MAJOR TRENDS OF EDUCATION IN INFORMATION SOCIETY

Culturological approach

ILYA LEVIN

Haifa University seminar
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OUTLINE

- Introduction
- Space of culture
- Social, Technological and Spiritual cultures
- Culture of Information Society
  - Social Media
  - Data intensive Science
  - Personal Identity Online
- Learning Environment of Postindustrial School
- Conclusions

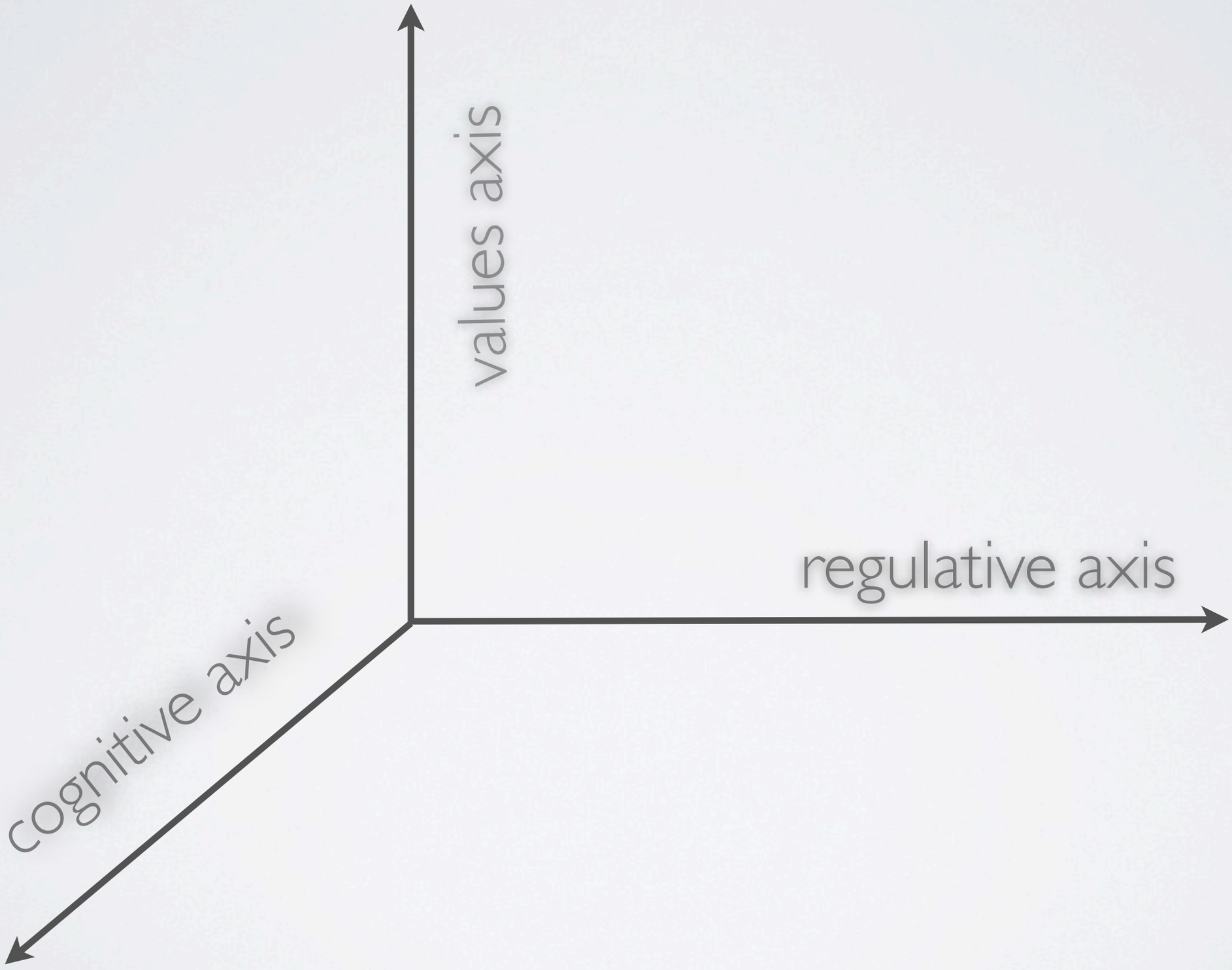
SPACE OF CULTURE

Three-dimensional model

SPACE OF CULTURE

- Cognitive axis - knowledge
