# Human Subtracted: Social Distortion of Music Technology

FINN UPHAM

WORKSHOP ON DESIGNING HUMAN-CENTRIC MIR SYSTEMS, 2019

DELFT UNIVERSITY OF TECHNOLOGY

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Schulich School of Music
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# Technology Transforming Music



- Music is an old cultural practice (> 50 000 years) with which humans have co-evolved.
- 140 years ago, sound recording technology revolutionized what music we heard, when we heard it, and what these sounds meant.
- Subsequent innovations have shifted musical experience further from a social practice to individual consumer activity.
- Here discuss:
  - What constraints on music used to be.
  - Consequences of how these are broken by commercial sound recording, personal playback devices, automated playlisting.

# Constraints prior to Sound Recording

Prior to recording and sound payback, acoustics restricted the circumstances of when music was heard:

1. **Proximity to source:** Heard music was 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 was also heard by everyone else within earshot.
3. **Effortful sound:** Music was present when it is worth the physical effort of producing it, whether for lullabies, group entertainment, solitary distraction, intimidation, etc.

# Constraints prior to Sound Recording

Acoustic constraints carried social implications:

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

# Unintended Consequences?



- Recent technologies have broken these constraints.
- But past consistencies still inform our present experience of music.
- These may help explain the paradigm shifts in musical engagement.

Clash of new technological affordances with music's implicit sociality is not always benign.

"Grammaphone from Singapore History Museum"
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# Separation of Listeners and Musicians

