

Relevance of the interdisciplinary course on Technology Assessment (TA) for energy universities

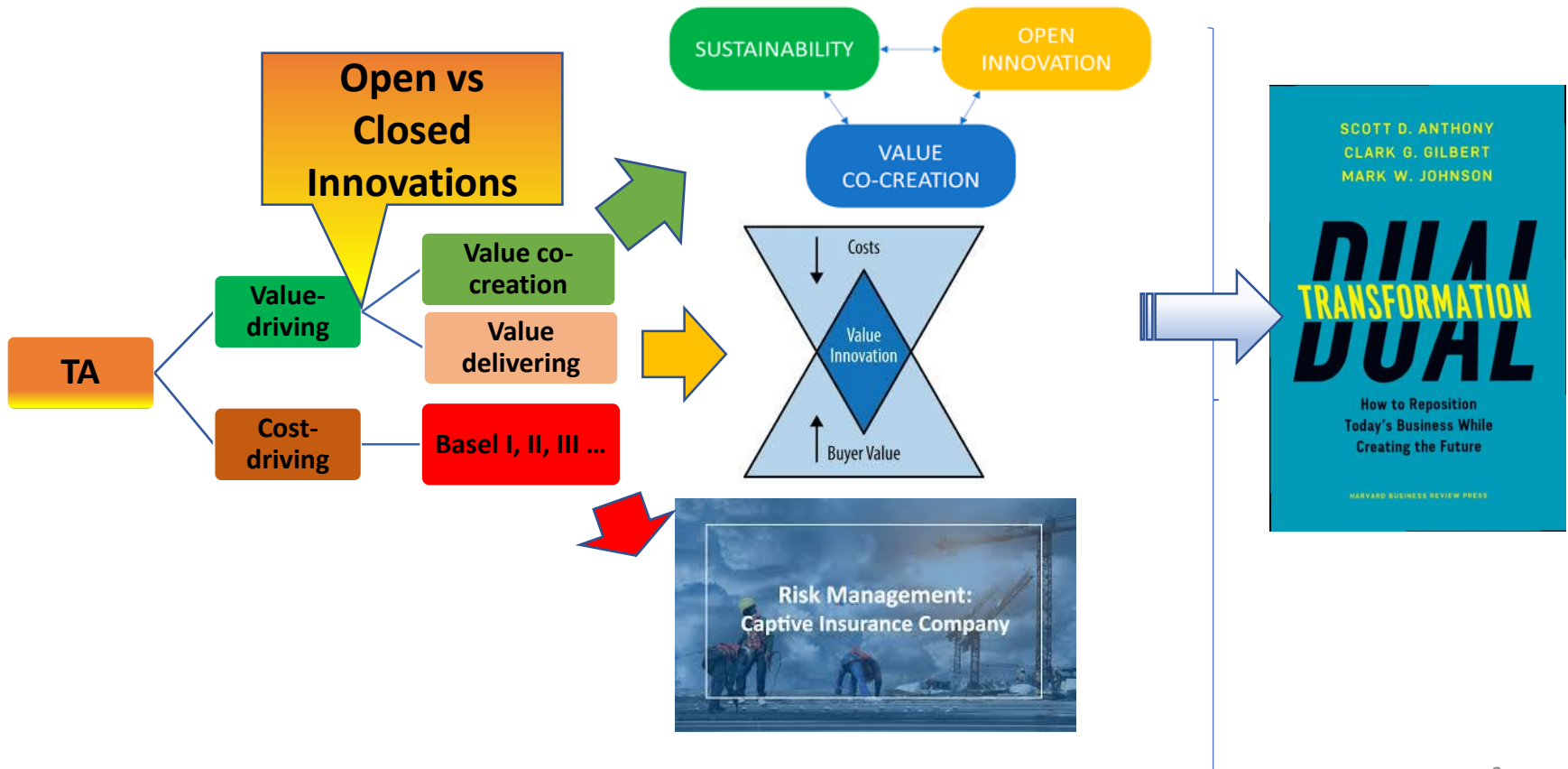
Malinovskaya Nina, Malinovskiy Pavel (Russia)

Technology Assessment' Mission: From Risk Society to Fear Society (1986 – 2017).

Lessons for Technical Education (TE) – Development and action learning innovation's forms of work (joint activities) in the era of transformations of Global civilization of professionals

TA: Risk insurance (including disruptive technologies) vs Engaging platform (for stakeholder's value co-creation)

TE: Value-driving TA will be digital platform for Stakeholder's Co-creation Projects (as base for multidisciplinary education)

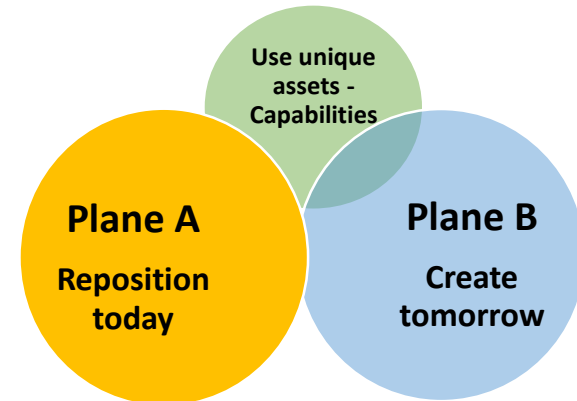


The inventors of the “Bicycle”



The key schema of Georgy P. Schedrovitzkiy /1929-1994/ “The Step of Development” (initially schema “The Transfer of Experience”) (1978-1979)

Dual Transformation. How to Reposition Today’s Business While Creating the Future (S.D.Anthony, C.G.Gilbert, M.W.Johnson, 2017)



Transformation A + Transformation B + Capabilities Link = Digital Enterprise (“Accenture”, 2015) and/or Social Enterprise (“Deloitte”, 2017)?

