Tunes Together

Understanding Users' Attitudes and Behaviors Towards Collaborative Music Playlists

So Yeon Park & Alexa Siu

Music

Music is increasingly becoming social again:

- Co-creation
- Co-enjoyment
- Co-performance

Collaborative Playlists (CPs)

Music co-enjoyment, especially, has risen with various platforms enabling collaborative music listening & curation

- Spotify launched collaborative playlists in 2008[1]
- Turntable.fm was widely popular in 2011 (though short-lived) for allowing multiple users to act as DJs within online chatrooms[2]

Designed study to better understand how people today **interact with** and **feel about** collaborative playlists

1 https://www.dummies.com/social-media/spotify/collaborate-on-playlists-with- spotifys-collaboration-feature/
2 https://en.wikipedia.org/wiki/Turntable.fm

Understanding Users' Attitudes and Behaviors Towards Collaborative Music Playlists
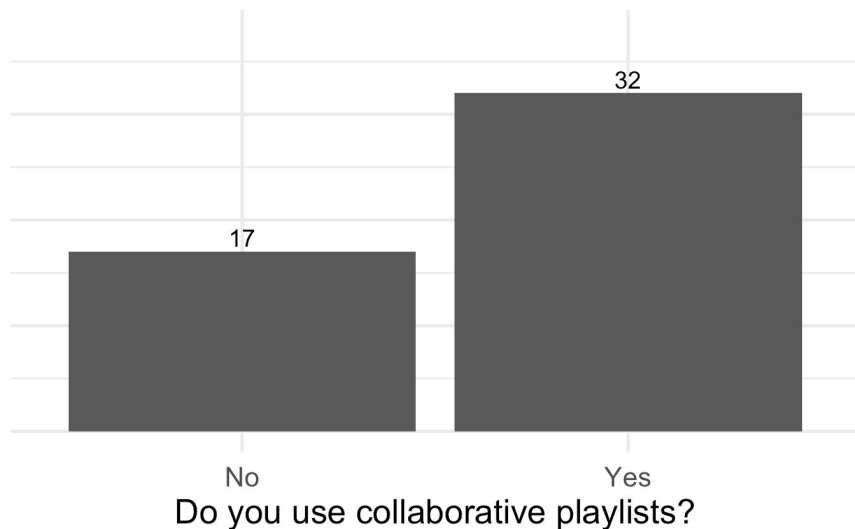
Q1 Are there **differences in music habits and values** between CP and non-CP users?

Q2 Is user's **engagement** in a CP related to their **sense of ownership?**

Methods: Online Survey

- **57 questions** about current music habits and experiences
  - Non-CP users answered 26 questions
  - CP users answered 47 questions
- Answers were mostly **Likert Scale ratings**
- Participants (n=49) recruited through an introductory music class

32

17

No   Yes

Do you use collaborative playlists?

Q1

Are there **differences in music habits and values** between CP and non-CP users?

CP users...

- Value sharing music with others
- Frequently engage in new music discovery

Q1

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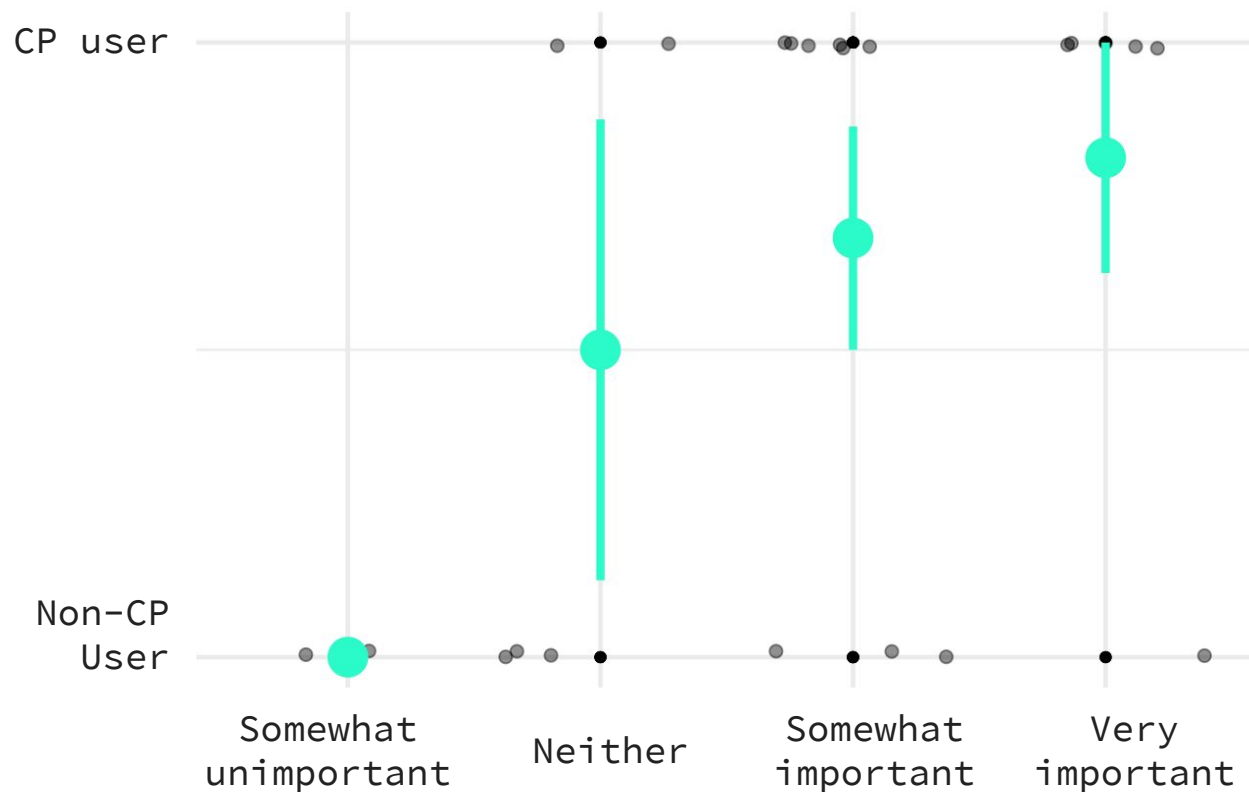
CP users...

