

University as a fractal organization of knowledge

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Agenda

- Introduction
- Knowledge - based university
- University as a fractal organization
- Conclusion

Introduction (1)

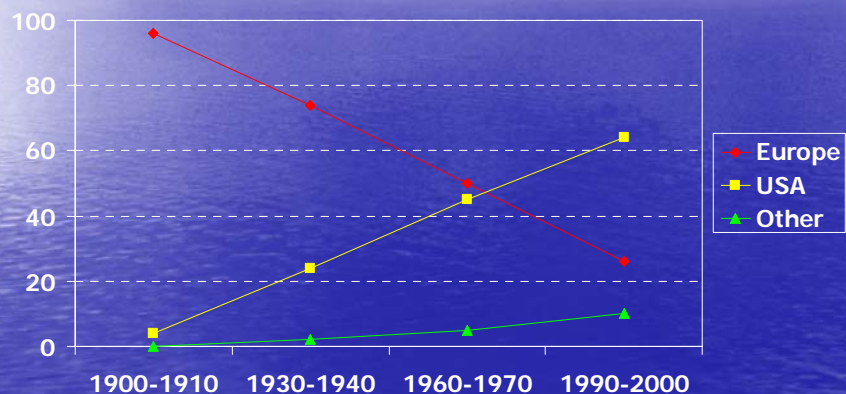
Lambert & Butler's report „The future of European Universities – renaissance or decay“

WEAKNESSES OF EUROPEAN UNIVERSITIES

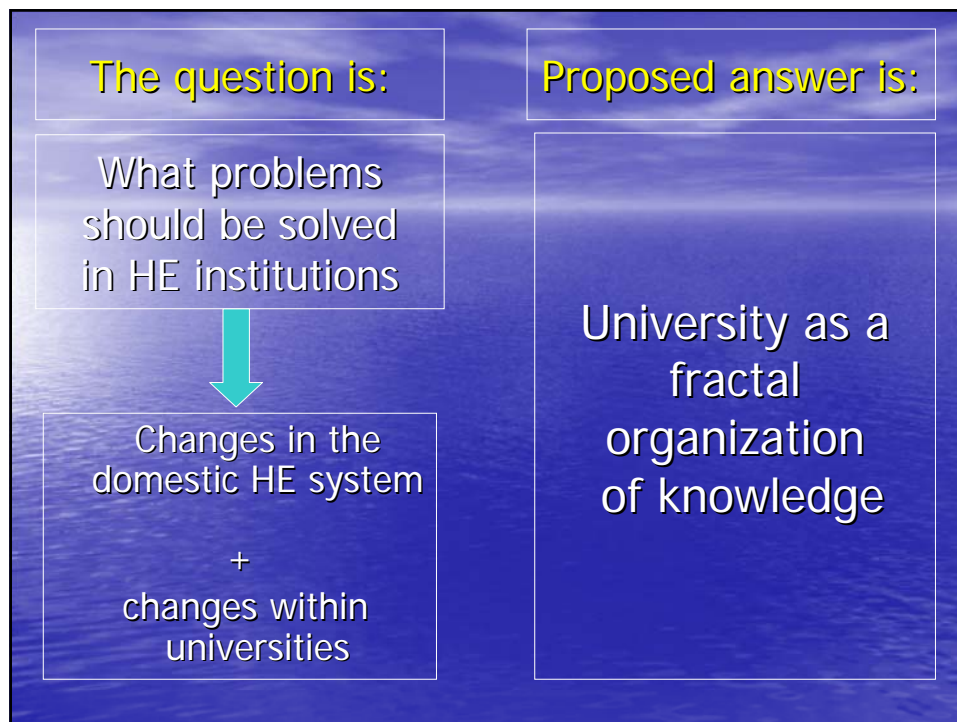
- exodus of young and the most talented people,
- most of European universities pursuing exactly the same objectives,
- unprofessional management.

