional impacts or

familiarity, users of music recommendation systems are at risk of all the concerns raised so far. These services encourage cultural wandering, helping users to appropriate genres without understanding the originating peoples and cultures. They discourage the attentional investments needed to develop strong emotional ties. And by tempting music consumers with personalised offerings, users are further pressured to allow their proximal social networks to decay.

5. CONCLUSIONS

Sound recording and subsequent technologies have utterly transformed how we use music today and yet the acoustic, social, and cultural constraints of music practices past still define its impacts on music consumers. When commercial recording was just starting, many musicians of the day were concerned by the disruptions they anticipated. In our present effortless consumption of recorded music selected to suit to our personal pallet, we have reached the dreaded "domestication of sound" (Debussy) that allows us to "listen lazily" (Stravinsky) and loose "our powers of musical concentration" (Keller) in this "boundless surfeit of music" (Schoenberg) [3] [7, p. 45]. But the greatest loss in experience may be through the de-socialisation of music, as we overlook where it comes from and what it means when that information is stripped away by the dominant means of dissemination.

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