

# Media and the Changing Picture of Human Intelligence

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- 1. Education and mediation
  - The triumph of the literate mind
- 2. Experiences of the past
- 3. Reframing the mindset
- 4. Being embedded
- 5. Conclusion

# 1/ Mediation, remediation

- *Mediation* (*medius* “being in the middle”): a kind of transmission, conveying and relaying between two things or parties. In a strict sense, there is no communication without mediation.
- “[W]e call the representation of one medium in another *remediation*.” (Bolter, Grusin 2000:45)
- “[T]here is nothing prior to the act of mediation, there is also a sense in which all mediation remediates the real” (Bolter, Grusin 2000:59)

# 1/ Childhood, privacy, education

- “The first concept of childhood – characterised by ‘coddling’ – had made its appearance in the family circle, in the company of little children. The second, on the contrary, sprang from a source outside the family: churchmen or gentlemen of the robe, few in number before the sixteenth century, and a far greater number of moralists in the seventeenth century, eager to ensure disciplined, rational manner.” (Ariès 1962:132)
- “[E]ssential difference between medieval school and the modern college lies in the introduction of discipline.” (Ariès 1962:333) Discipline means better supervision inside the school and at the same time the expectation that the boundaries of the school period will be respected.

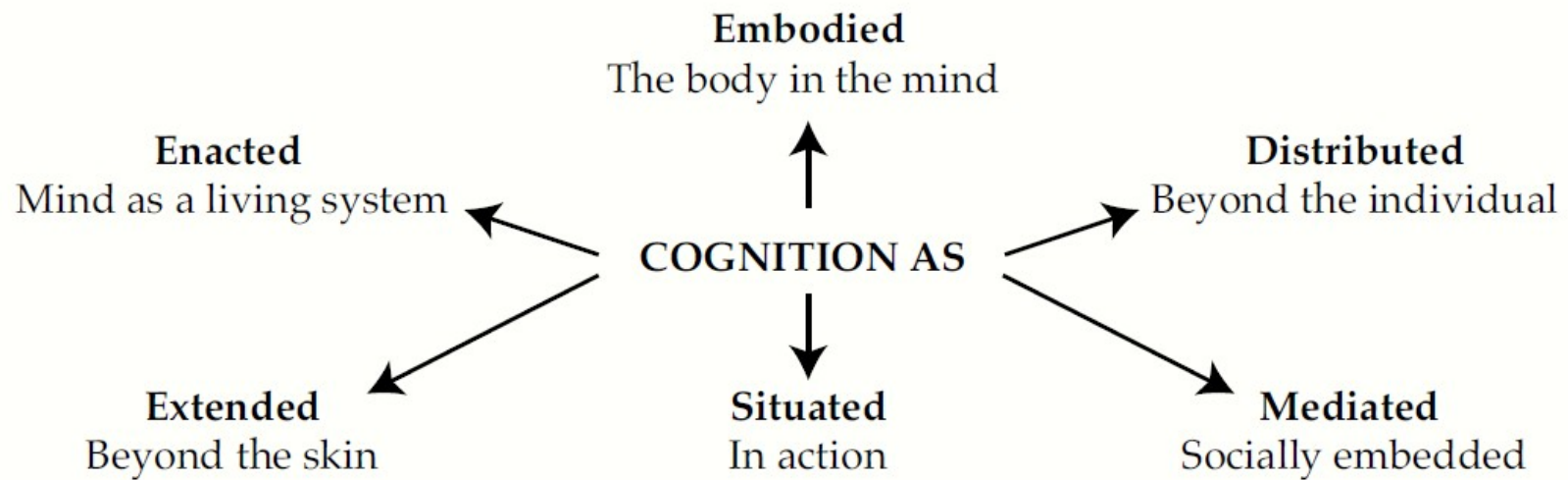
## 2/ Duties entailed by the traditional setup

- Updating curriculum
- Sustaining discipline
- Integrating neurodiversity
  - Attention deficit, hyperactivity,
  - Autism Spectrum Disorder
  - Dyslexia, dyscalculia

## 2/ The background of the traditional setup

- The literate mind
  - Individual
  - Intellectualized
  - Disembodied
  - Rational
  - Contemplating, passive
- Separation between matter vs. method, intellect vs. emotion, activity vs. passivity, empirical vs. theoretical knowledge
- “All of these separations culminate in one between knowing and doing, theory and practice, between mind as the end and spirit of action and the body as its organ and means.” (Dewey, *Democracy and Education*, p. 346)