- **Value sharing music with others**
- Frequently engage in new music discovery

Q1. Value of Sharing Music With Others

How important is sharing music with others to your social relationships?

Very unimportant	Somewhat unimportant	Neither	Somewhat Important	Very Important

Q1. Value of Sharing Music With Others

Q1. Value of Sharing Music With Others: Analysis

Logistic regression: UseCP ~ 1 + SharingMusic

	Estimate	Std. Error	z-value	Pr(>|z|)
(Intercept)	-0.3501	0.4975	-0.704	0.482
SharingMusic	1.0229	0.4116	2.485	0.013 *

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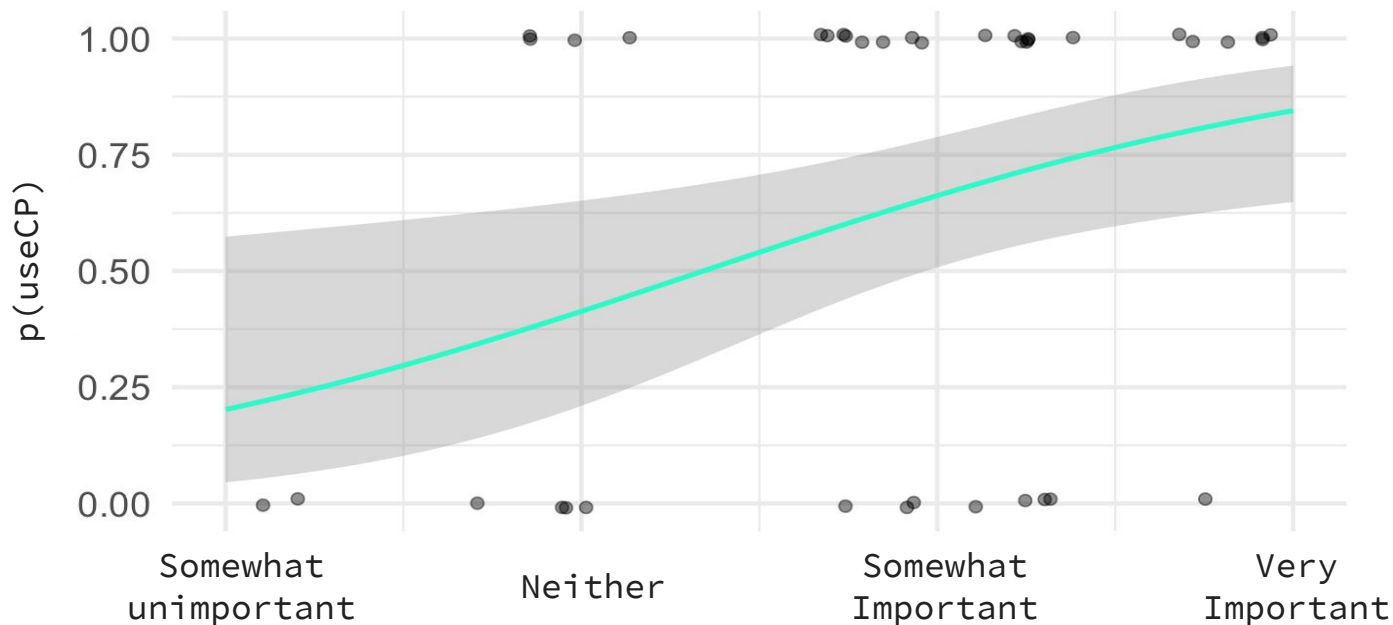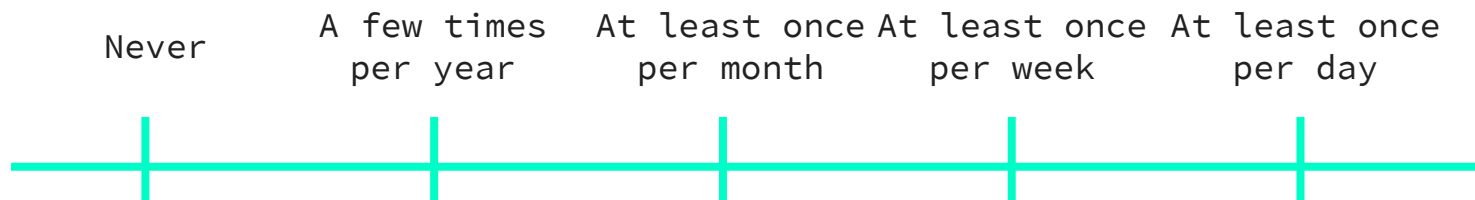
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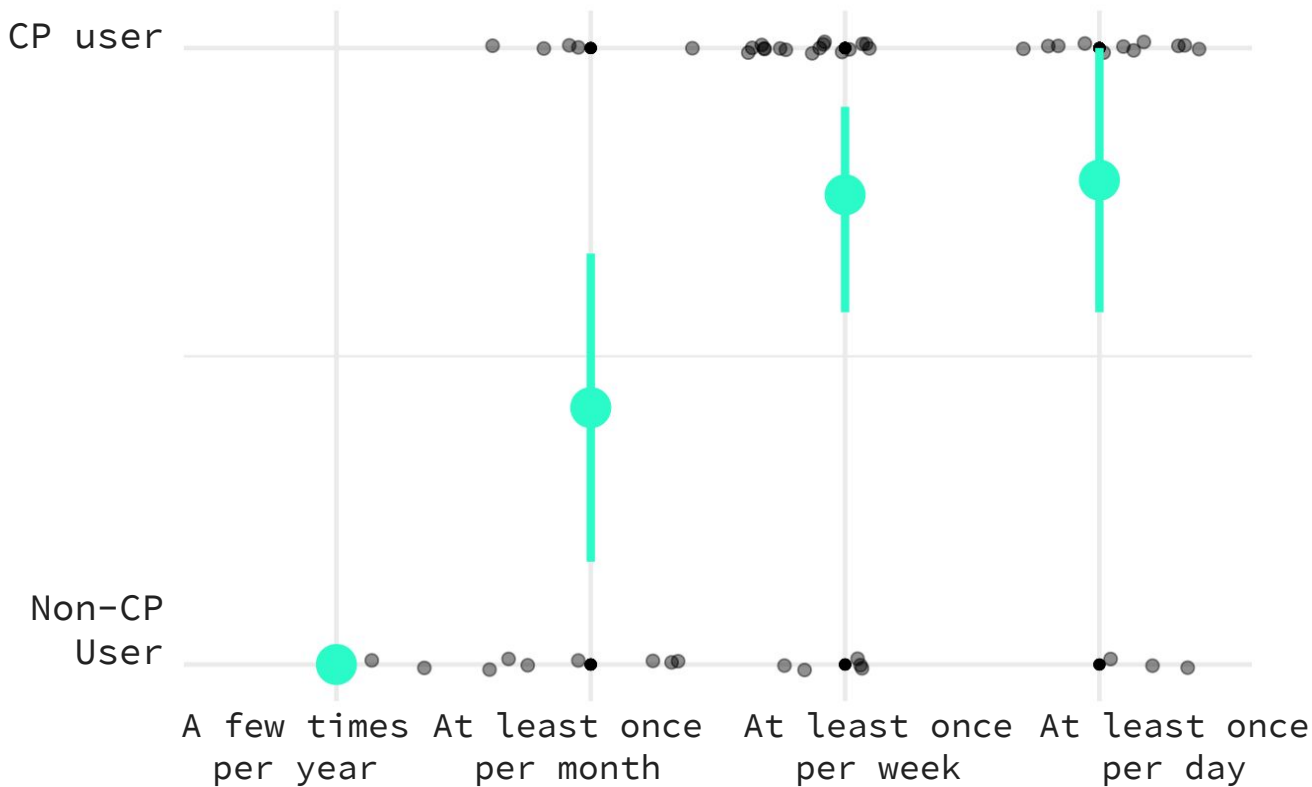
CP users...

