AFFORDANCES OF THE MEDIA

CREATING AN UNIQUE AUDIOVISUAL (VIDEO) EDUCATIONAL EXPERIENCE

OEB Shaping the future of education
Berlin, 30.11./1.12. 2016
Jeanine Reutemann

Outline:

- Polymers of amino acids
- Order specified by bases in mRNA
- Fold spontaneously into catalytic structures, driven by hydrophobic effects and hydrogen bonds

earning Objectives:

- Describe protein 1° and 2° structure
- Relate to gene structure

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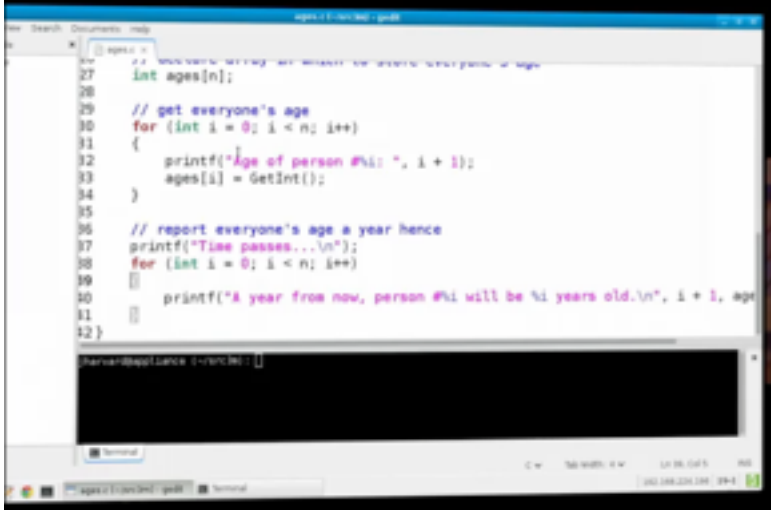
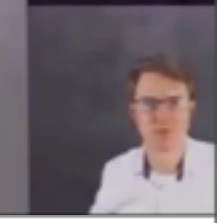


UNIVERSITY of WASHINGTON

What Does Scalable Mean?

- Operationally:
  - In the past: "Works even if data doesn't fit in main memory"
  - Now: "Can make use of 1000s of cheap computers"
- Algorithmically:
  - In the past: If you have N data items, you must do no more than N^k operations -- "polynomial time algorithms"
  - Now: If you have N data items, you must do no more than N^k operations, for some large k
    - Polynomial-time algorithms must be parallelized
  - Soon: If you have N data items, you should do no more than $N * log(N)$ operations
    - As data sizes go up, you may only get one pass at the data
    - The data is streaming -- you better make that one pass count
    - Ex: Large Synoptic Survey Telescope (30TB / night)