- Values axis - ideas
- Regulative axis - rules

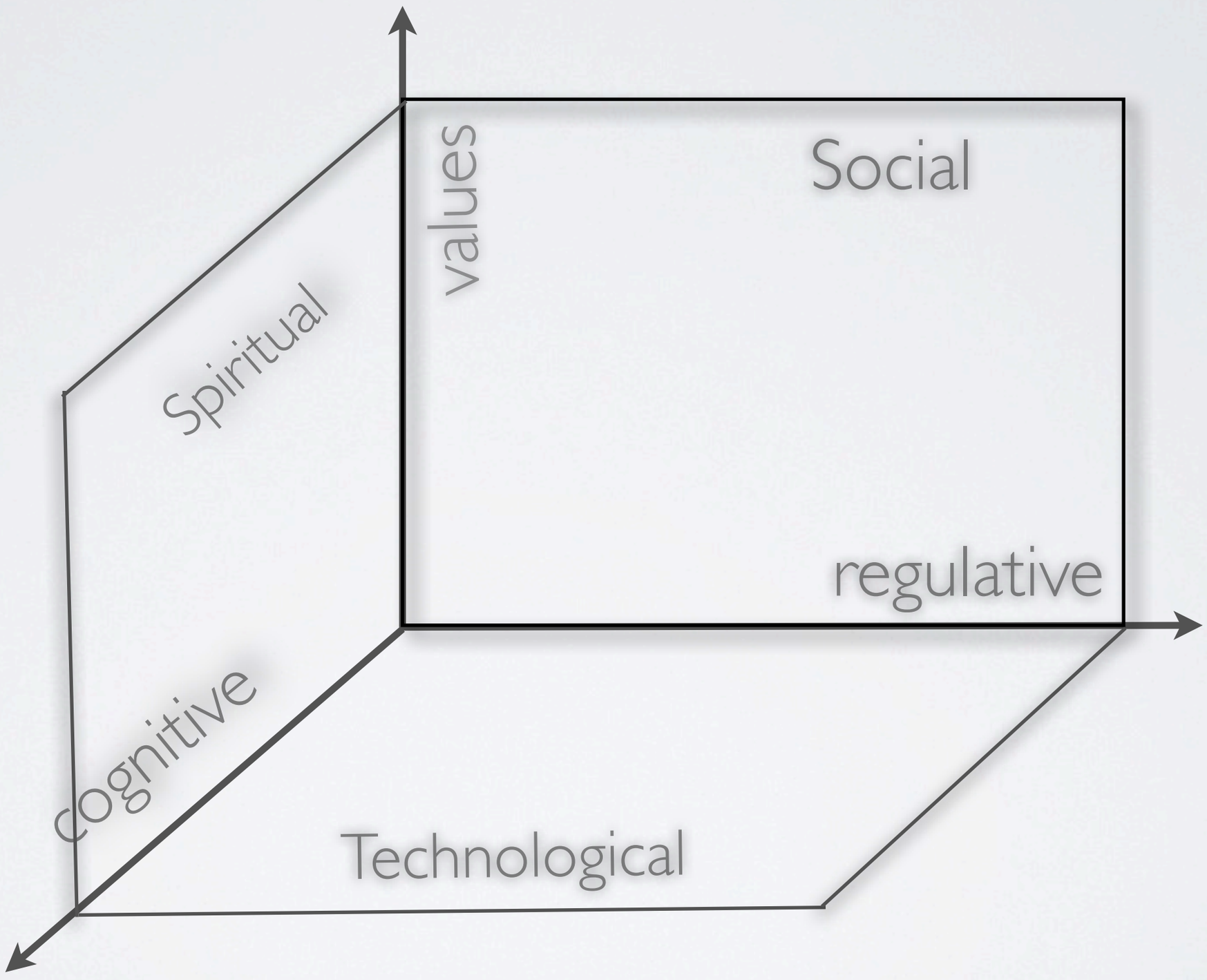
SPACE OF CULTURE



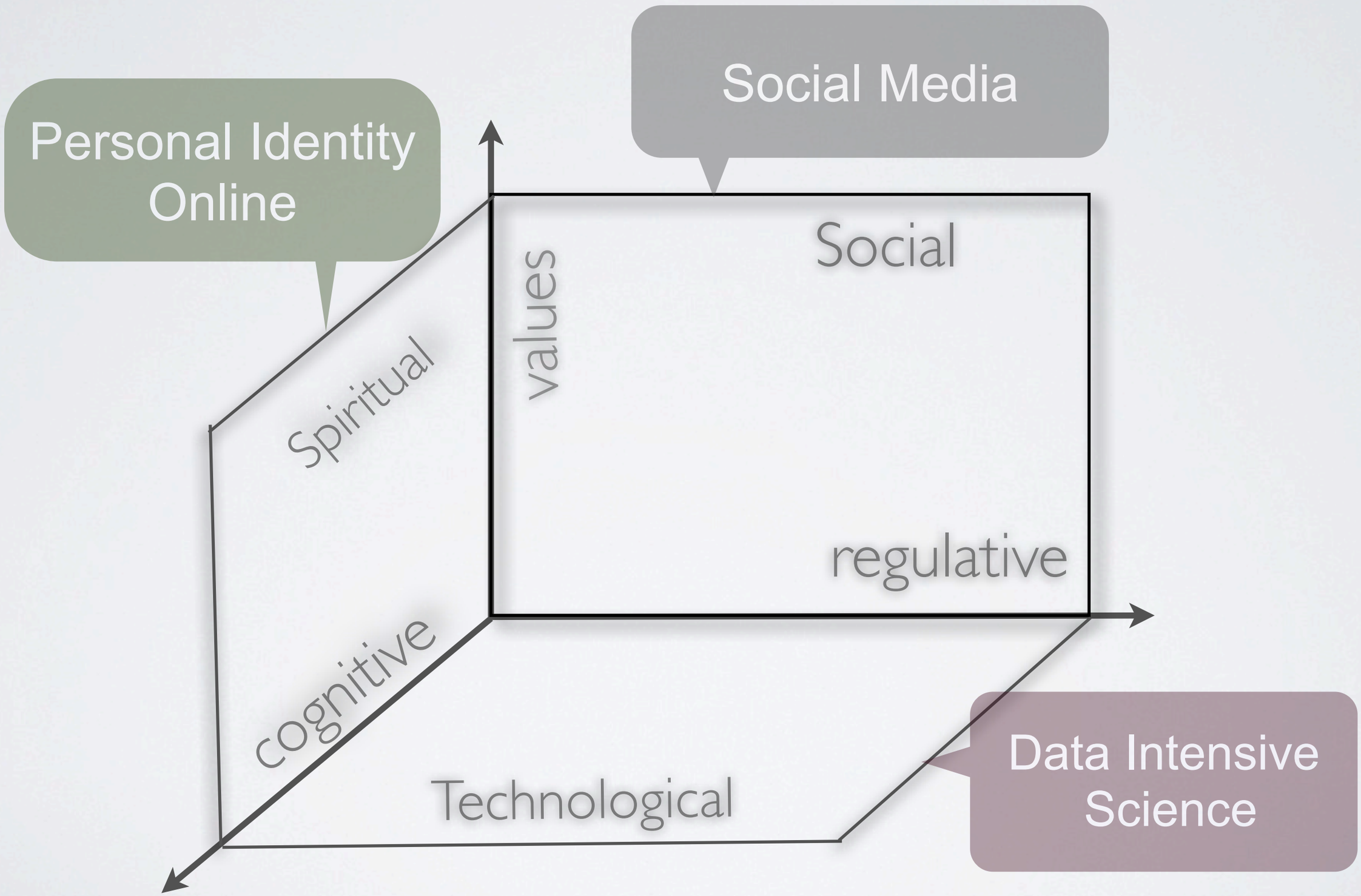
TYPES (PLANES) OF CULTURE

- Spiritual Culture
- Social Culture
- Technological Culture

SPACE OF CULTURE



CULTURE IN INFORMATION SOCIETY



DEFINITIONS

	Neutral	Value-laden
Social Media	Use of Web applications supporting creation of user-generated content	New way of forming social consciousness
Data-Intensive Science	Data growing faster then technology	Fourth paradigm of science
Personal Identity Online	Ability of websites to distinguish one individual from another	Personal identity formed in cyberspace

SOCIAL MEDIA

Social Culture of Postindustrial Society

SOCIAL MEDIA

- Crowd based thinking
- Cult of amateur
- Self-organization of the net
- Neutrality of the net
- Crisis of capitalism. New democracy
- Information literacy. Security awareness. Security education.
- Manuel Castells, Yuhai Benkler, Clay Shirky, Andrew Keen, Nicholas Carr

DOES THE INTERNET MAKE YOU SMARTER?

CARR - SHIRKY DISPUTE

Nicholas Carr

Clay Shirky

CULT OF AMATEUR?

