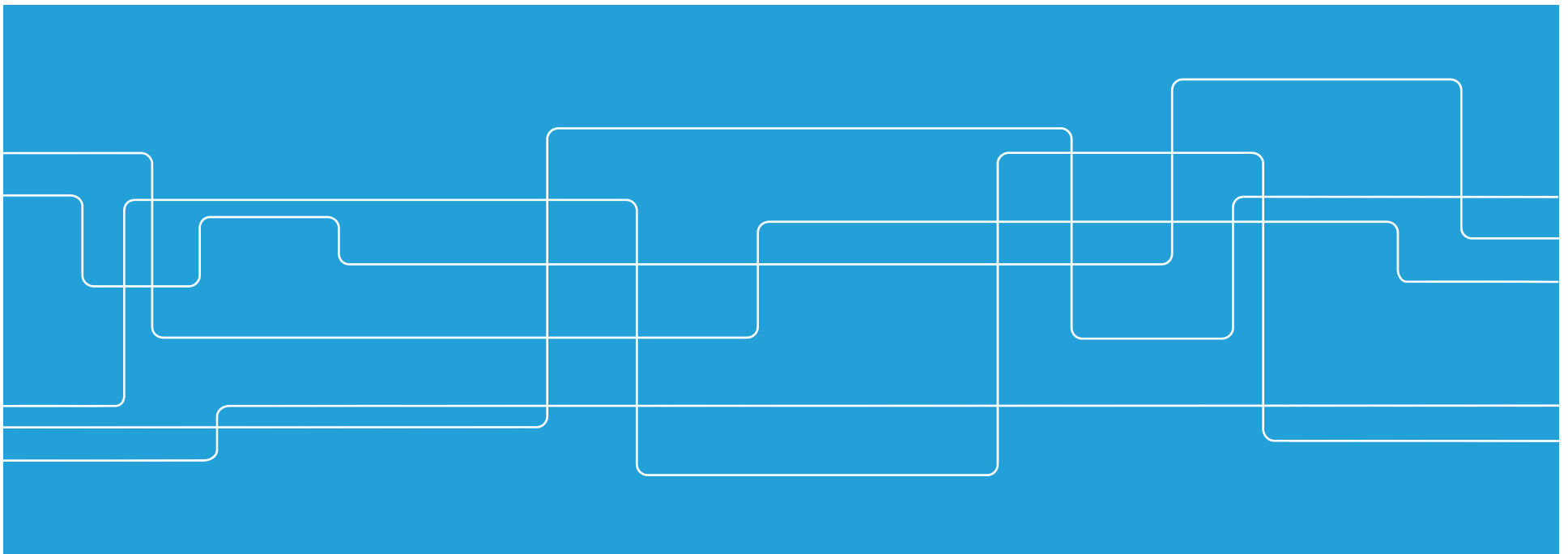




# Books or MOOCs Whither the University?

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# Overview

1. The modern research university
2. Massive open online courses
  - Description and use cases
  - Challenges for universities
3. My views
  - Opportunities and preparation
4. Summary and conclusion



# The modern research university

## Humboldt model

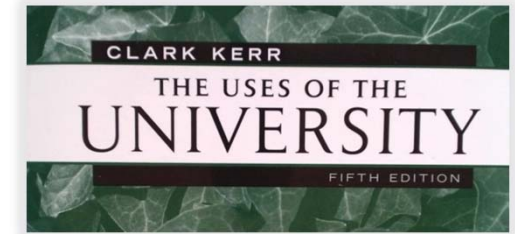
- Both teaching and research for each faculty member
- Small seminars for teaching
- Lehrfreiheit; lernfreiheit

## Humboldt augmented at Harvard

- Up-or-out tenure
- Externally funded research
- Academic departments and professional schools

## Growth phase from the late 1960's until today

- Number of students, facilities, staff
- ... and roles!



# The modern research university

The age of the *Multiversity* (Clark Kerr, President of UC)

“A series of separate schools and departments held together by a central heating system.”