Introduction (2)

Percentage participation by nation in Nobel Prizes Awarded



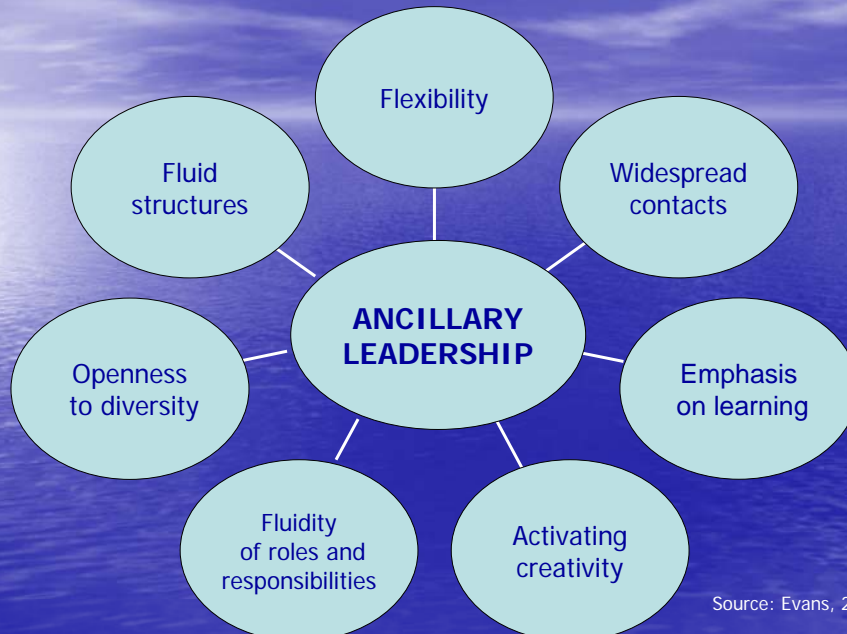
Source: K. Pawlowski, Rediscovering higher education in Europe, UNESCO-CEPES and WSB=NLU, 2004, p.18



UNIVERSITY

BLACK BOX
OR
OR KNOWLEDGE ORGANIZATION

Model of knowledge organization



Ancillary leadership (1)

- strong leadership position serving the purposes to academic community
- coordinating the activity of each particular organizational unit of the university
- flexible approach to problem solving = guarantee a degree of self-organization typical to knowledge based organization

Ancillary leadership (2) self - organization

- the principle of redundancy of functions
- the principle of necessary diversity
- the principle of the critical minimum of specification
- the principle of learning how to learn

Source: G. Morgan, Images of organization, 1986

Flexibility

- the new Polish legislation of HE – 2005
- adaptive-inertial model – traditional HE
- anticipatory flexibility - knowledge HE

Fluid structures

- complex organizational structures
- academic communities tend to be diversified
- structures should represent the idea of the university not just reflect its habits and tradition
- university organization similar to human brain

Emphasis on learning

- learning in teams is a key factor in acquiring knowledge
- adverse events and negative findings may serve as a source of great practical value
- respect various points of view, irrespective of the academic position of their proponents
- questioning established solutions as „canonical“ options
- double loop learning (Argyris)

Fluidity of roles and responsibilities

- university staff – creatively pursuing the truth rather than merely doing the everyday duties
- „individuals must be able to work simultaneously in various organizational structures (...) the same person who is a boss in her/his organization may be a partner in an association, a minority stakeholder or participant in a joint enterprise, etc.“ – Drucker

Openness to diversity

- teams composed of specialists in various fields may be more innovative
- diversity must be reinforced by an atmosphere that promotes an unrestrained transfer of thoughts
- Russian Literature PhD > MBA graduate(?)
 - „the knowledge of Dostoyevski stimulates curiosity and learning drive“

Fractal university (1)

- functions on the basis of self-organized, autonomous group (research and didactic)
- forms a selfsame organizational structure based on „inheriting aims“ – base on principles of good practice
- allows continuous change of organizational structures as a result of implementing the principle of self-optimisation of work resources and processes