- Value sharing music with others
- **Frequently engage in new music discovery**

Q1. Frequency of Music Discovery

How often do you engage in discovering music with others?

Never   A few times per year   At least once per month   At least once per week   At least once per day

Q1. Frequency of Music Discovery: Plot Data

Q1. Frequency of Music Discovery: Analysis

Logistic regression: UseCP ~ 1 + MusicDiscoveryFreq

	Estimate	Std. Error	z-value	Pr(>|z|)
(Intercept)	-2.3569	1.2279	-1.919	0.0549 .
MusicDiscoveryFreq	1.0423	0.4233	2.462	0.0138 *

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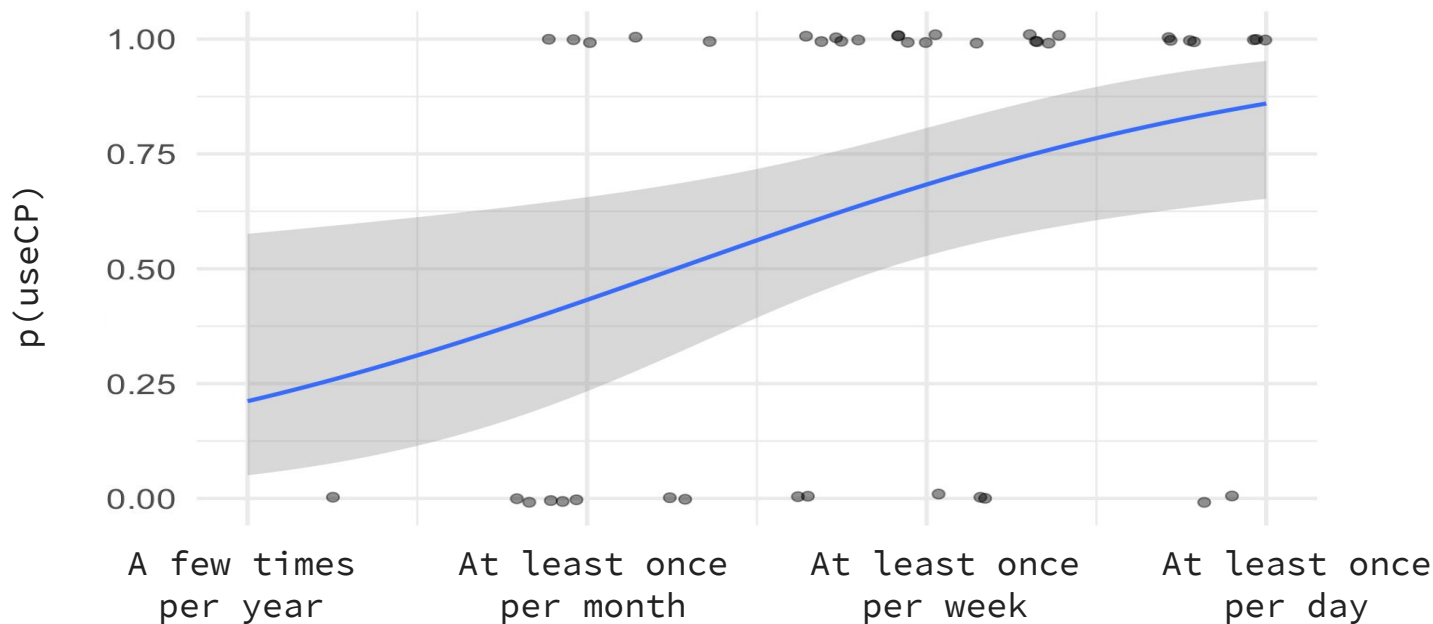
Q2