## AUDIO RECORDING/PLAYBACK AND THE RELATIONSHIPS BETWEEN MUSICIANS AND LISTENERS

# Music Recordings allow Unidirectional Social Contact

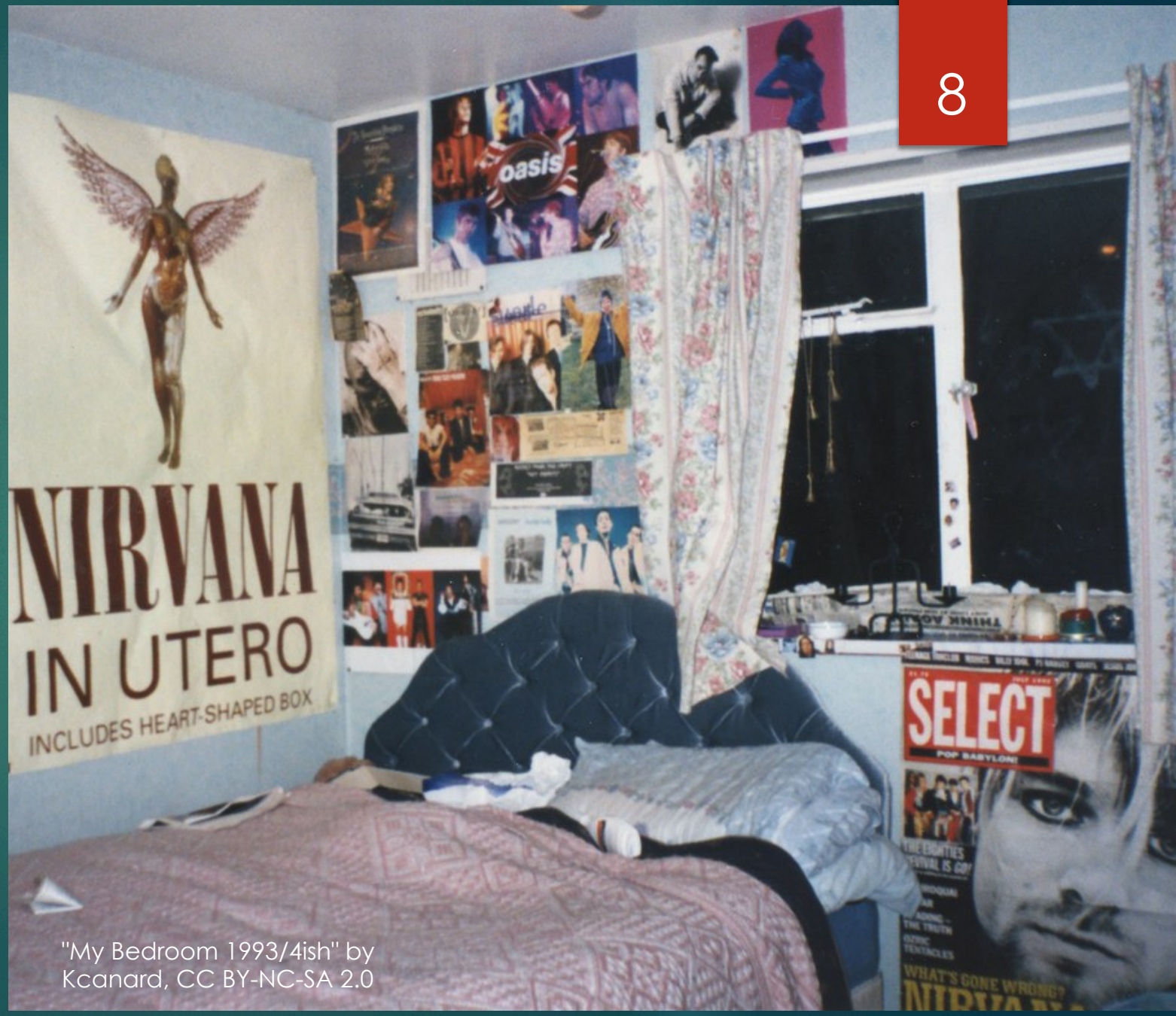


| | |
|---|---|
| Music without present contact | Access to music from far away and long ago. |
| | Hear music across cultural and socio-economic divisions. |
| Repeated listening | Exposure without effort by musicians. |
| | Develop deep familiarity with specific performances. |

# Parasocial Potential



- Familiarity with performance leads to familiarity with performers and **parasocial attachment.**
  - Listeners are free to interpret musicians as willing friends/family
- Performers' lives define value of their recordings. They are judged on:
  - Authenticity
  - Politics
  - Interpersonal relationships
- Resultant fan/performer relationships can be harmful for both parties.




"My Bedroom 1993/4ish" by Kcanard, CC BY-NC-SA 2.0

# Cross-cultural Entitlement and Appropriation



- Familiarity through recordings leads to social interpretability and cultural identification.
- Cultural identification drives entitlement to create with style and techniques.
- Identification grown from recordings is shallow.
  - Disconnected from artistic tradition, it does not temper bigotry.

Recording facilitates exploitative appropriation with cultural and financial consequences for marginalized communities.

NUNATSIAQ NEWS

NEWS 23 OCTOBER, 2019 – 10:30 AM EDT

## Acclaimed American choir slammed for use of Inuit throat singing

"This is appropriation"

"This is appropriation. The third movement (at about 12 min.) is entirely based on Inuit throat singing. Specifically the Love Song," Tagaq said on Twitter.

"No Inuit are named as composers, no Inuit hired. At least credit the Inuit who taught you as composers so they too can benefit and book more gigs to put food on the table."

Tagaq said "taking from poor brown people and siphoning it into white throats and profiteering is wrong," asking the group whether any of the appropriated cultures benefited financially from the various performances of the work.

Acclaimed American choir slammed for use of Inuit throat singing by J. George, *Nunatsiaq News* (2019)

# Listening Alone

PERSONAL PLAYBACK DEVICES DISTORT THE SOCIAL RELATIONSHIPS BETWEEN LISTENERS

"Sony WM-D6C,MDR-51" by hdboy 88CC BY-SA 2.0

# Controlled Listening



Once impossible, listening to music alone is now common. Headphones and mobile playback devices facilitated two major changes in how music is experienced:

- Capacity to overwhelm local soundscape and attention with music of choice.
- Hear music without sharing it, no open broadcast.

"Shikamaru iPod Dancer" by phradaka (2008) **CC BY-NC-ND 2.0**

# Identity Construction

Solitary listening permits solitary investment in music cultures.

- Genre preferences now a marker of personality as well as community.
- Self-actualization priority in teenage music consumption choices.

LauraLA2008 **Family Portrait 2011 (CC BY-NC 2.0)**

# Environ-mental Regulation

Music directed to satisfy individual goals instead of social action.

- Mood regulation without exposing objectives.
- Prioritize individual listening preferences without negotiating implications for those nearby.
- Insulate thinking/feeling from environment.

