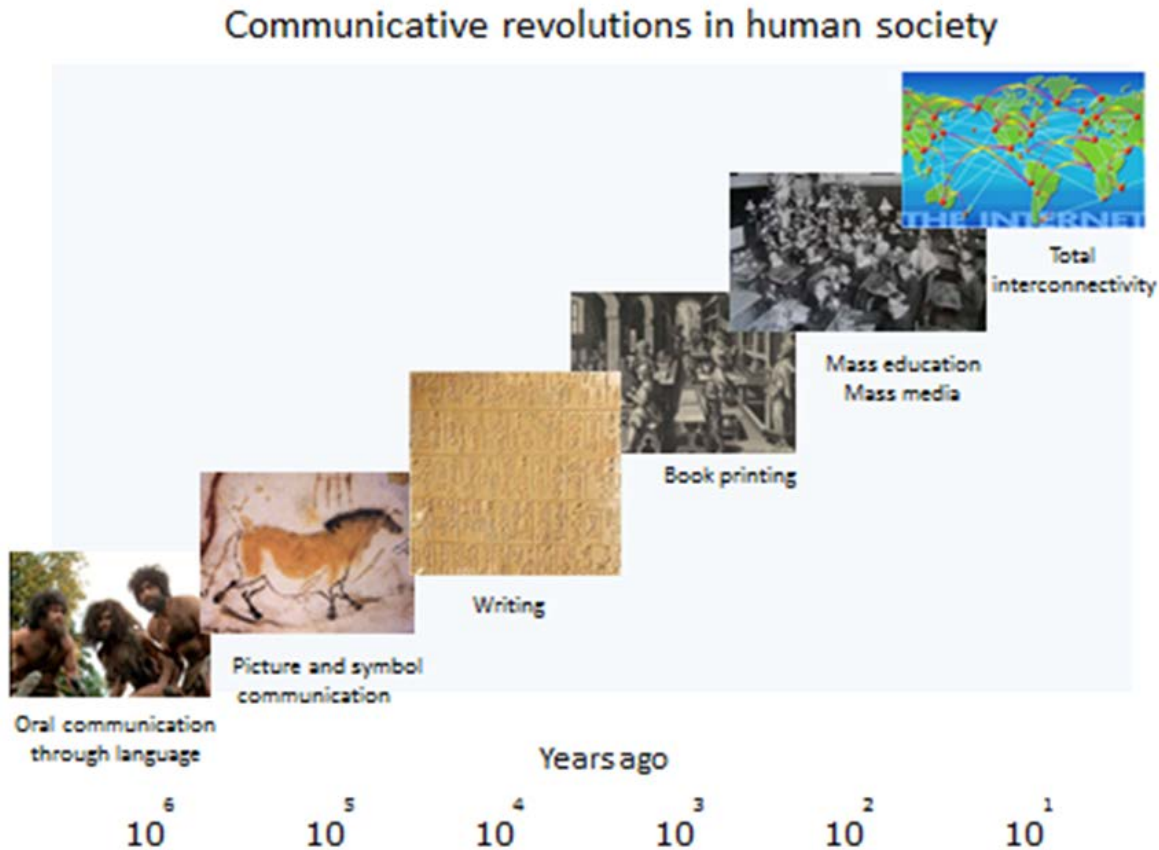# Who needs teachers in the 21st Century?

Are MOOCs taking over the institutional towers?

Victor van Rij

Conference New Challenges for Pedagogy and Quality Education:
MOOCs, Clouds and Mobiles
UNESCO, IITE 2014 , conference, Moscow 14-15 October 2014

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ICT revolutionizes our Communication

Communicative revolutions in human society

The characteristics of the ICT revolution

- Speed and range of communication
- Global immediate communication and data transfer from many people to many people, Giga bytes per second

- Multimedia
- Written information but also symbolic, audio and visual (real recordings)

- Real mass communication
- Almost everyone can send and receive

- Storage an full communication over time
- Information including real audio-visual recording built up over time, communication to next generations, massive increase data, info and knowledge (in all domains,disiplines)