Is user's **engagement** in a CP related to their **sense of ownership?**

Sense of CP ownership is associated with perceived role and frequency of contributions

- In particular, adding music is the most indicative

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Q2. CP ownership

Which of the following statements best represents your sentiment towards [favorite CP] in general?

1) **High:** The playlist belongs to me
2) **Medium:** The playlist belongs to me and my collaborator(s)
3) **Low:** The playlist belongs to my collaborator(s)

Q2. CP ownership + Perceived Role

Select your role of contribution to the CP in terms of...

1. Adding music
2. Deleting music
3. Reordering music
4. Other
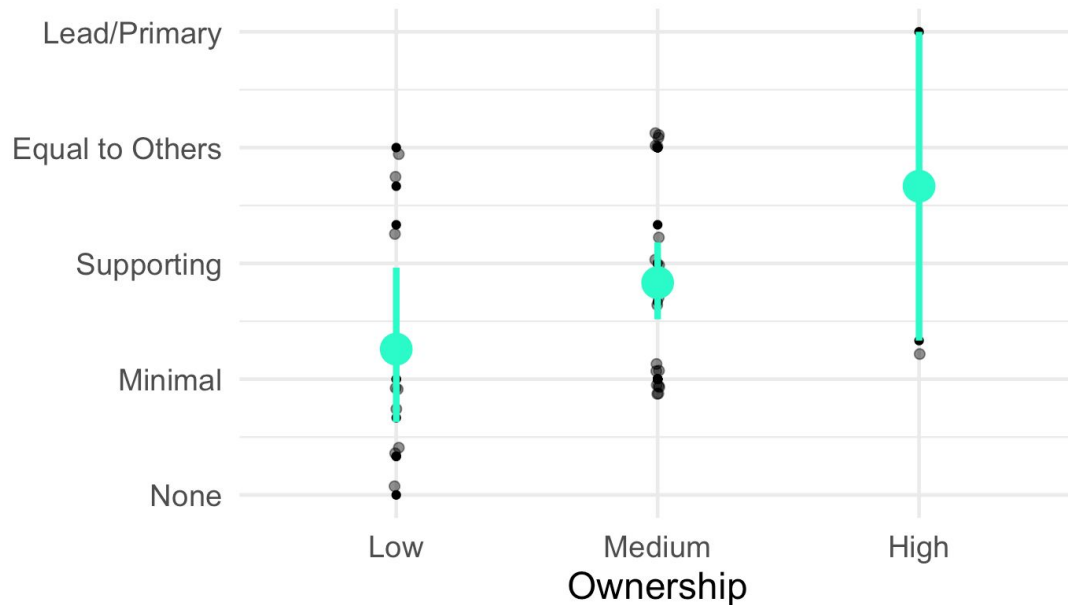
*Mean values were calculated for all roles

Q2. CP ownership + Perceived Role

Compact LM: Ownership ~ 1 + PerceivedRole

	Estimate	Std. Error	t-value	Pr(>|t|)	
(Intercept)	-0.82098	0.29043	-2.827	0.00829	**
mean_PerceivedRole	0.23036	0.09941	2.317	0.02750	*

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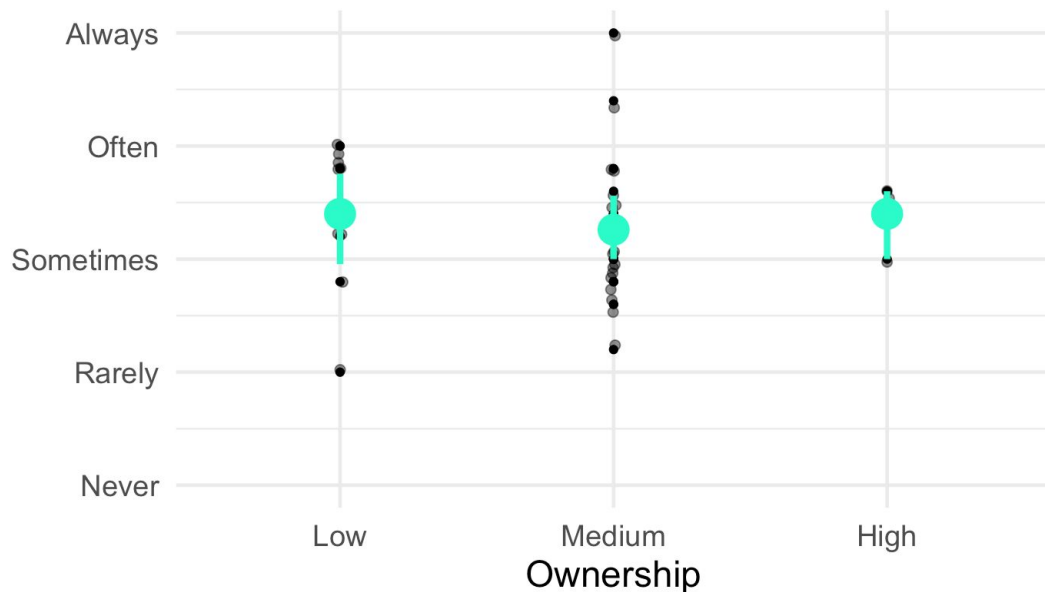
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mean_PerceivedRole	**0.23036**	**0.09941**	**2.317**	**0.02750 ***