# 3. Reframing the mind-set



# 3. Reframing the mind-set

- [I]f the words ‘enclose’ and ‘between’ have a meaning for us, it is because they derive it from our experience as embodied subjects. (Merleau-Ponty 2005: 182)
- [Embodiment] highlights two points: first, that cognition depends upon the kinds of experience that come from having a body with sensorimotor capacities, and second, that these individual sensorimotor capacities are themselves embedded in a more encompassing biological, psychological, and cultural context. (Valera *et al.* 1991:172f.)
- We propose as a name the term *enactive* to emphasize the growing conviction that cognition is not the representation of a pregiven world by a pregiven mind but is rather the enactment of a world and a mind on the basis of a history of a variety of actions that a being in the world performs. (Valera *et al.* 1991: 9)



[T]he image offers a new mode of epistemic access to the world of visual experience. (Malafouris 2007: 299)



[T]he cognitive map of knowledge and memory may well be extended and distributed in the neurons of the potter's brain, the muscles of the potter's body, the 'affordances'... of the potter's wheel, the material properties of the clay, the morphological and typological prototypes of existing vessels as well as the general social context in which the activity occurs. The above components can be broken down further, but none of them can be argued as determining the contours of activity in isolation. (Malafouris 2004:59)

## 4. Sociability

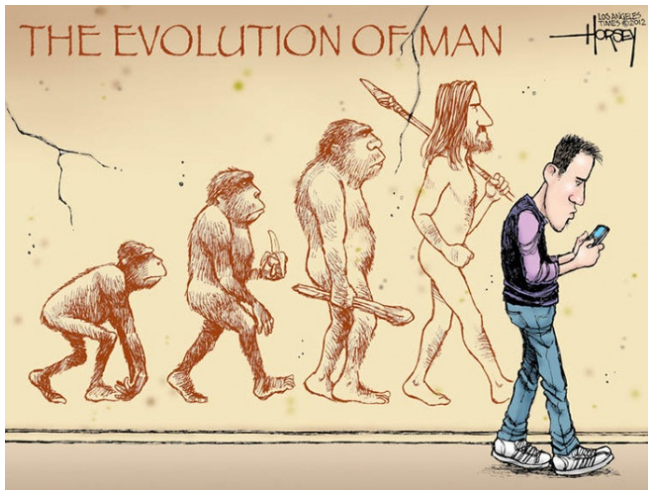
- R. Dunbar: The ever changing social relations entail an increasing computational burden proportional to the group size
- M. Donald: “Cultures restructure the mind, not only in terms of its specific contents, which are obviously culture-bound, but also in terms of its fundamental neurological organization”. (Donald 1993: 14)

**Episodic –  
episodic memory**

**Mythic –  
language, cave  
paintings**

**Mimetic – self-  
representational  
skills**

**Theoretic -  
External symbolic  
storing system**

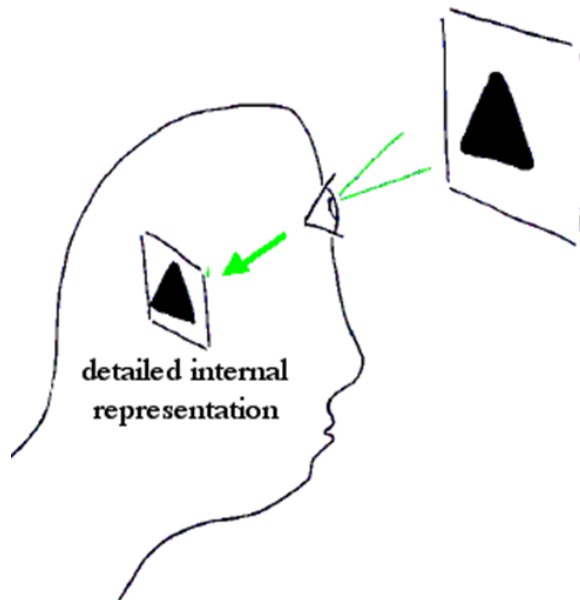


# Traditional – alternative

- representation

**standard view**

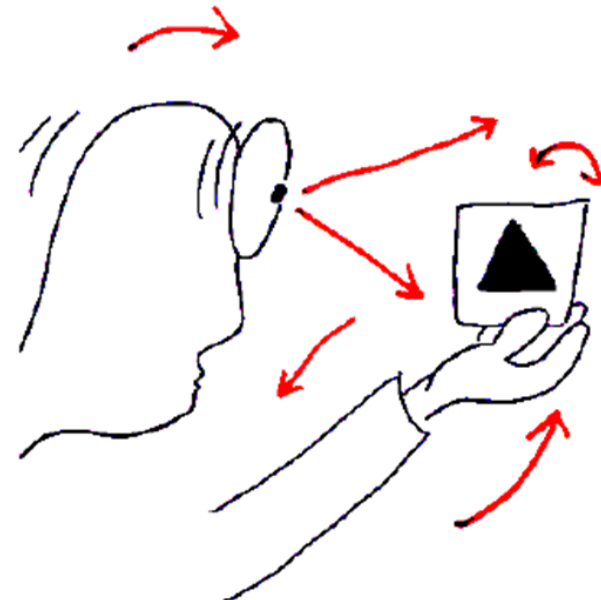
**Seeing is making an  
internal  
representation**



- apprenticeship

**new view**

**Seeing is knowing  
about things to do**



# 4/ Expectations old and new?

- Be exciting – to hinder distraction
- Be effective
- Help experimentation
- and explanation
- Give space to trial and error
- Provide appropriate feedback
- Reward?