- Processing and Translation
- Programming gives continuously new ways to process and visualize data and information in useful ways (Ms office, Openoffice, Specialized programmes)

- Interconnectiveness of people (world wide), computer-systems, data collections , real time measurements and observation systems – and manufacturing systems - the internet of things

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The lineair classroom society

1930

1960

2010

Knowledge society: 21st century skills

- Critical thinking, problem solving, reasoning, analysis, interpretation, synthesizing information
- Research skills and practices, interrogative questioning
- Creativity, artistry, curiosity, imagination, innovation, personal expression
- Perseverance, self-direction, planning, self-discipline, adaptability, initiative
- Oral and written communication, public speaking and presenting, listening
- Leadership, teamwork, collaboration, cooperation, virtual workspaces
- Information and communication technology (ITC) literacy, media and internet literacy, visual interpretation, data interpretation and analysis, computer programming
- Civic, ethical, and social-justice literacy
- Economic and financial literacy, entrepreneurialism
- Global awareness, multicultural literacy, humanitarianism
- Scientific literacy and reasoning, the scientific method
- Environmental and conservation literacy, ecosystems understanding
- Health and wellness literacy, including nutrition, diet, exercise, and public health and safe
- Capable of self learning through full use of most up to date (self learned) ICT, taking into account advices , knowledge and opinions of others (not necesarily bosses) as well as cooperating and cocreating with others (through ICT)
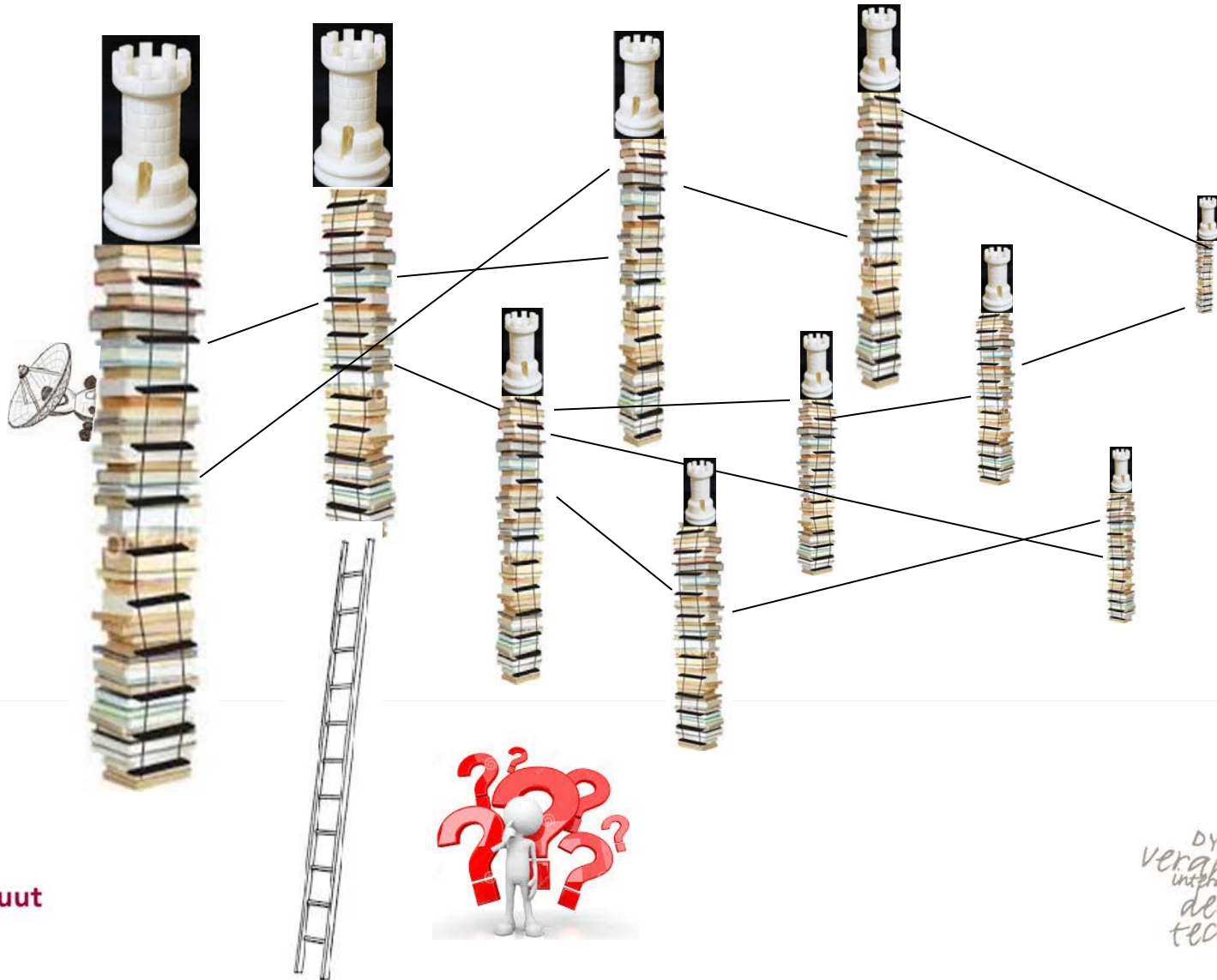
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The connected knowledge society