CP users' sense of ownership is significantly associated to a user's perceived role (p<0.05)

Q2. CP ownership + Frequency

Select the frequency with which you...

1. Check songs
2. Listen/play alone
3. Listen/play with others
4. Contribute (e.g., modify, add, delete)
5. Share

Mean values were calculated for all frequencies

Q2. CP ownership + Perceived Role + Frequency

Augmented LM: Ownership ~ 1 + PerceivedRole + Frequency

	Estimate	Std. Error	t value	Pr(>|t|)	
(Intercept)	-2.1995	0.9934	-2.214	0.0351	*
mean_Frequency	0.6168	0.4291	1.438	0.1616	
mean_PerceivedRole	0.9125	0.4021	2.270	0.0311	*
mean_Frequency:mean_PerceivedRole	-0.3000	0.1726	-1.738	0.0931	.

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Only CP users' perceived role is significantly associated to a user's sense of ownership ($p<0.05$)

Q2. CP ownership + Perceived Role + Frequency

PRE(compact, augmented) = 0.104

Analysis of Variance Table

Model 1: ownership ~ 1 + PerceivedRole
Model 2: ownership ~ 1 + PerceivedRole * Frequency

	Res.Df	RSS	Df	Sum of Sq	F	Pr(>F)
1	30	9.2241				
2	28	8.2618	2	0.96229	1.6306	0.2139

Including frequency of contribution in the model is not worth it, p>0.05, PRE = 10.4%

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NOT WORTH IT!

Q2

Is user's **engagement** in a CP related to their **sense of ownership?**

Sense of CP ownership is associated with perceived role and frequency of contributions

- **In particular, adding music is the most indicative**

Q2. Ownership + Action Roles

Linear regression: ownership ~ 1 + add + delete + reorder

	Estimate	Std. Error	t-value	Pr(>|t|)
(Intercept)	-1.54802	0.38424	-4.029	0.000389 ***
addSong	0.33310	0.10405	3.201	0.003394 **
deleteSong	0.09004	0.07592	1.186	0.245603
reorderSongs	-0.04427	0.07226	-0.613	0.545016

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The perceived role of adding a song is a significant predictor for a user's sense of ownership (p<0.05)

Conclusion

Q1 CP users have different music values and habits compared to non-CP

- Value more sharing music with others
- More frequently engage in discovering new music

Conclusion

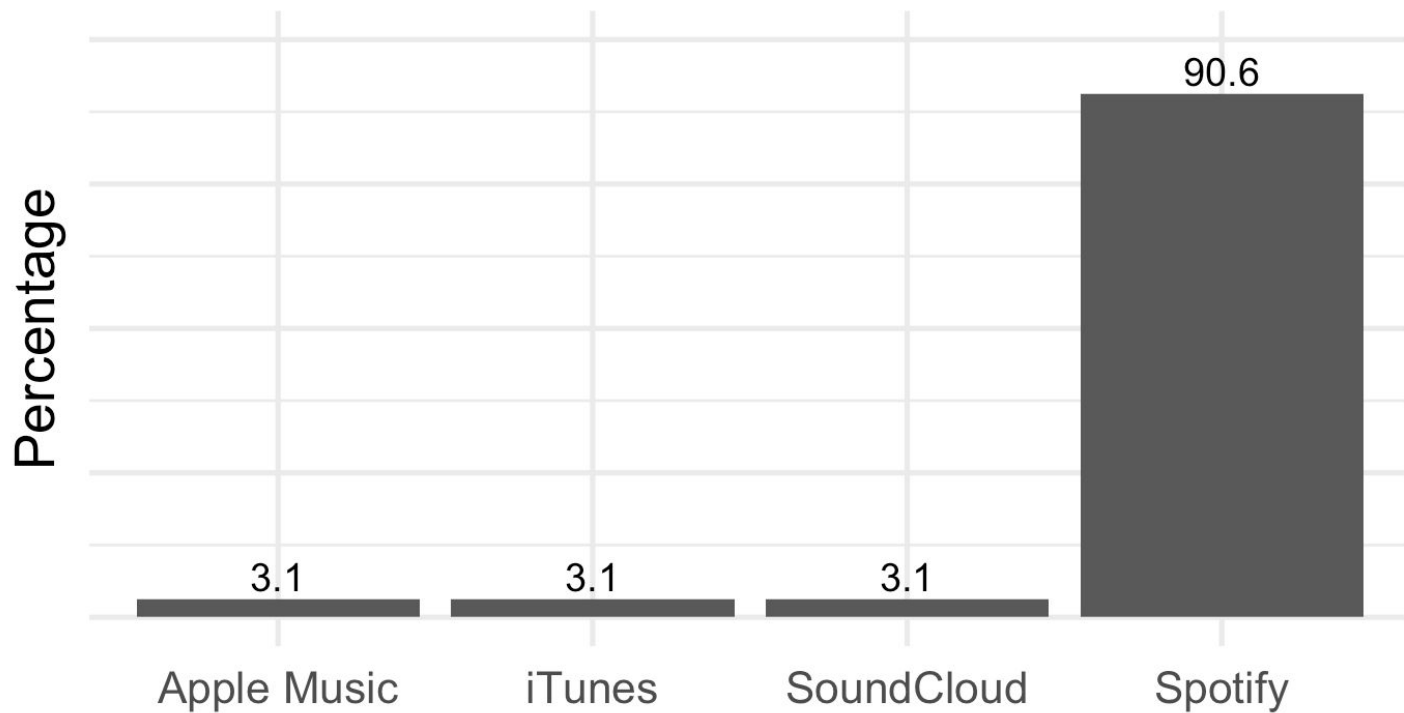**Q2** User's engagement in a CP is related to their sense of ownership