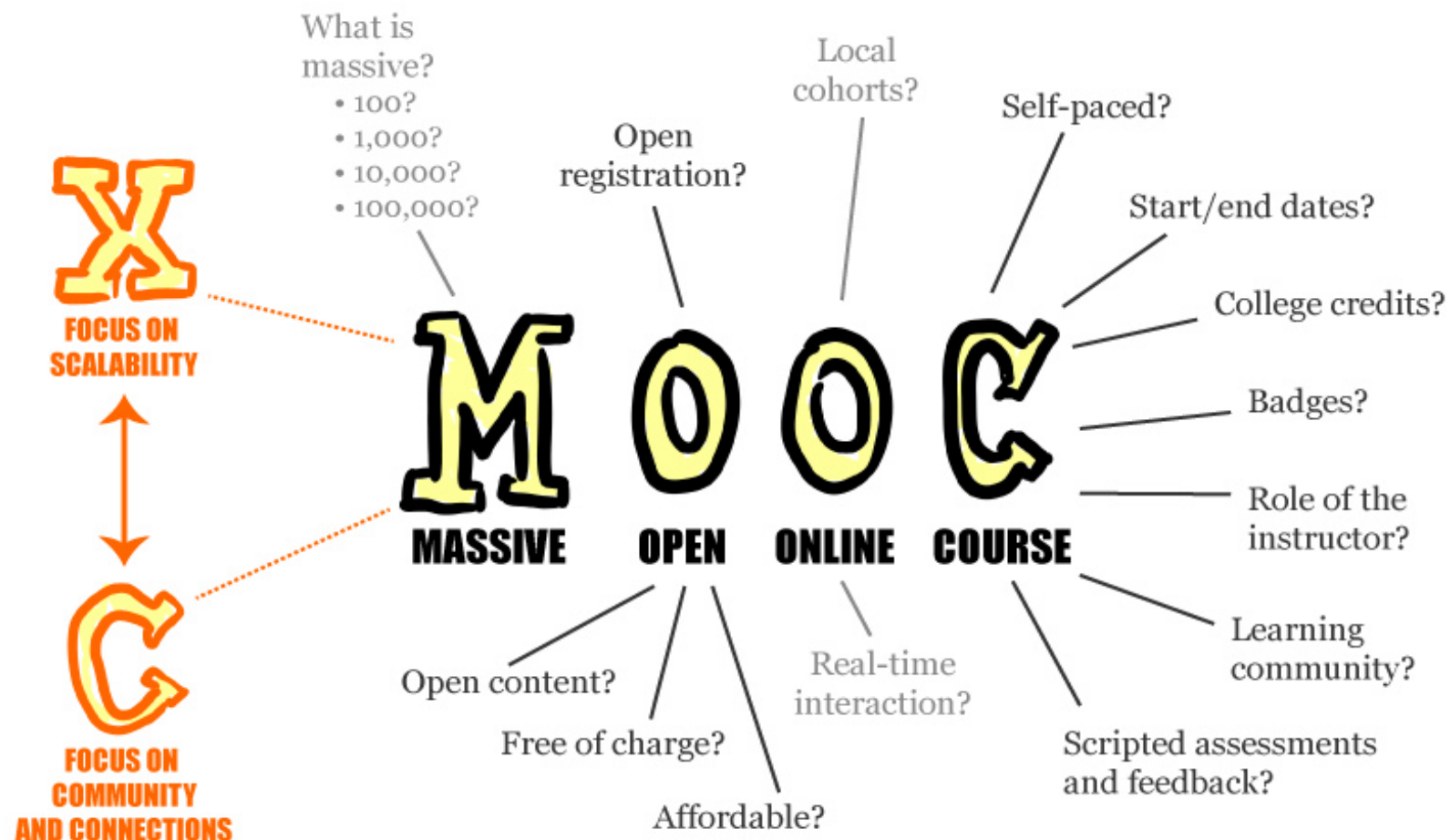
- Robert M. Hutchins, President of the University of Chicago

Little faculty attention to undergraduate teaching and to students

- Increased reliance on external grants
- Attention to research; education a duty

Race to the top, or race to ruin?

- Expensive model (Harvard's credo: “everything at its best”)
- Exacerbated by international ranking
- Public and political discontent in US, Germany, ...



M ♦ O ♦ O ♦ C

Every letter is negotiable.