KEEN - SHIRKY DISPUTE

Andrew Keen

Clay Shirky

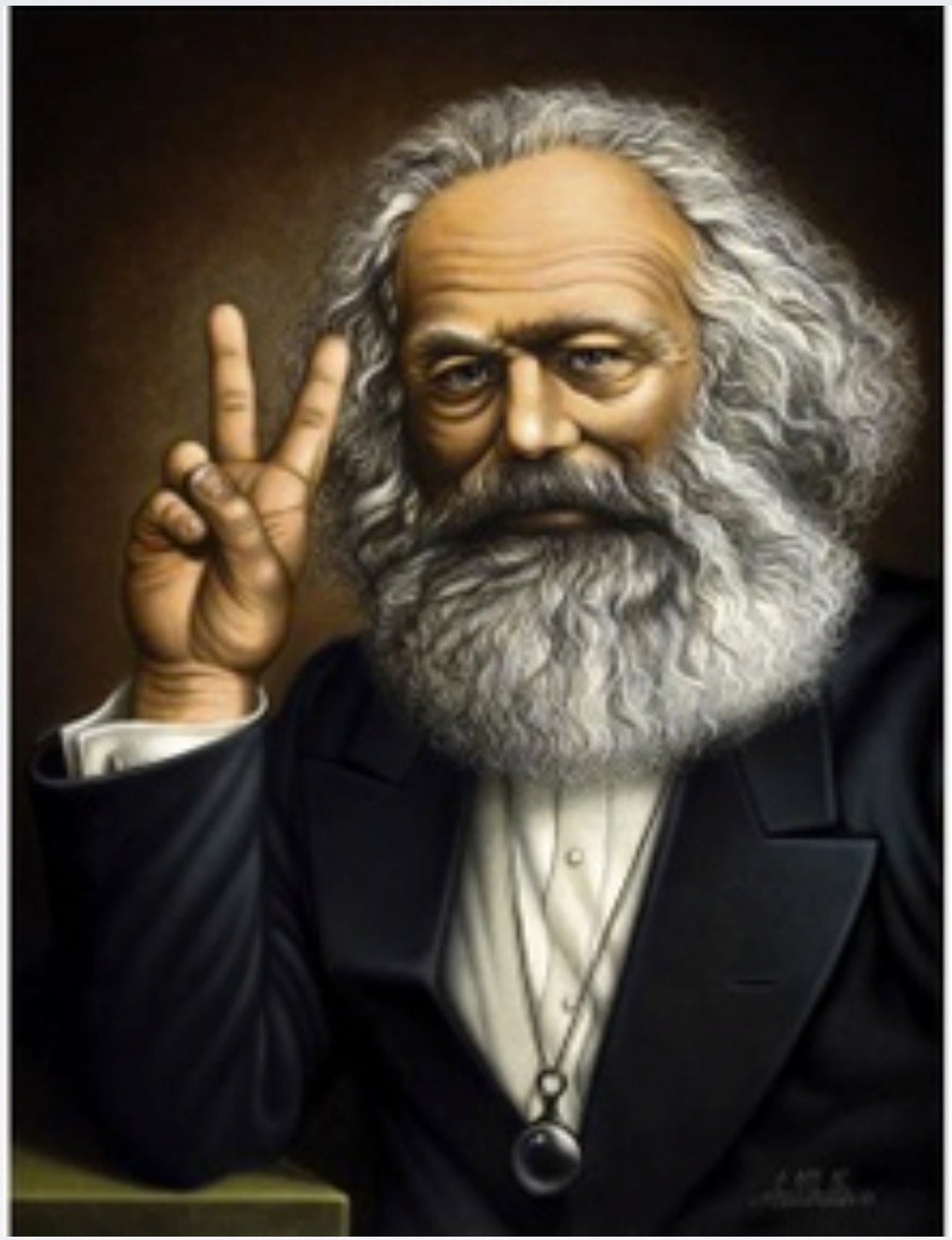
WHETHER THE MOST INFLUENTIAL SITES ON THE INTERNET WILL BE PEER-PRODUCED OR PRICE-INCENTIVIZED?

CARR–BENKLER WAGER

Nicholas Carr

Yochai Benkler

MARX IS BACK?