## 4. VR and AR

- Accuracy
- Context
- Details
- Entertaining
- Immersive
- Interactive
- Almost multimodal, multi-sensory



# AR as effective supplement of the traditional curriculum





# VR by now

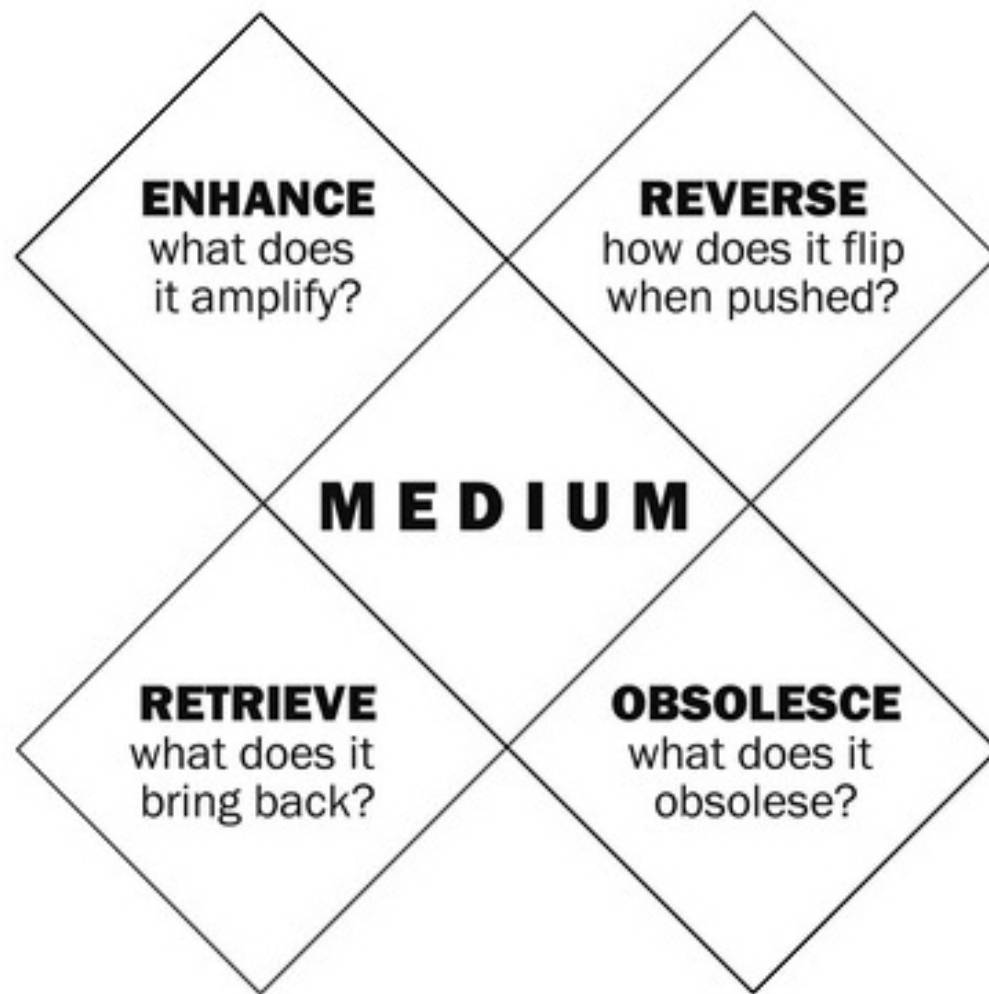
- Social interactions? Shareable experiences?
- Traits of material engagement? Reminding actions? Memorable episodes?



## 5. Stubborn anxieties?

Triumph of *hyper* mind over the rational

- unavoidable cognitive overload,
- distraction,
- retribalization,
- futile clicking instead of intense cognitive work, and
- basic skills fade away
- ...



## Tetrad of Media Effects

McLuhan (1988)

# Mind the change

- What needs emerged as the consequence of communications technology?
  - Lifeworld has radically changed
  - The accessibility and amount of knowledge has radically changed
  - Social setting has radically changed
  - ...
- To what extent our neurological organisation modified?
- What skills are needed?
- What expectations and ideals are outdated?
- What about the classroom?

Thanks for your attention.

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