

Smart Home Ambient Intelligence: a new limit for our freedom?

ethical concerns about voice assistants

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Presentation Outline

Smart Home Ambient Intelligence: a new limit for our freedom?
ethical concerns about voice assistants

Introduction

Technological Mediation
Definitions

Case Study: Google Home - Google Assistant Actions

Technological mediations further limiting our freedom
Ethical concerns arising from loss of freedom

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Introduction

Technological Mediation

*While fulfilling their function, technologies do much more: they **give shape to what we do** and how we experience the world. And in doing so they **contribute actively** to the ways we live our lives (Verbeek 2011)*

- ▶ Technologies are not **neutral intermediaries**
- ▶ Technologies play an **actively mediating role**
- ▶ Artifacts are **bearers of morality** (Latour 1992)
- ▶ Morality is a matter of **human-technology associations**
- ▶ Two perspectives of mediation:
 - ▶ Perception
 - ▶ **Action**: I will focus on **human freedom**

Definitions I

Ambient Intelligence

***Ambient Intelligence** is an approach that combines two major technologies: Ubiquitous Computing and Intelligent User Interfaces (Brey 2005)*

Voice Assistant

*A **voice assistant** is a digital assistant that uses voice recognition, natural language processing and speech synthesis to provide aid to users through phones and voice recognition applications (whatis.techtarget.com 2017)*

Definitions II

Freedom

***Ambient Intelligence** is an approach that combines two major technologies: Ubiquitous Computing and Intelligent User Interfaces.*

Case Study: Google Home - Google Assistant Actions



Google Assistant Actions

Script

Invitation/Inhibition structure

Behaviour Steering

Moral laziness

Technocracy

Technological mediation?

Moral responsibility of designers

Possible Remedies

Possible Remedies

Conclusions

Conclusions

Bibliography I



Brey, Philip (2005). "Freedom and privacy in ambient intelligence". In: *Ethics and Information Technology* 7.3, pp. 157–166.



Brey, Philip (2006). "Ethical aspects of behavior-steering technology". In: *User Behavior and Technology Development*, pp. 357–364.



google.com (2017). *Actions On Google Developers Documentation*. URL: <https://developers.google.com/actions/>.



Latour, B. (1992). "Where Are the Missing Masses? The Sociology of a Few Mundane Artifacts". In: *Shaping Technology-Building Society: Studies in Sociotechnical Change*. Ed. by Wiebe Bijker and John Law, pp. 225–258.



recode.net (2017). *Google Assistant e-commerce revenue*. URL: <https://www.recode.net/2017/5/23/15681596/google-assistant-ecommerce-revenue>.



Verbeek, Peter-Paul (2011). *Moralizing technology: Understanding and designing the morality of things*. University of Chicago Press.



whatis.techtarget.com (2017). *WhatIs? Definition: voice assistant*. URL: <http://whatis.techtarget.com/definition/voice-assistant>.