- CP ownership is significantly associated with perceived role of contribution but not with frequency of contributions
  - Adding music is the most significant predictor
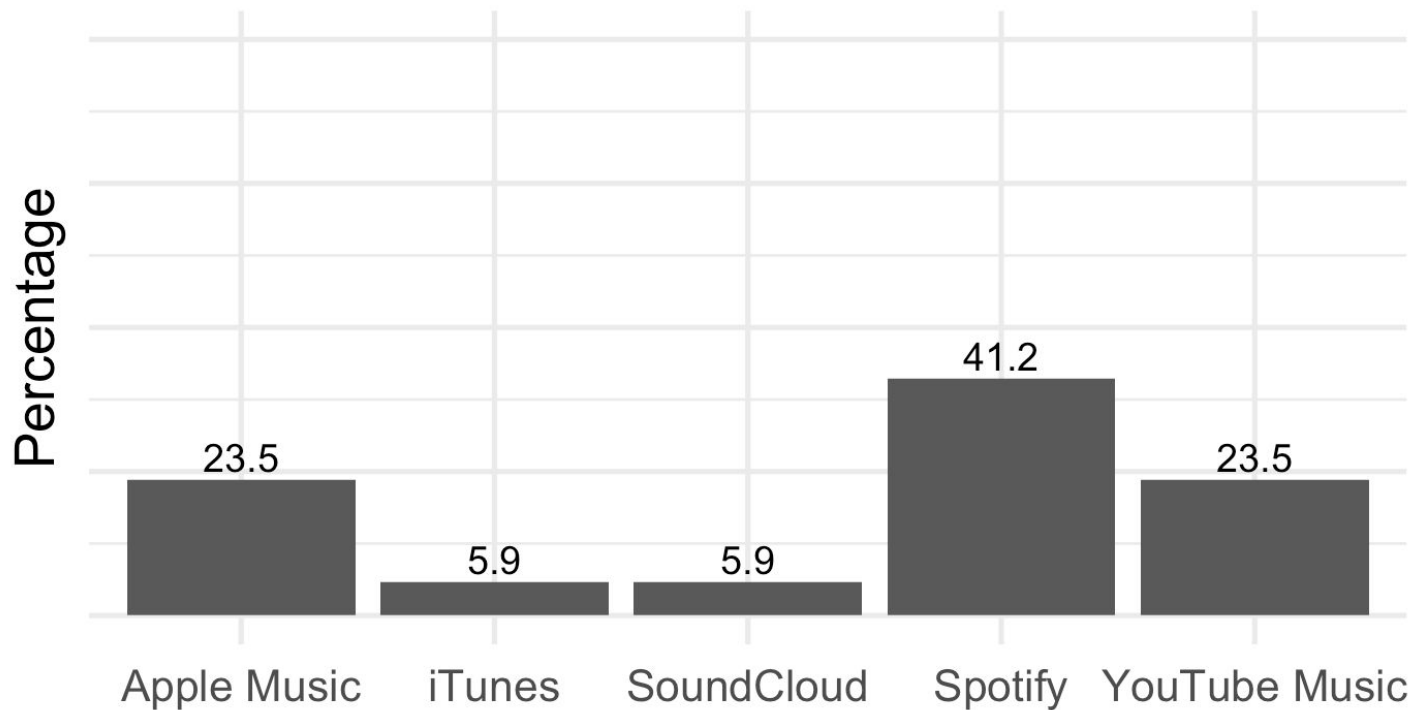
Thank you :)

