INF5020
Philosophy of Information:

Information, Communication and Language

History:

- We first talked about computation, complexity and information.
- We then looked at several definitions of information.
- Later, we also tried to understand information within the context of data and knowledge.

Goal:

- We want to go on discussing what information is, this time within the context of communication and language
- We want to be able to understand what is designable or creatable and what is not, so as to channel our (research, design, engineering) efforts correctly

A CHOICE – *Assuming the nature of information*

- We had to choose whether information is internal or external to the mind.

- We choose:

> INFORMATION IS **EXTERNAL** TO THE MIND.

- NOTE THAT THIS IS (YET) <u>ONLY</u> AN ASSUMPTION THAT WE NEED FOR BEING ABLE TO GO ON.
- It (the assumption) will be validated or rejected depending upon its "health" as wee use it and see what the consequences of using it are.

IMPLICATIONS OF THE CHOICE – *Designable, creatable "in-formation"*

- **The consequences of the assumption:**
  By assuming this, we are allowing information to be designable, engineerable, modelable, computable, creatable etc.

- This is supported by most (but not all) definitions of information.
- It is implied in the etymology of the word (i.e., in-formation), which indicates its original intention.

- Besides, we can still satisfy the community that wants to emphasize the role of the individual and the society in "in-forming".
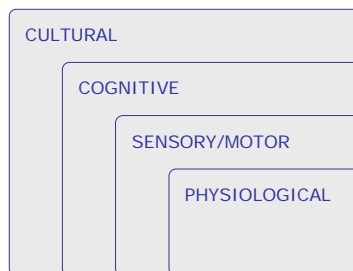
IN-FORMATION DESIGN – *User characteristics*

- **From some design-centric fields like HCI (CHI, UI, GUI) design, information design, interaction design, ad design, signage design etc.:**

  What contributes to characterizing a human is explicitly stated.

  WHY?

INFLUENCES USER CHARACTERISTICS MOST

USER CHARACTERIZATION

CULTURAL

COGNITIVE
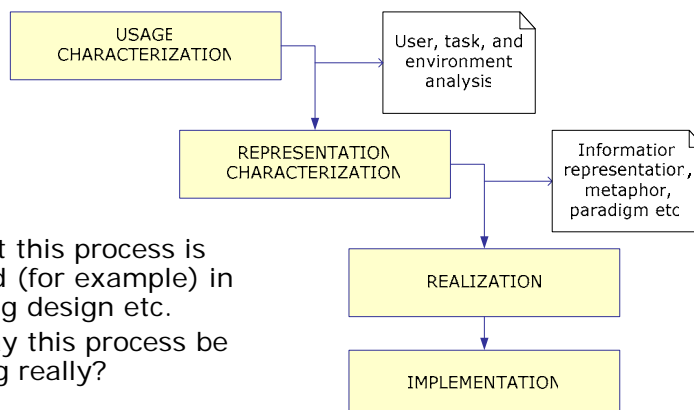
SENSORY/MOTOR

PHYSIOLOGICAL

INFLUENCES USER CHARACTERISTICS LEAST

FROM: Akkøk, M.N., Towards the Principles of Designing Diagrammatic Modeling Languages: Some Visual, Cognitive and Foundational Aspects, in Institute of Informatics, Mathematics and Natural Sciences Faculty. 2004, University of Oslo, Dr.Scient. (PhD) Thesis, ISSN 1501-7710.

IN-FORMATION DESIGN – *The process*

USAGE CHARACTERIZATION → User, task, and environment analysis

REPRESENTATION CHARACTERIZATION → Information representation, metaphor, paradigm etc

REALIZATION

IMPLEMENTATION

- Note that this process is also used (for example) in marketing design etc.
- What may this process be designing really?

FROM: Akkøk, M.N., Towards the Principles of Designing Diagrammatic Modeling Languages: Some Visual, Cognitive and Foundational Aspects, in Institute of Informatics, Mathematics and Natural Sciences Faculty. 2004, University of Oslo, Dr.Scient. (PhD) Thesis, ISSN 1501-7710.