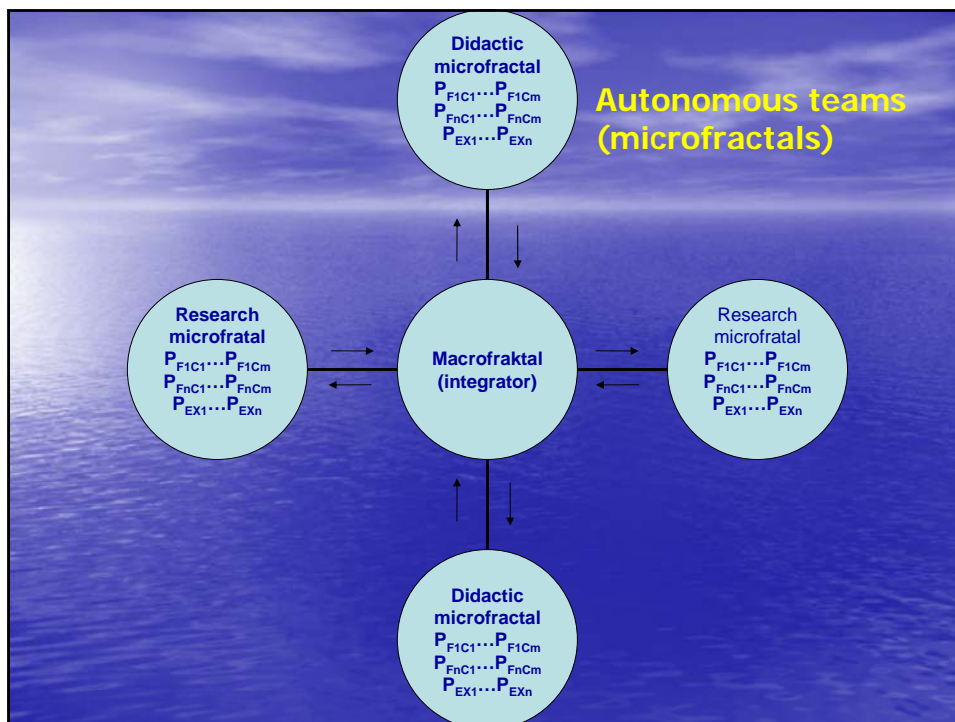
Fractal university (2)

- achieves a high level of vitality as a result of using flexible forms of work and guaranteeing a high level of freedom
- enable all fractal units of the university to navigate towards a common, set direction through permanent controlling and steering activities



Fractal university (3)

- on the basis of full access to information and its unobstructed, dynamic flow, positively influences learning processes, self development and improving its members qualifications
- best functions in a turbulent environment characterised by fast dynamics of change, typical of the present EU market
- obliges its members to apply holistic care and show responsibility for the work processes carried out for the benefit of client



Autonomous teams

the elements which bind and regulate them

- common goals and interests identified and accepted as a direction to follow
- integration and harmonisation of the resources at achieving the share goal
- common values and norm shared by the members of microfractal

Autonomous teams

- management teams
- cross-functional teams – formal and informal
- support teams – administrative staff
- autonomous work teams – working on research projects

Autonomous teams why microfractals?

- they are in fact highly autonomous
(freedom of decision making and responsibility being extensive)
- transparent and fast information flow and effective mechanism of sharing knowledge as a result of copying good solutions
- they automatically modify structures
- the principle of complementary mutual services – support each other

COMMITMENT of TRADITIONAL UNIVERSITY STAFF and FRACTAL TEAMS

ANALYSED ISSUE	TRADITIONAL TEAMS	FRACTAL TEAMS
ROLES:	Set	Changeable
TASKS:	Strictly delineated	Flexible; often modified in the course of completion
SKILLS:	Specialised	Miscellaneous Wide spectrum of general knowledge
CONTROL:	Individual	Collective + self-control
STATUS:	Various	Equal
SUPERVISION:	External	Within the group, minimum control from authorities
WORK EFFORT:	Distributed	Shared; if possible – evenly divided amongst all team members
LEADERSHIP:	Usually one person	Divided amongst team members

Source: own, based on: [Torres and Splegel]

Conclusion - outputs

- convergence of the concept of knowledge – based and fractal university (self organized fractals)
- growing need for team autonomy
- an increase in the rate and capacity of information channels
- a strong increase to share knowledge
- promoting creating attitudes in university
- fractal organizations are more efficient than traditional one

Thank you