DATA-INTENSIVE SCIENCE

The Fourth Paradigm of Science - Technological Culture of Postindustrial Society

HISTORY OF COMPUTING

Communication Era

Consumer Era

1970s- 1980s 1990s Today+

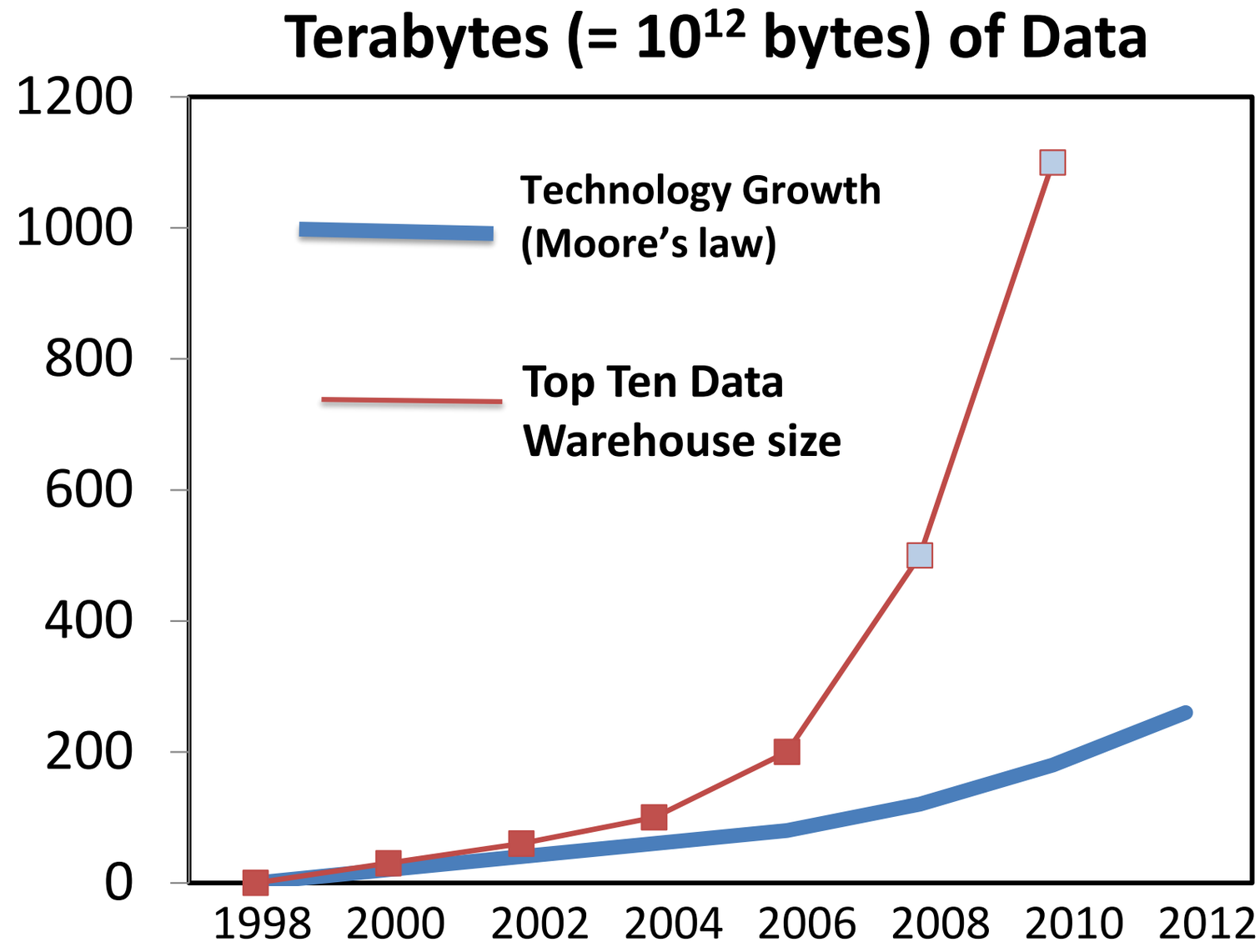
Mainframes

PC Era

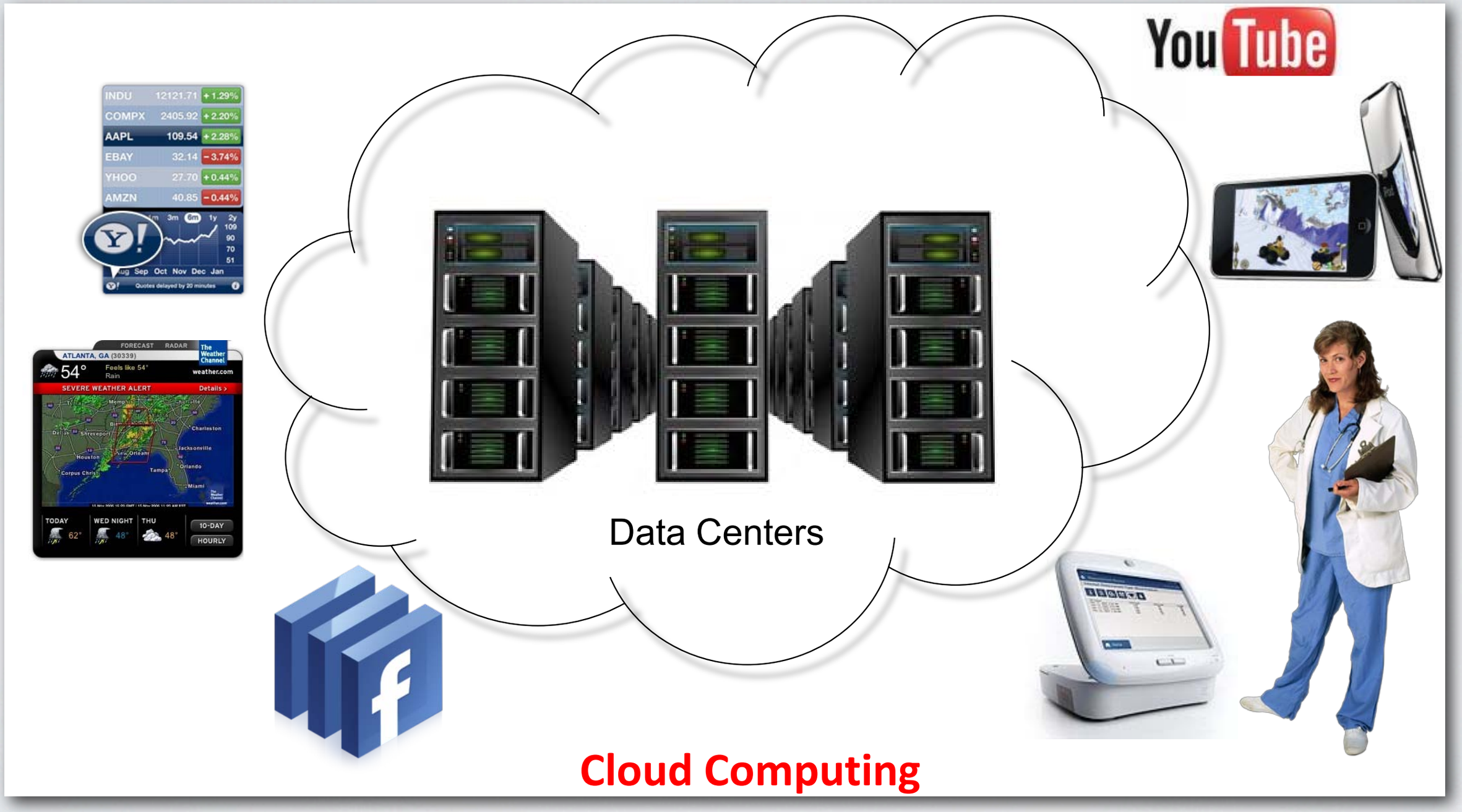
- From computing-centric to data-centric
- Consumer Era: interfacing, connectivity and access

DATA GROWING FASTER THEN TECHNOLOGY

- Commerce entirely data-driven
- Science handling massive data
- Companies spending $$$ to collect/analyze data
- Personalized computing