- What the process may be used for is obvious also through the fields/areas it is used in like marketing or advertisement design:
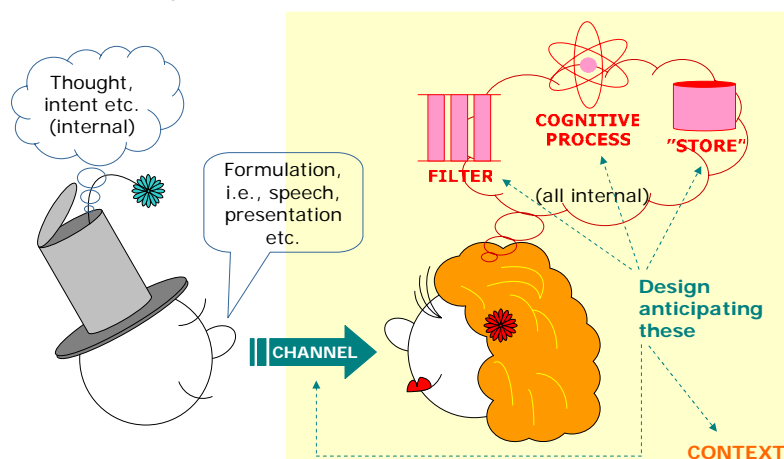
  The in-formation design process is often referred to as <u>communication design</u> as well,

  i.e.: designing WHAT you communicate, WHY you communicate it and HOW you communicate it…

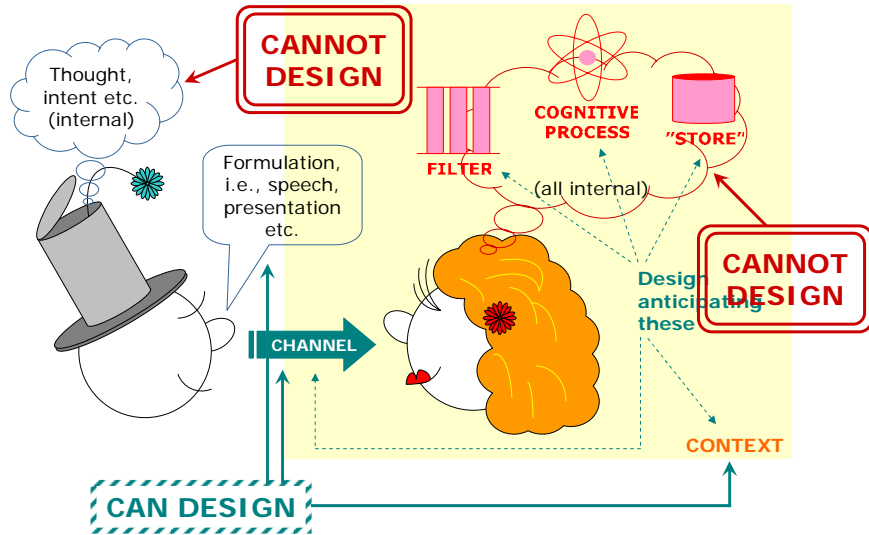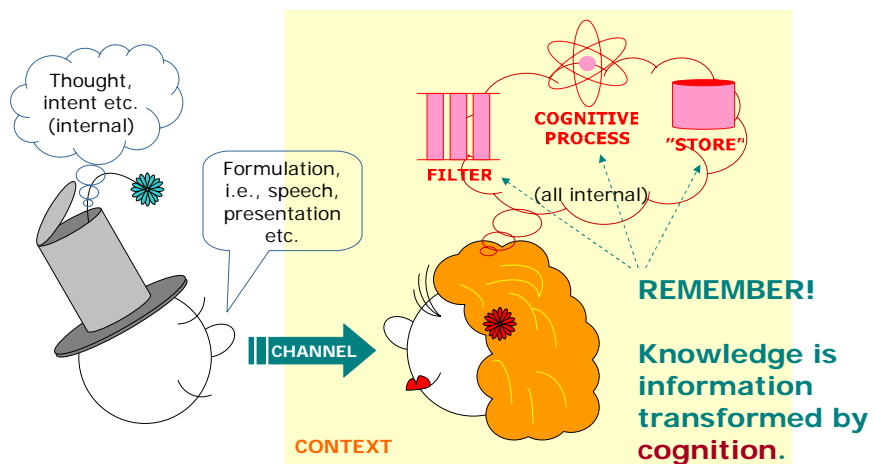
COMMUNICATION DESIGN – *A scenario*

