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# Young people and ICT – materials shaping resource-intensive practices?

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# The outset

- Energy consumption for ICT devices is growing
  - About 20-30% of household electricity consumption
  - Also “indirect” energy and resource consumption related to manufacturing of devices and use of internet
- Young people are “intensive” ICT users  $\Rightarrow$  above-average electricity consumption per person
- Young people are “early adopters” and learning, creating and shaping new practices that will last for many years

# Research question

- Focus on reasons and dynamics behind why it is so difficult to change young people's use of ICT in a less energy-intensive direction
  - Television, smart/mobile phones and laptops in particular
  - Focus in this presentation in particular on role of materiality
- Empirical analysis partly based on EU-funded IEE project *useITsmartly* focusing on young people, ICT and energy
  - Little awareness of the connection between ICT and environment/energy among young people across five countries
  - Difficult and limited motivation to change own practices in order to save energy

# Methods

- Focus groups in Denmark and the Netherlands
  - 8 focus groups (54 participants; 26 females & 28 males)
  - Educational track: University students in Netherlands and mixed in Denmark (general secondary + vocational + continuation school + “production school”)
- Individual time use diaries and qualitative interviews in the Netherlands
  - 17 participants (master student Sigrid Aarts)

# Theoretical approach

- Crossover between practice theories and ANT
- Practice theories
  - Energy consumption outcome of performing practices
  - Downplay the role of individual agency – focus on collective “doings and sayings”
  - Practices as constituted by interdependent elements – including materials
- ANT
  - Sensitivity in analysing the role of materials and the interplay of materials/non-materials (hybrids)
  - Scripts (Akrich) – physical designs and social-technical encoding

# Empirical analysis: common practices across focus groups

- Communication (on scale from more to less formal)
  - Social-institutional embeddedness: institutional requirements, social institutions and peer groups
- Entertainment (on scale from more to less reflexive/targeted entertainment)
  - From targeted entertainment (games, streaming and browsing) and “FoMo” to “back cloth”, “filling in dead time” or procrastinating towards embodied “non-reflexive” embodied routines

# Communication practices

*Catherine: Even if you don't react for a bit then you'll be asked if there's something wrong, even my mom does that.*

*Karin: Everybody is so used to being connected all the time. If you don't react shortly then that is just weird. You'll get all these questions like "Why don't you answer me, normally you always respond".*

*Ingrid: You can also see when someone was online for the last time.*

*Karin: Exactly. If you don't respond the other one soon thinks you are ignoring someone.*

# Entertainment practices

- From targeted entertainment, FoMo (Fear of Missing out) / “always on” and “backcloth”/multitasking usage...

*Marlou: during lunch break you can not talk with everybody at the same time. That is a good moment to check, right? If people are talking with each other, they don't pay attention to me and so I can quickly check if I don't miss anything*

# Entertainment practices

- ... to “filling in dead time” and procrastinating/distraction

*Safiye: Well, sometimes I'm bored, then you just check, what's happening on Facebook or just*

*Michael: Twitter, Instagram*

*Amira: Yes (...)*

*Michael: Often, then I'm bored, then I check Facebook, Instagram, Twitter – or something. Then I end up checking the soccer match programme, [and] turn on the TV and watch a match...”*

# Entertainment practices

- ... to embodied routines

*Lisa: then I check if there is anything funny. If you think about it, it is just nonsense, but it is a habit. That is the thing with habits, you just do it. You can also not explain why you do it, it just becomes a practice*

*Anders: Sometimes I just visit [a website or social media] – and it is not even certain that I'm reading it – I'm just scrolling down [the page]. (...). I don't know what I'm doing – I'm just scrolling down.*

*Several: Laughs*

*Anders: And then sometimes – 'Hey, there's something' – [and] then I just go [follow a link] – and then I go back – and then I'm scrolling further.*

# Conclusions

- Why so difficult to reduce use?
  - Young people are embedded in social-institutional networks, asking one person to change is like “dieting”
  - Scripts of ICT, the material design of hardware and software facilitate, support and encourage frequent, ubiquitous and intensive use of ICTs for “entertainment”  
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# Scripts reinforce intensive usage

- Generic devices facilitating seamless and frequent shifting between activities (and devices)
- Convenience of anytime and anywhere (e.g. video streaming), always at hand (small and portable)
- Dynamic content, e.g. hyperlinks and embedded movies
- Attracts attention – becomes ubiquitous when used
- Co-creating culture of always onlineness, reinforcing social-institutional embeddedness, supported by materiality (e.g. attracts attention through audio/visual notifications)