"Boston Subway" by Nikita Gavrilovs CC BY-NC 2.0

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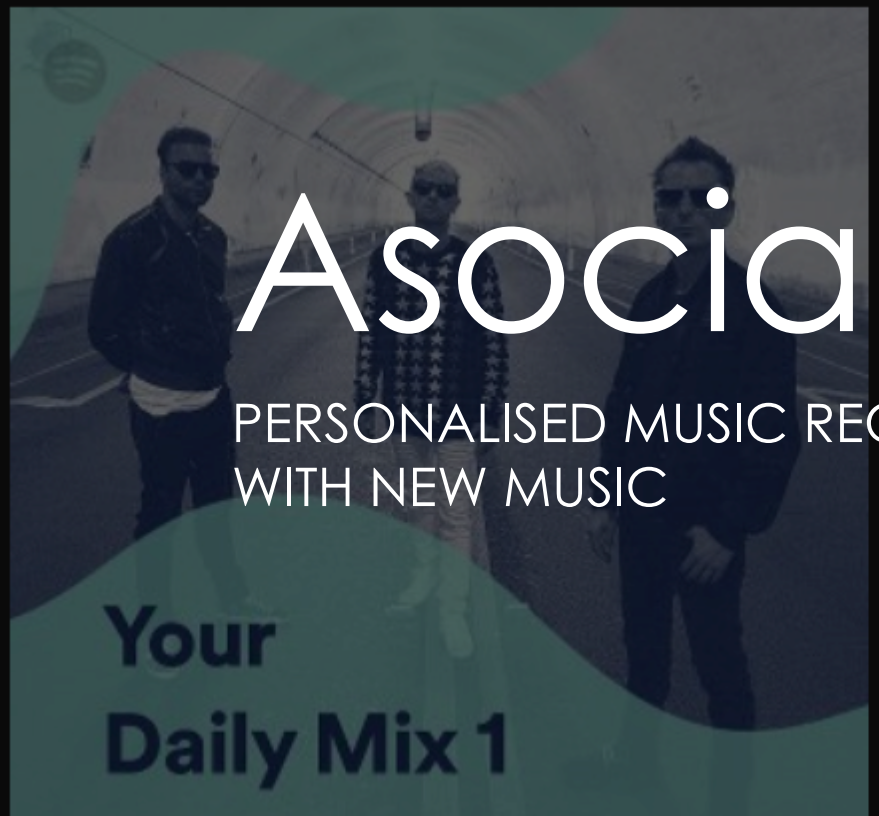
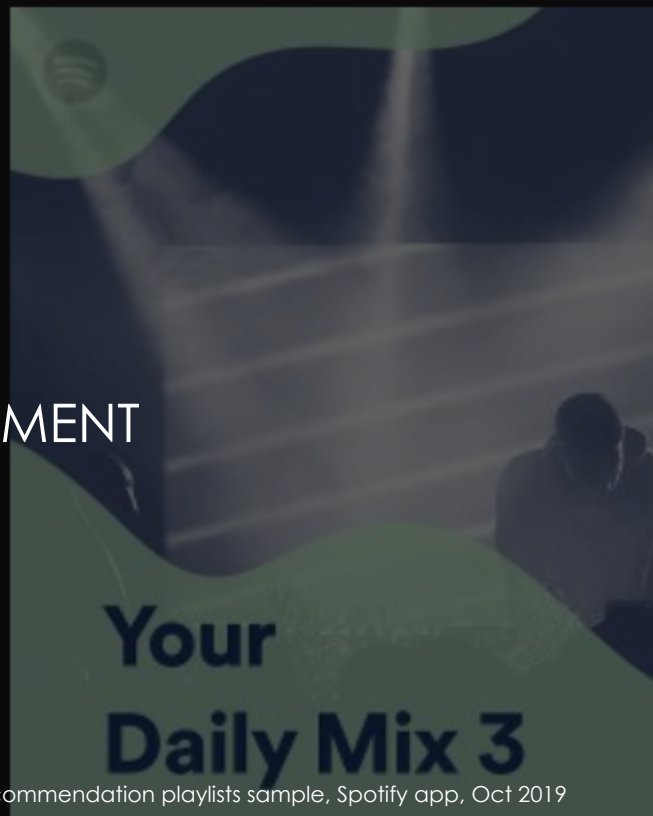
## Your Daily Mixes






# Asocial Exposure

PERSONALISED MUSIC RECOMMENDATION CHANGING ENGAGEMENT WITH NEW MUSIC

Recommendation playlists sample, Spotify app, Oct 2019

# Social Exposure



- Outside of personal playlist recommendation new music comes with:
  - Social context via:
    - friends
    - favourite performers
    - Narratives in mixed media
    - Live concerts
  - Cultural value via:
    - Expert listeners (DJs)
    - Popular charts
- Social & cultural weight motivates engaged listening.