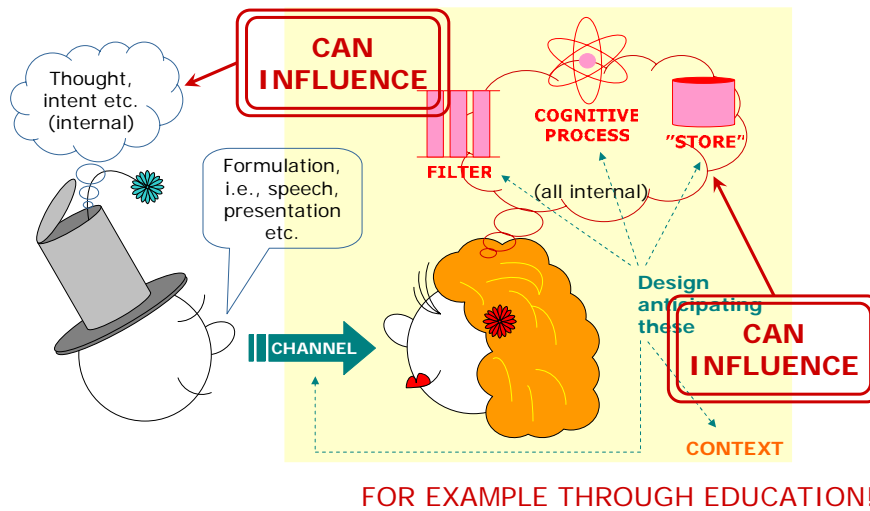- Designing WHAT you communicate, WHY you communicate it and HOW you communicate it…

4

INFORMATION/COMMUNICATION DESIGN – *What you can and cannot design*

CANNOT DESIGN

Thought, intent etc. (internal)

Formulation, i.e., speech, presentation etc.

COGNITIVE PROCESS

"STORE"

FILTER

(all internal)

CANNOT DESIGN

Design anticipating these

CHANNEL

CONTEXT

CAN DESIGN

M. Naci Akkøk, Fall 2004

Department of Informatics, University of Oslo, Norway
INF5020 – Philosophy of Information

Page 9

KNOWLEDGE – *In the context of information/communication*

Thought, intent etc. (internal)

Formulation, i.e., speech, presentation etc.

COGNITIVE PROCESS

"STORE"

FILTER

(all internal)

CHANNEL

CONTEXT

REMEMBER!

Knowledge is information transformed by cognition.

M. Naci Akkøk, Fall 2004

Department of Informatics, University of Oslo, Norway
INF5020 – Philosophy of Information

Page 10

5

INFORMATION/COMMUNICATION DESIGN – *What you can influence*

FOR EXAMPLE THROUGH EDUCATION!

INFLUENCING, TEACHING, LEARNING – *The domain of knowledge*

- Influencing through education is like teaching.
- It is like enabling the formation of knowledge.

- This is actually one major aim of in-forming (or communication)!
- This is why we "design" for effective communication.

- We may actually use the term "knowledge enabler" as yet another definition of information.

6

- So far the statement that "information is external to the mind" seems to hold, at least by looking at the health of its consequences:
- Designing information/communication seems to be plausible (and maybe even necessary).

- This is a choice:
  - If information is "social" than how is it different from (say) culture?
  - If information is individual (inherent to the mind), than how is it different from cognition, memory and (ultimately) knowledge?

- We do not want to use the same name for different concepts just because we react at heavily reductionist approaches!

- Language is a medium (channel) of communication.
- It is designable itself (like any channel).
- It can be used to design presentations (i.e. as part of designing information/communication.

CHANNEL
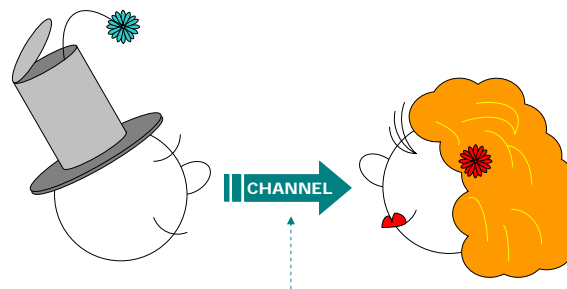
**LANGUAGE
is one possible medium of communication**

7

DANGER! WARNING!
WATCH OUT FOR LOOPHOLES IN THE CHARACTERIZATION
OF LANGUAGE!
THERE WILL BE MORE ABOUT LANGUAGE (SOON)

ANY QUESTIONS SO FAR?

8