# The MOOC: more than a book

Recorded lectures, reading material

- Viewed and perused online
- Learning checked by machine-graded quizzes

Peer instruction

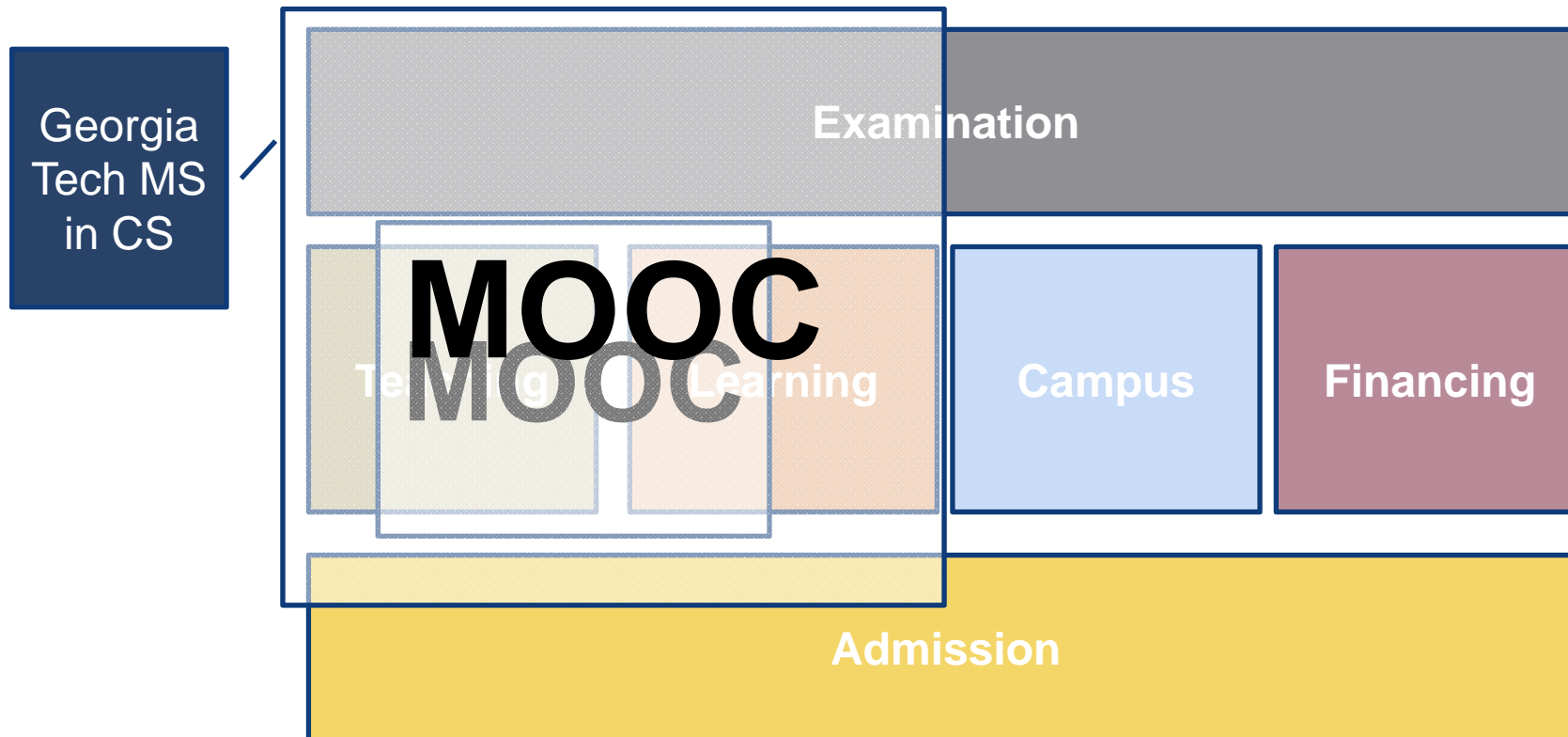
- Discussion groups
- Review of one another's work

Learning analytics

- Mining data from online activities
- Feedback to student, teacher and institution



# Higher education and MOOCs









# MOOC attraction and use cases

Availability of high quality courses free or at low cost

- Economy of scale in course production
- Improved quality of learning and throughput (well, not yet ;)

Use cases for existing universities

- Flipped classroom for improved learning
  - See video of David Black-Schaffer's talk at KTH: [www.ee.kth.se/natkurser](http://www.ee.kth.se/natkurser)
- Skipped classroom for lower cost (a.k.a. *reading course*)
  - Selection of material and examination

New organization: *MOOC College*

- Selection of MOOCs, study planning and monitoring of progress
- Aggregator of third-party services for students
  - Certification, tutoring, coaching, extracurricular and financing
- Social networking and after market



# Opportunities and threats for the multiversity

Academic brands may vanish when actual knowledge is assessed

- Performance on task beats seal on diploma
- Research excellence does not lead to teaching excellence

Programs and degrees loose importance

- Portfolio of documented learning outcomes beats grades
- Reduce length of studies; sufficient to get a job
- Life-long learning for continuous development and employability

Early entry into labor market

- Combat learning fatigue by mixing education and work
- Coming of age experience does not require 3 to 4 years
- To support aging population; not only raised retirement age



# My views on the future of the university

From academic research to broader set of scholarship

- Ernest Boyer: *Scholarship Reconsidered*
- Scholarship everywhere but with different emphases
  - Keep faculty alert and in touch with state-of-the-art

Academic research will be sharper and smaller

- No public support for research faculty without teaching
- Aimed at research *not* done elsewhere
- Less need for PhDs owing to fewer faculty

Strategic research at institutes and laboratories

- Balancing use and understanding; public vs proprietary
- Focus on results rather than on publications
- No tussle between attention to research and teaching



# Opportunities and preparation

Teaching: renewed possibility

- Pedagogics for online still in development
  - Teaching skills increasingly important for academic hiring
  - Testing beyond multiple choice questions
  - Big data learning analytics
- Technology: simulators, design tools, visualization, ...

Get informed: read, discuss, reflect, act; prepare for change

- Some starters
  - Ernest Boyer, *Scholarship Reconsidered*
  - Clark Kerr, *The Uses of the University*
  - Derek Bok, *Our Underachieving Colleges*
  - Donald Stokes, *Pasteur's Quadrant*
  - Anya Kamenetz, *DIY U*
  - Clayton Christensen and Henry Eyring, *The Innovative University*

} My canon



## Summary and conclusion

- The modern research university ready to unbundle
- MOOC industry fills a need and develops quickly
- Prepare for change; get involved



# Thank you!

Comments and questions are welcome!

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