2010

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The lineair connected society

The linear university a century ago

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19th Century University

Accredited Knowledge Worker

Connected education MOOC lists

MOOC University of University of MOOC's

Open educational resources

Open sources , measuring networks

- The internet, Google Search itself, special variants (earth,analytics etc), special rich sources, Wikipedia, news papers, open libraries, musea , measurement devices, networks (NASA,

- http://www.tesis.lebedev.ru/en/sun_flares.html?m=6&d=9&y=2014

- http://earthquake.usgs.gov/

- http://www.who.int/csr/don/archive/disease/ebola/en/

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21st Century University

WWW of knowledge,data and observations

The university

The MOOC

OER

OS

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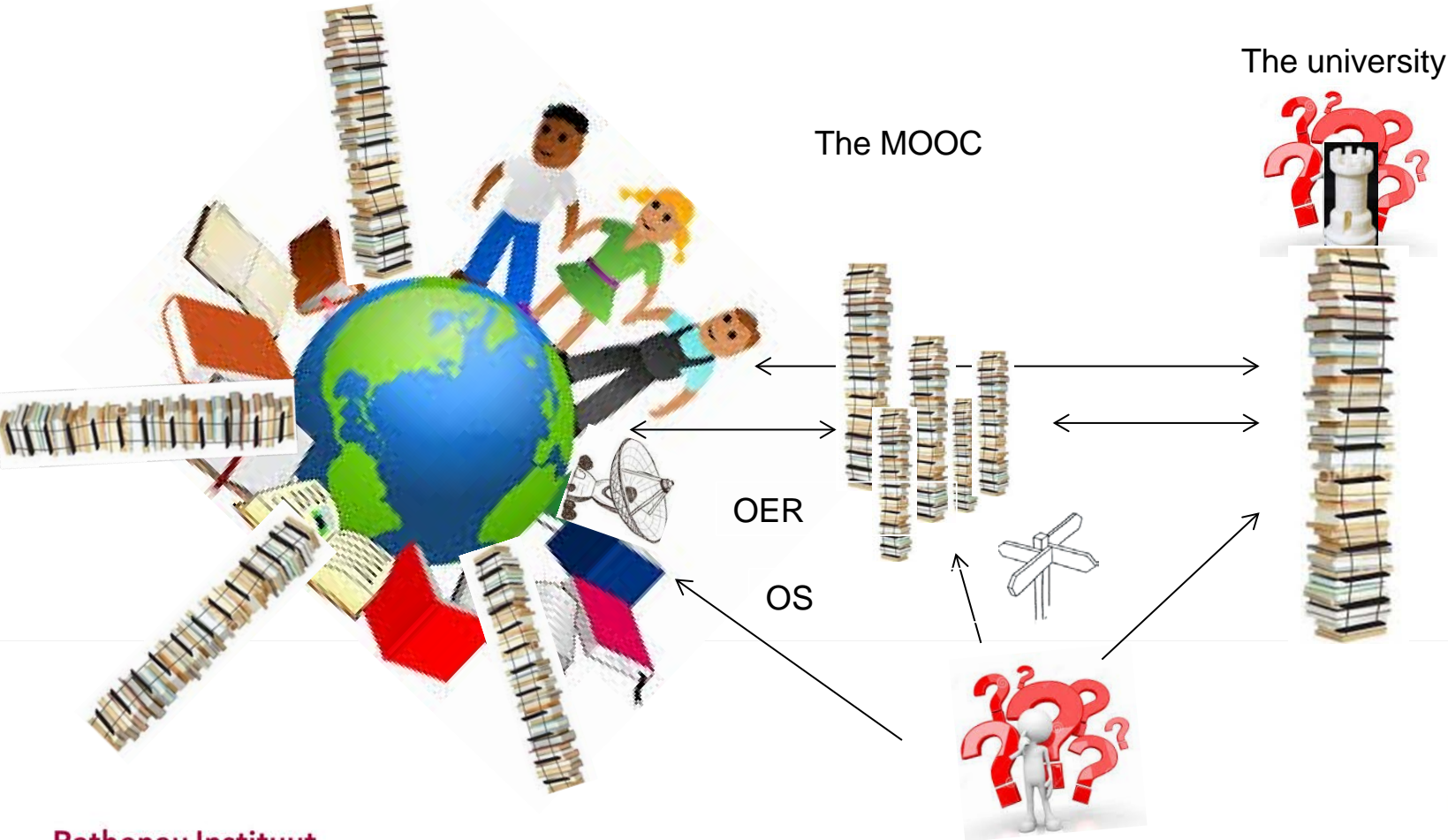
ICT in education may revolutionize Institutions