ALL ABOUT ACCESSING DATA



SCIENCE PARADIGMS

I. Empirical Science

II. Theoretical Science

III. Computer based Science

IV. Data Intensive Science

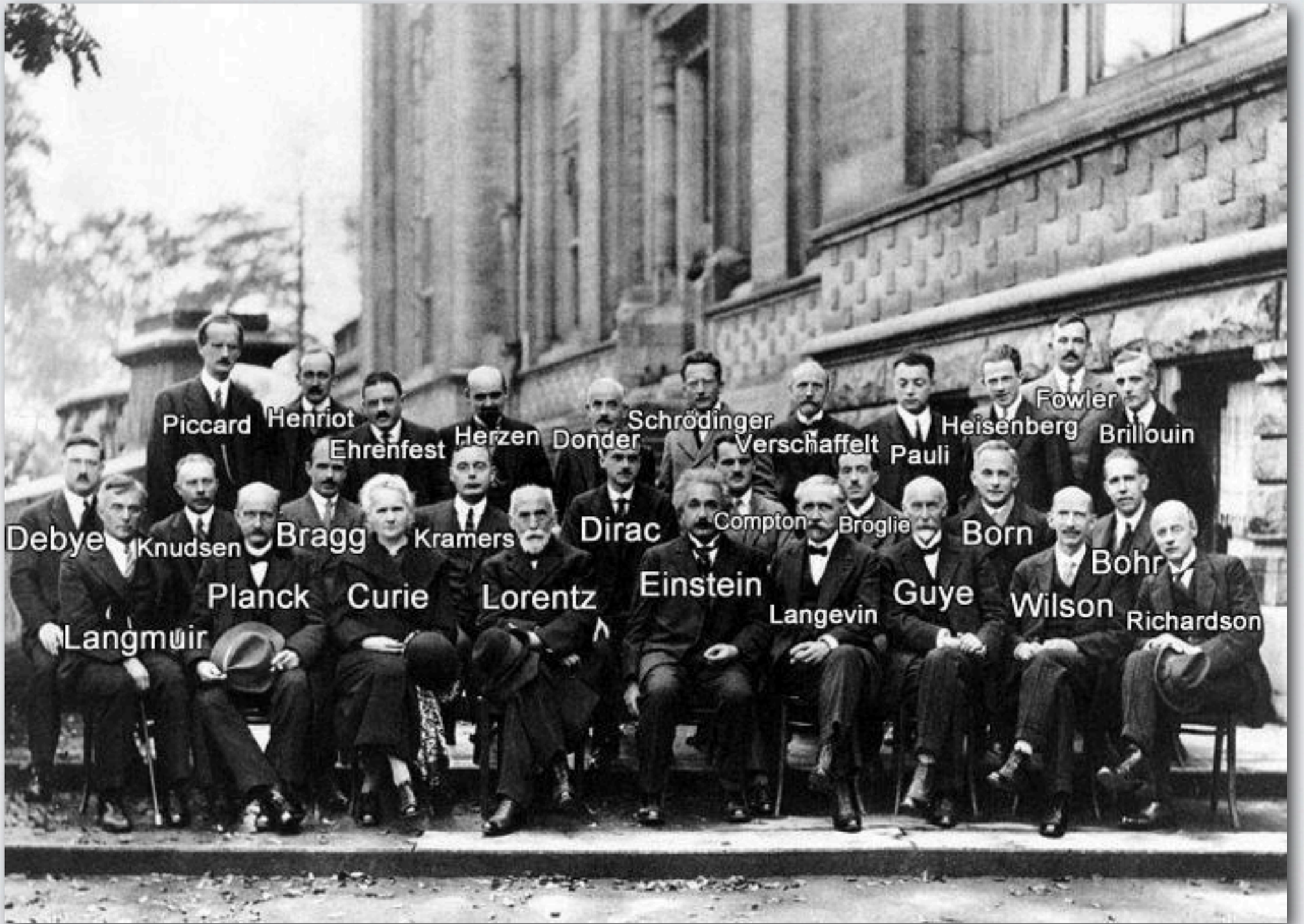
THE FOURTH PARADIGM: DATA-INTENSIVE SCIENTIFIC DISCOVERY

The speed at which any given scientific discipline advances depends on how well its researchers collaborate with one another and with technologists in areas of e-Science such as: databases, visualization and cloud computing.

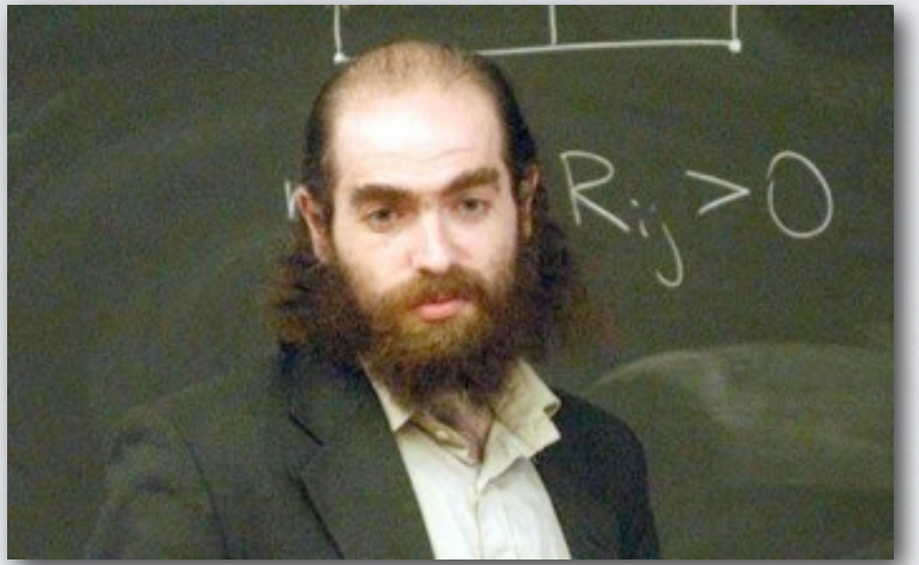
SCIENCE AS THE VALUE

From XX to XXI century

SCIENCE IN XX CENTURY



VALUES DILEMMA



?