https://goo.gl/qWXKsT
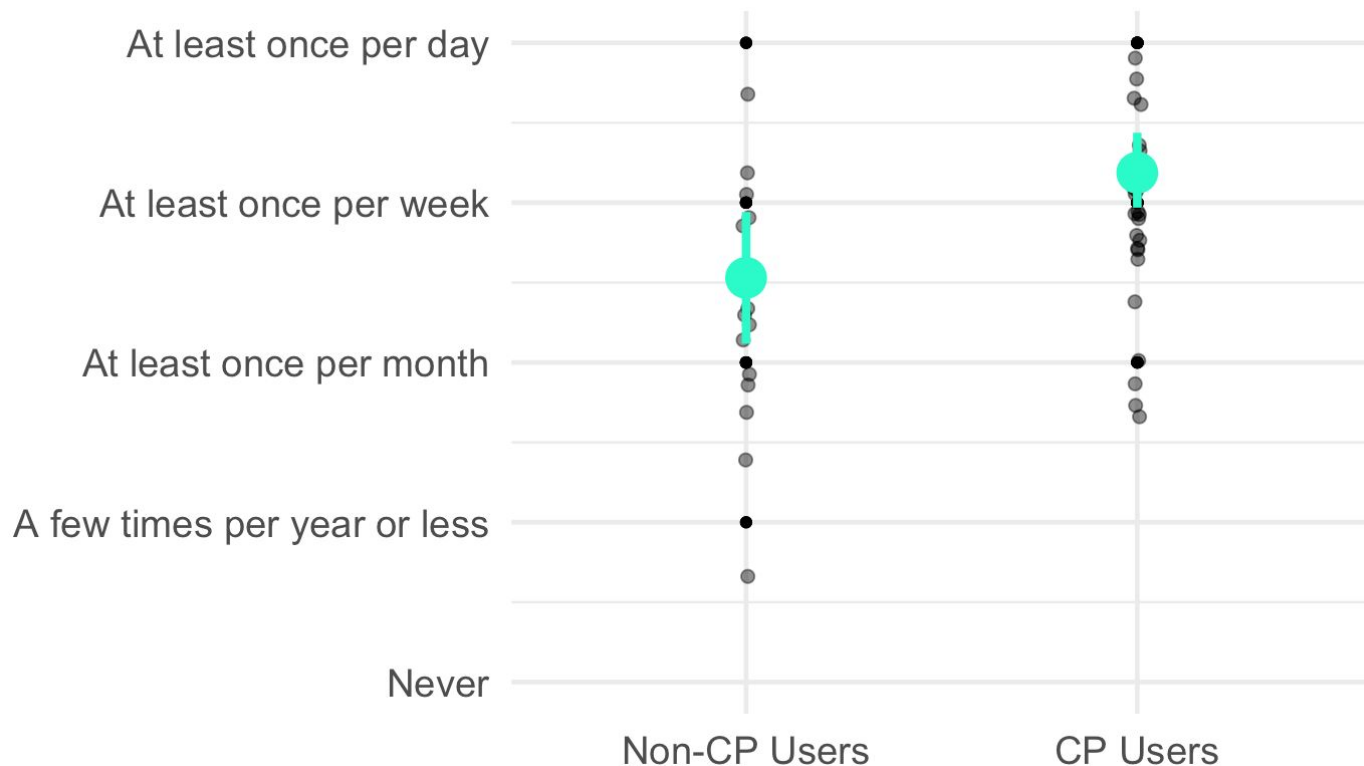
Supplemental Slides

CP Users Mainly Use Spotify

Non-CP Users Have More Diverse Use of Music Platforms

Q1. Frequency of Music Discovery: Plot Data

Q1. Value Sharing Music With Others

How important are these activities to your social relationships?

1) Experiencing musical events with others
2) Performing or creating music with others
3) Listening to recorded music with others
4) **Sharing music with others**
5) Discussing music with others
6) Having non-musical interactions with others

Very unimportant | Somewhat unimportant | Neither | Somewhat Important | Very Important