"**happy**" by jesmar para jugar, **CC BY-NC-ND 2.0**

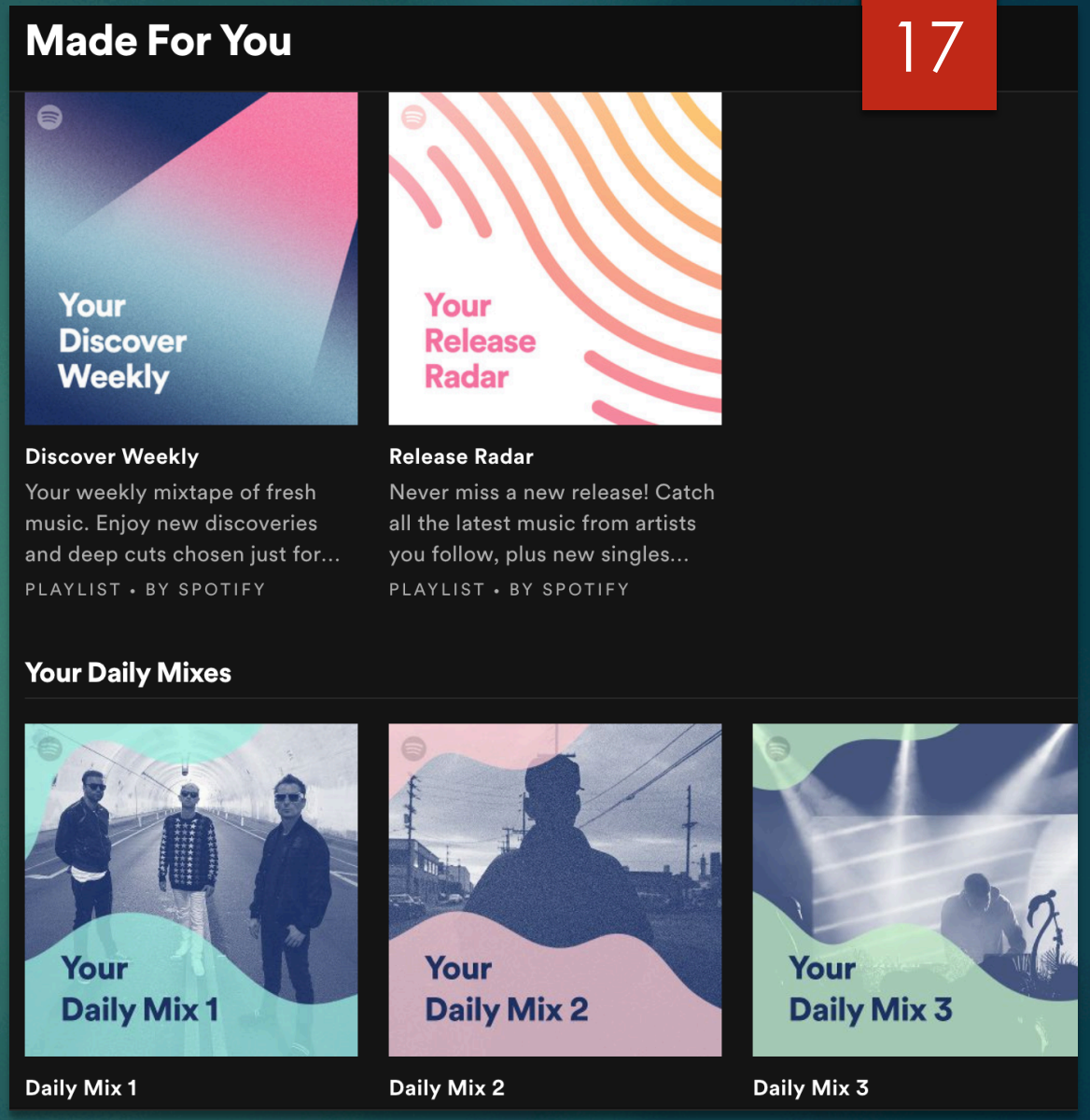
# Effortless Personalized Music Listening



| | |
|---|---|
| Provide music of interest to suit: | • Expected purpose of listening<br>• Individual preferences |
| Reduce effort of discovery: | • Triage of large music collection<br>• Automated sequencing |

# Experience Restricted

- Individual preference supersedes extra-musical motivations for music exposure.
  - Without social values directing exposure, novelty leads engagement.
  - Novelty appetite discourages engagement required to give pieces deeper cultural and emotional meaning.
- This cycle directs consumers into restricted listening practice far from musical practices past.




Recommendation playlists sample, Spotify app, Oct 2019

# Present Technologies

CAN AND SHOULD NEW TECHNOLOGIES WORK TO ADDRESS THESE ISSUES?

# Past constraints

Breaking these constraints offed great opportunities, but there are also unintended consequences

1. Proximity to source
2. Open broadcast signal
3. Effortful sound
4. Cultural affinity
5. Social interpretability
6. Group distinction

# Current and future redress



Social practices around music and the music industry continue to change. Some concerning effects can be addressed with music technology:

- Apps supporting group music-making.
- Metadata adding cultural context to streaming music.
- Encouragement to attend live shows.
- Speakers vs headphones.

Music needn't be restricted to what it has been, but the persistent effects of past conditions can be used to our advantage again.

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Fonds de recherche Société et culture Québec
compute canada | calcul canada
WESTGRID
SIMSSA | Single Interface for Music Score Searching and Analysis

# Thank you for attending. Questions? Comments?

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