DATA

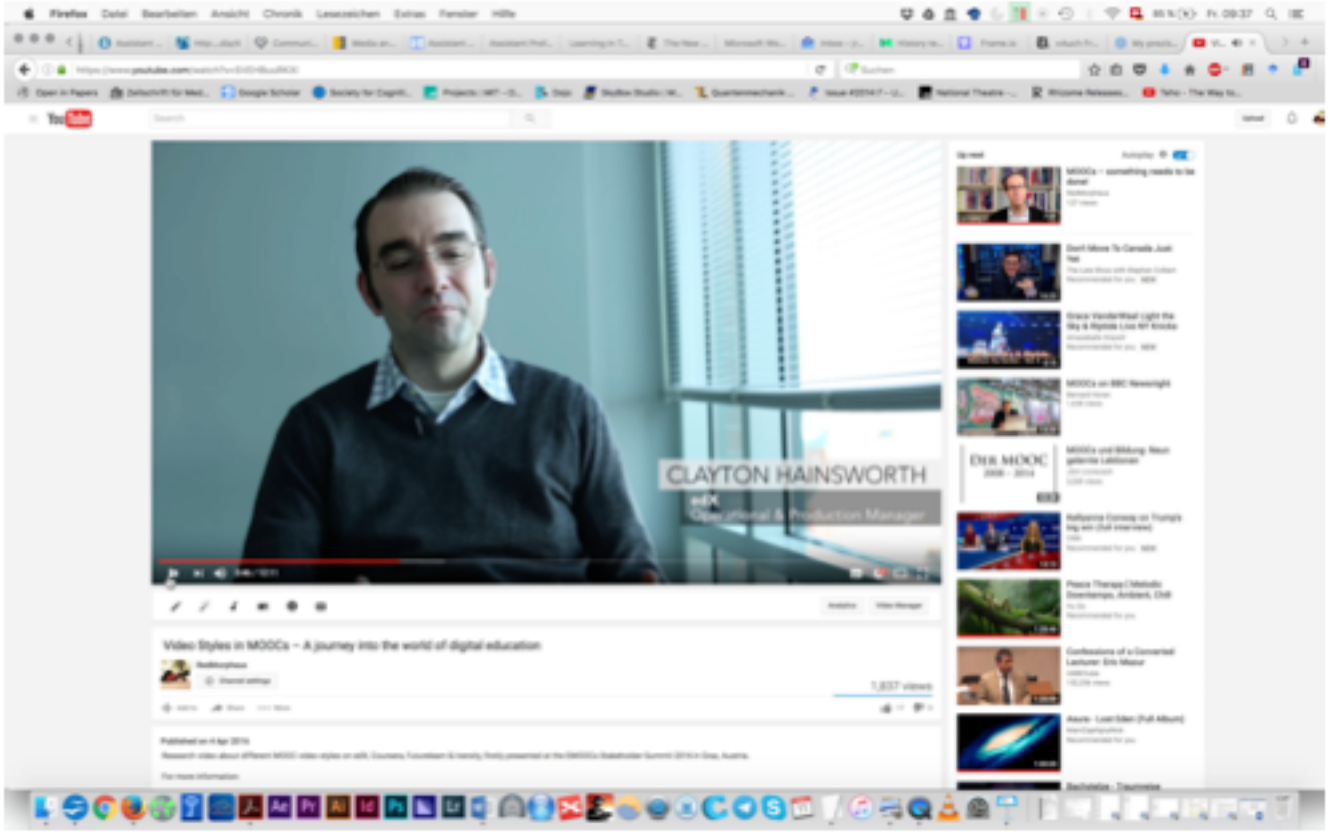
RESULTS

WEEK 3 – LECTURE VIDEO	448 VIDEOS
Talking Head (summary)	74%
Classroom with students	7%
Classroom without students	6%
Presentation slides with speaker	33%
Presentation slides without speaker	38%
Computer screen, high-lightening	29%
Green-screen	26%
Monochrome	27%
Book Shelf	10%
Animation	20%
Split-screen	10%
Outdoor	10%
Webcam Capture	8%
Several speakers	15%
Off-voice speaker	16%

RESEARCH VIDEO

VIDEO STYLES IN MOOCS. A JOURNEY

INTO THE WORLD OF DIGITAL EDUCATION



AFFORDANCES

OF THE MEDIA

(1) create a «learning experience» rather than
«teaching» ~~(1x1 Adaptation)~~ > market spoilage
(2) audiovisual didactical narratives
(3) sociocultural: recognising media quality
(4) design the video regarding the media characteristic
(5) e-components / non-e-components
(6) investment (time, resource, money): should depend on stability
of content, static or dynamic topics
(7) there is no 'one-style-fits-all' approach to video design
(8) talking head: it's all about the performance!
> but media design can help

AFFORDANCES
OF NEW MEDIA

CO-DESIGN
HISTORY & FUTURE

HISTORIC USE OF FILM FOR SCIENCE

- **document research**
- **visualise phenomena invisible to the eye**

- an instrument of research
- long relationship in co-design of content between scientist & filmmaker

TODAY

- rapid increase
- e-learning
- mostly «home cooked» low-budget by researchers / IT departments students
- wide variation in quality
- missing important media-specific characteristics

«The development of audio-visual techniques in all fields, the need to promote interdisciplinary co-operation demand the creation of a specialized training so as to permit close collaboration between scientists and audiovisual technologists in the field of scientific research.»

Virgilio Tosi/International Scientific Film Association: Cinematography and Scientific Research, UNESCO, 1977, p. 39.

NOT ONLY TALK ABOUT

NOT ONLY TALK ABOUT
DESIGN THINKING AND
INTERDISCIPLINARY
COLLABORATION BUT

DO-IT

n|w University of Applied Sciences and Arts Northwestern Switzerland

– **Publication about 360°Videos, aesthetics, narration and proxemics: Reutemann, J.: »Too close to be true. VR images bring the visible speaker into your face (literally)« in: Image Embodiment. New Perspectives of the Sensory Turn, 2016.**

– Publication about MOOC videos: »Differences and commonalities – a comparative report of video styles and course descriptions on edX, Coursera, Futurelearn and Iversity«, in: European Stakeholders Summit.

– Research Video: Video Styles in MOOCs - A journey
into the world of digital education (on youtube)

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