- MOOCs and OER, if shared with other universities can be used to enlighten the burden of HE teachers. The offer of courses in each institution can be considerable extended and individualised

- Institutions may be tempted to source out more of the teaching topics, provided that you can save teachers costs , so they can specialize to education which is connected to their specialisation (perhaps in MOOC shape to attract students)

- For theoretical subjects it is not clear what the position of the standing institutions is (why not the MOOC of MOOCs)

- Portfolio's of the external courses could be assessed by students and clients, withdrawing acourse has no personal consequences

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Does the institutions still need a teacher

- If Institutions are tempted to use OER/OS and MOOCs of other universities in large scale, most teachers will get different tasks than providing the courses

- From the institution perspective they are needed to assess student achievements in the incorporated MOOC /OER courses (accredit, fee reason)

- Some HE teachers should however develop and update the course (usually connected to the research strength),

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MOOCS /OER and OS has its limits

- MOOCS and OER and OS guided education,facilitate access to the best sources available on internet , and guide students how to learn from these sources. Gradually by the connecting to things (internet of things) the physical world (3 D printing, automised measurements (environment,flows of materials) can come in reach of MOOCs and OER

- Allthough MOOCS cannot (yet) surpass the need in many areas to feel smell and touch the object , to handle equipment to analytically observe and experiment objects in the real world: materials, ecosystem, animals, and to work or treat people. But the border is not a fixed border due to further automation of science

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Students perspective choices

- A full MOOC may be seen as something with a lower status. But if institutions use them themselves this may alter ,

- A MOOC of MOOC institution for theoretical topics may be competitive with vested institutions.

- Vested institutions have the advantage that they provide the Physical aspects of higher education , which MOOCs cannot

- MOOCS cannot (yet) surpass the need in many areas to feel smell and touch the object , to handle equipment to analytically observe and experiment in the real world: ecosystem, animals, people etc,

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21st Century University

WWW of knowledge,data and observations

Web Peer Accredited
Knowledge Worker

The university

Institutional Accredited Knowledge Worker

The MOOC

What the MOOC cannot provide

Falling in Love on Campus Part II

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What the MOOC cannot provide