



# Estimate radio listening via headphones

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# Headphones 1999 vs. 2019

Wired (big) headphones



Wireless headphones & earbuds





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MiniDisc, Discman with AM/FM Tuner, wired control



Wireless headphones & earbuds

Smartphone paired via bluetooth





# Headphones 1999 vs. 2019

Wired (big) headphones

MiniDisc, Discman with AM/FM Tuner, wired control

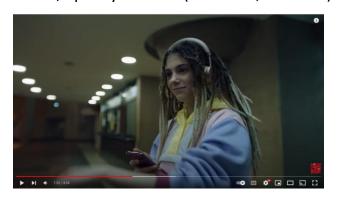
CD & analog radio



Wireless headphones & earbuds

Smartphone paired via bluetooth

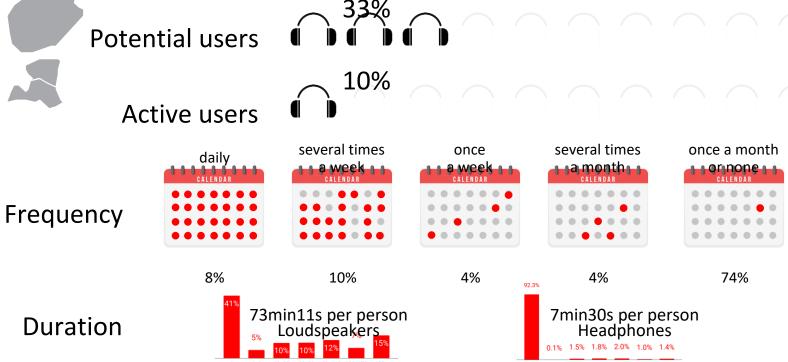
YT, Spotify & radio (also DAB, Internet)





# Radio listening via headphones in Norway







# Estimate radio via headphones is challenging

HP usage can't be directly metered without significant bias



Claimed usage can be collected **but** it needs sensitivity on daily variation





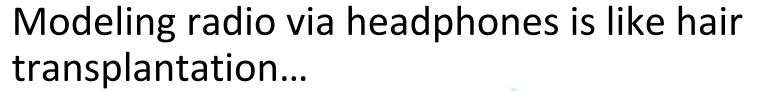


Assumption that the loudspeaker listening statements are good proxy of HP listening statements

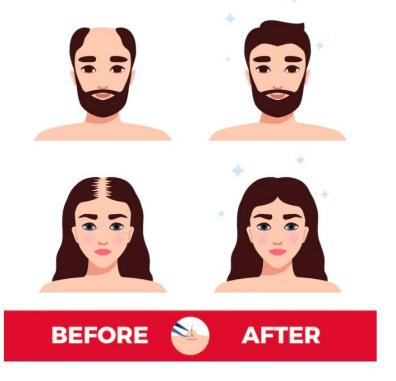






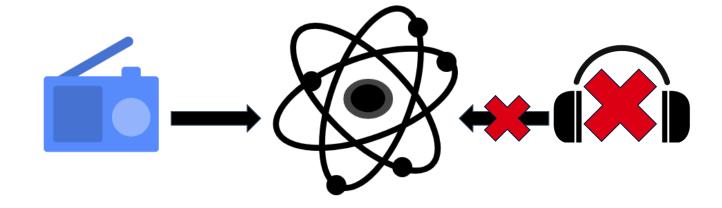






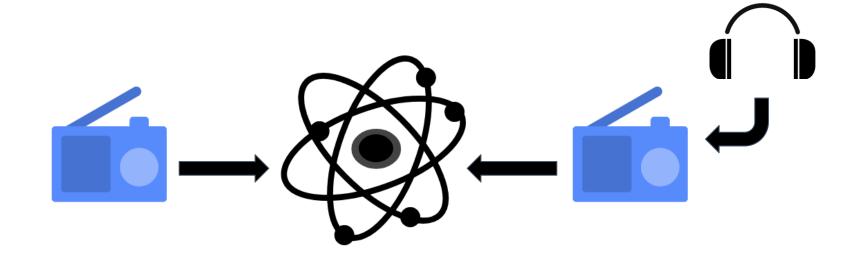


# No HP radio listening in panel to fuse...





#### ... but we can fuse radio panel to itself



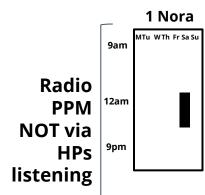
using claimed HP usage to adjust donated listening