PERSONAL IDENTITY ONLINE

Spiritual Culture of Postindustrial Society

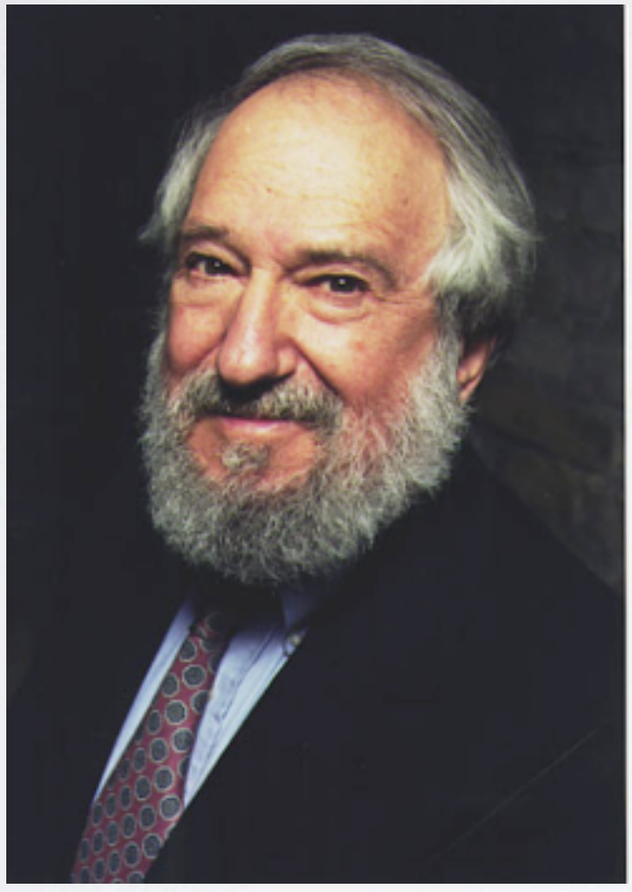
PERSONAL IDENTITY ONLINE

- **Info-sphere.** Personal database. Interaction of Info-spheres

- **Personality** in Cyberspace. Multi-personality, false personality, trust. Ubiquity in space and in time. Smart device vs. book.

- **Context awareness.** Different points of view on info-sphere. Permanently updatable

EPISTEMOLOGY OF INFORMATION SOCIETY



Seymour Papert
(born 1928)

Luciano Floridi
(born 1964)

HISTORICAL FORMS OF ACQUIRING KNOWLEDGE

- Direct observation
- Indirect observation. Acceleration
- Indirect observation. Energy transforming
- Indirect observation. Information transforming
- Social epistemology. Data intensive learning

HISTORICAL FORMS OF EDUCATIONAL PROCESS

- Preindustrial Society - Personal Education
- Industrial Society - Class/Lesson. Socialization
- From ~1980 - Computer Micro-worlds Personalization
- Postindustrial Society - Socialized Educational Environments (Education 2.0)

... BUT STILL:

WHAT IS THE POSTINDUSTRIAL LEARNING ENVIRONMENT?

New Learning Environment?

INFO-SPHERE - PERSONAL MICRO-WORLD

- Ubiquity in space and in time
- Context awareness
- Social nature
- Mutability. Unexpectedness

CONCLUSIONS

- Changes in technology and in in education has to be considered as connected with three types of culture - spiritual, social and technological
- There are three contemporary phenomena corresponding to the three types of culture: Social Media, Data Intensive Science and Personal Identity Online
- Social consciousness is formed in Social web
- Science becomes data-intensive changing drastically the concept of Science Education
- Personal Identity is formed in Cyberspace in addition to real identity
- *Personal Info-sphere* becomes the core of new educational environment
- Education 2.0 well corresponds to cultural trends of the Postindustrial Society

EDUCATION 2.0

Education of the era of Web 2.0

WEB 2.0

PIO	Social Media	Data Intensive
Interactivity	*Sociality*	*Mash up*

WEB 2.0

- Interactivity
  - Web is a mediator between users but not an information store
  - Dynamic improvement
- Sociality
  - Creation of communities
  - Personal status support
- Syndication (Mash-up)
  - Hierarchal integration of services
  - Exponential grow of data

EDUCATION 2.0

PIO	Social Media	Data Intensive
Subjecthood	*Collaboration*	*Redundancy*

EDUCATION 2.0

- Subjecthood
  - Personalized Knowledge vs. Standard Curriculum
  - Subjectiveness of Content
- Collaboration
  - Teacher as a partner. Leader vs. driver
  - Personal, naturally formed, multidimensional status of a participant
- Redundancy
  - Variety of knowledge sources. Personal way of learning
  - Role of teacher as an organizer of students activities but not as a provider of the content

WEB VS. EDUCATION 2.0

	PIO	Social Media	Data Intensive
Web 2.0	*Interactivity*	*Sociality*	*Mash up*
Education 2.0	*Subjecthood*	*Collaboration*	*Redundancy*