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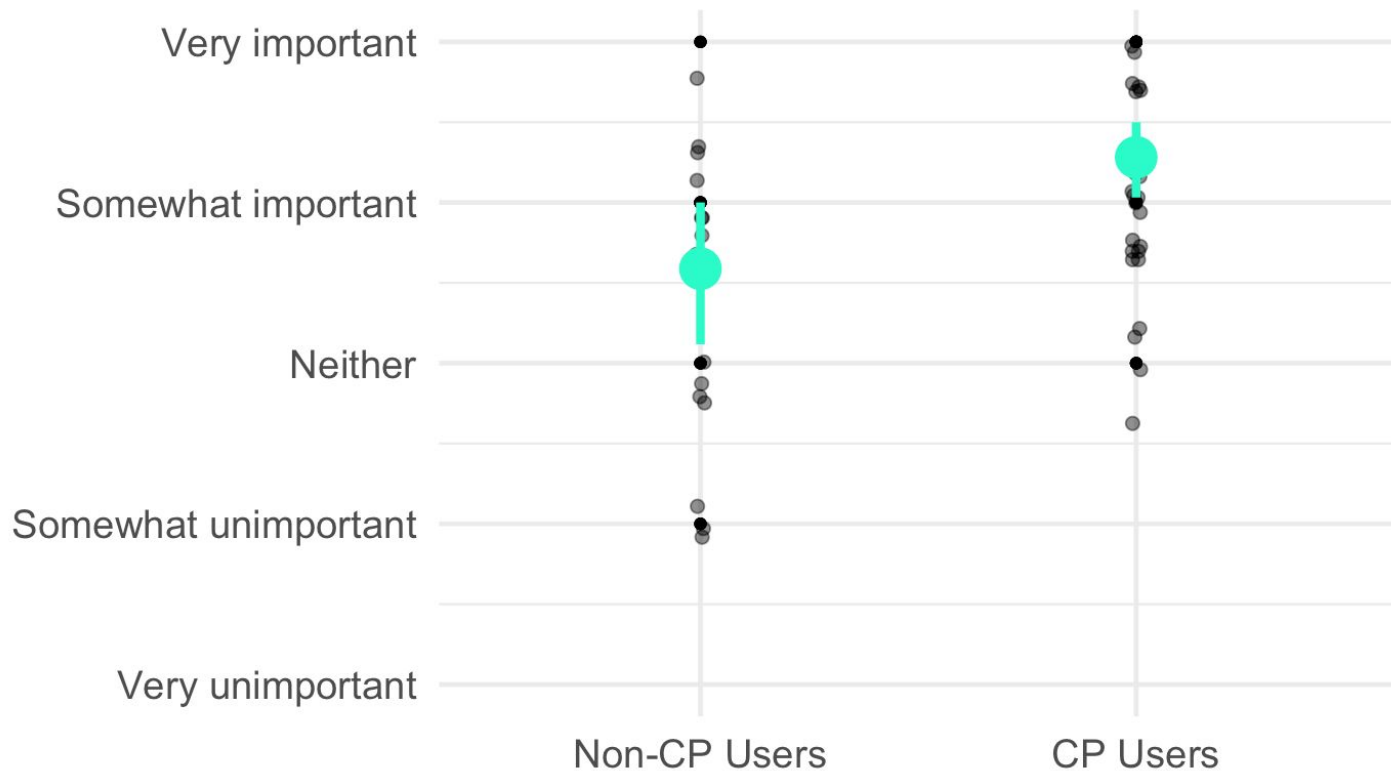
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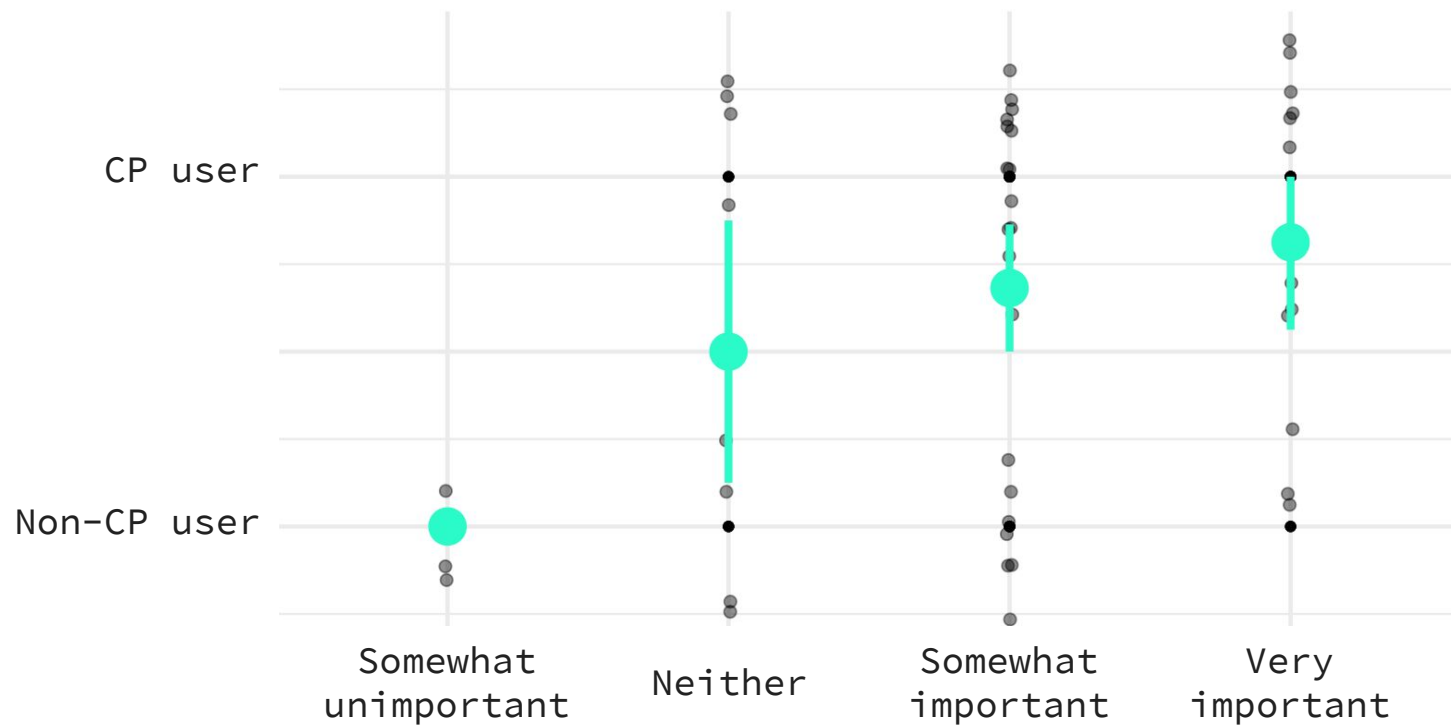
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1) The playlist belongs to **me**
2) The playlist belongs to my collaborator(s)
3) The playlist belongs to **me and my collaborator(s)**

Frequency
- Check CP
- Listen/play CP alone
- Listen/play CP with others
- Contribute to CP
- Share CP with others

Roles
- Adding music
- Deleting music
- Reordering music

Q2. CP ownership: Analysis

Analysis of Variance

Model 1: ownership ~ 1 + check + listen_playAlone + listen_playOthers
                        + contribute + share
Model 2: ownership ~ 1 + check + listen_playAlone + listen_playOthers
                        + contribute + share **+ add + delete + reorder**

```
Res.Df    RSS   Df Sum of Sq    F   Pr(>F)
1      26 6.2149
2      23 4.3460  3    1.8689 3.2969 0.03848 *
```

WORTH IT! CP users' sense of ownership is related to a user's perceived role and frequency of contributions. Including the person's perceived role leads to a 30% reduction in the model error.

Freq of action (5.16)

Ownership (5.20)

Role in playlist (5.17)

Role in music management (5.18)