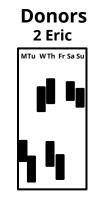
# Example

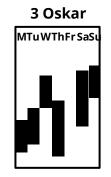


6 Jacob

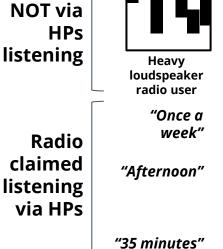
MTu WTh FrSaSu





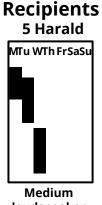




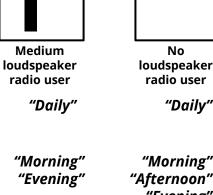


4 Ida

MTu WThFr SaSu



"145 minutes"





"280" minutes

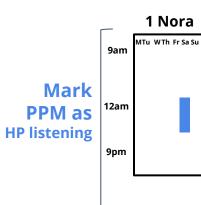
No

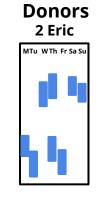
"Daily"

#### Example



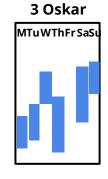
6 Jacob



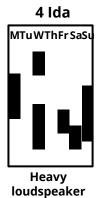


"Morning"

"Evening"



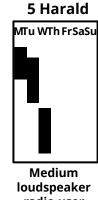
Radio **PPM NOT** via **HPs** listening



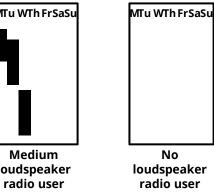
radio user

"Once a

week"



Recipients



**Calculated** listening from PPM

week" "Afternoon"

"Once a

"41 minutes" "126 minutes"

"Several times "Daily" a week"

> "Morning" "Afternoon" "Evening"

**"252"** minutes

Radio claimed listening via HPs

"Afternoon"

"35 minutes"

"Morning" "Evening"

"Daily"

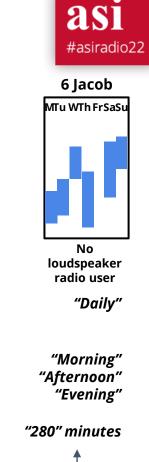
"Morning" "Afternoon"

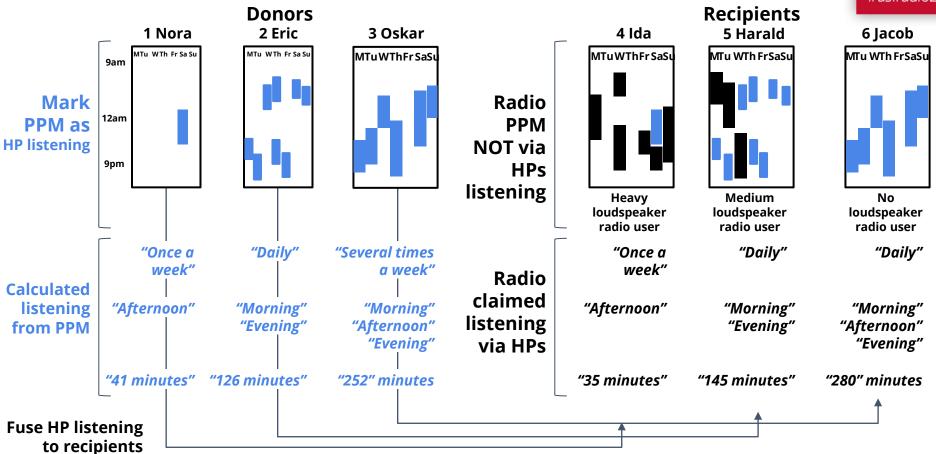
"280" minutes "145 minutes"

"Evening"

"Daily"

#### Example







#### **Implications**



If applied to TV panels



+ Rating and Reach for radio content listened to with HPs

+ Rating and Reach for TV content watched with HPs





While measuring radio audiences, do not turn a deaf ear to headphone listening, it is vital part of how we listen to the radio



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