Anatomy of BioNiC company

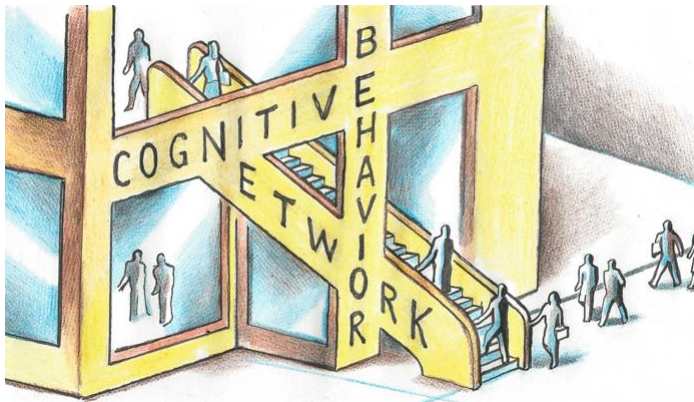
The successful company of the future will blend human (digital talents) and technological (data, platforms, AI) capabilities.

XX century: Financial+Human+Natural Capital



XXI century:

{Behavior capital (developed by tracking ongoing activity) + Cognitive capital (the value inherent in algorithms) + Network capital (the connection people and machines)} × Imagination = Successful Transformation!



strategy+business

Five Overlooked Principles Shaping the Destiny of Your Business

- 1 Turing's theory of computability** Machines can calculate any of the ever-growing number of problems that are possible to calculate.
- 2 Coase theorem of transaction costs** Aside from transaction costs, the most efficient outcome will prevail in any market.
- 3 Bell's law on the birth and death of computer classes** Roughly every decade, a new class of lower-priced computing devices emerges — and changes everything.
- 4 Baldwin and Clark's concept of modularity** Breaking a technology or process into functionally relevant components facilitates innovation.
- 5 Nakamoto's law of the distributed ledger** Transactions improve when trust is managed by the system, not by mediators.

Source: strategy-business.com/FivePrinciples
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Statement on the Purpose of a Corporation

(Business Roundtable USA,
August 19, 2019)

...While each of our individual companies serves its own corporate purpose, we share a **fundamental commitment to all of our stakeholders**. We commit to:

- **Delivering value to our customers...** leading the way in meeting or exceeding customer expectations.
- **Investing in our employees...** through training and education that help develop new skills for a rapidly changing world. We foster **diversity and inclusion, dignity and respect**.
- **Dealing fairly and ethically with our suppliers.** We are dedicated to serving as **good partners** to the other companies... that help us meet our missions.
- Supporting the communities in which we work. **We respect the people in our communities and protect the environment** by embracing sustainable practices across our businesses.
- **Generating long-term value for shareholders,** who provide the capital that allows companies to invest, grow and innovate. We are committed to **transparency and effective engagement with shareholders**.



Source: Deloitte Global Human Capital Trends survey, «Human principles for the social enterprise: Benchmarks for reinvention», 2019



Types of joint activities

L.I. Umanskiy /1921-1983/ (1976), P.V. Malinovskiy (1988, 1990, 2007)

joint-interactive (J-Int)

self-regulated by *collective*

joint-individual (J-Ind)

self-regulated by *motives*

joint-sequential (J-S) regulated by *normative*

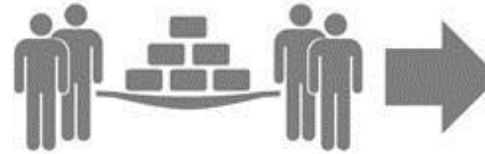
2 types: 1) J-S/J-Int; 2) J-S/J-Ind

joint-creative (J-C) regulated by *(collective&motives&normative)* ❌

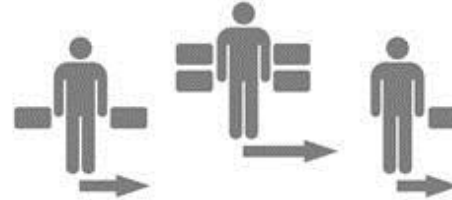
creative = imperatives

**Partnership
Culture**

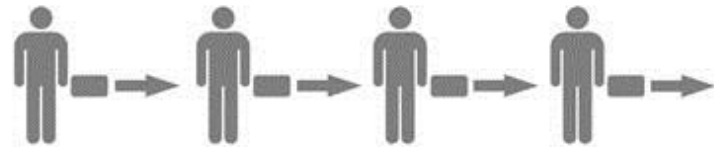
1. Совместно-взаимодействующий



2. Совместно-индивидуальный



3. Совместно-последовательный



4. Совместно-творческий



Five imperatives of joint-creative activity

Basic values and principles that are obligatory for everyone who seeks to achieve a synergetic effect.

Individual creativity

- Continuous self-development of everyone on the basis of available best practices.
- Individual self-organization.
- Self-education as a way of life and self-realization.

Human capital

Social creativity

- Creation of new social institutions as tools for solving problems.
- Development / change of institutions based on collective self-organization and mutual trust.

Social capital

Cultural creativity

- Obtaining new cultural achievements (creation of works) of world level.
- Preservation of traditions, critical understanding of the heritage of mankind.

Cultural capital

Moral creativity

- Everyone's practical willingness to do good, not evil, in the most difficult circumstances.
- To strive in any situation to be a moral model – for yourself and for others.

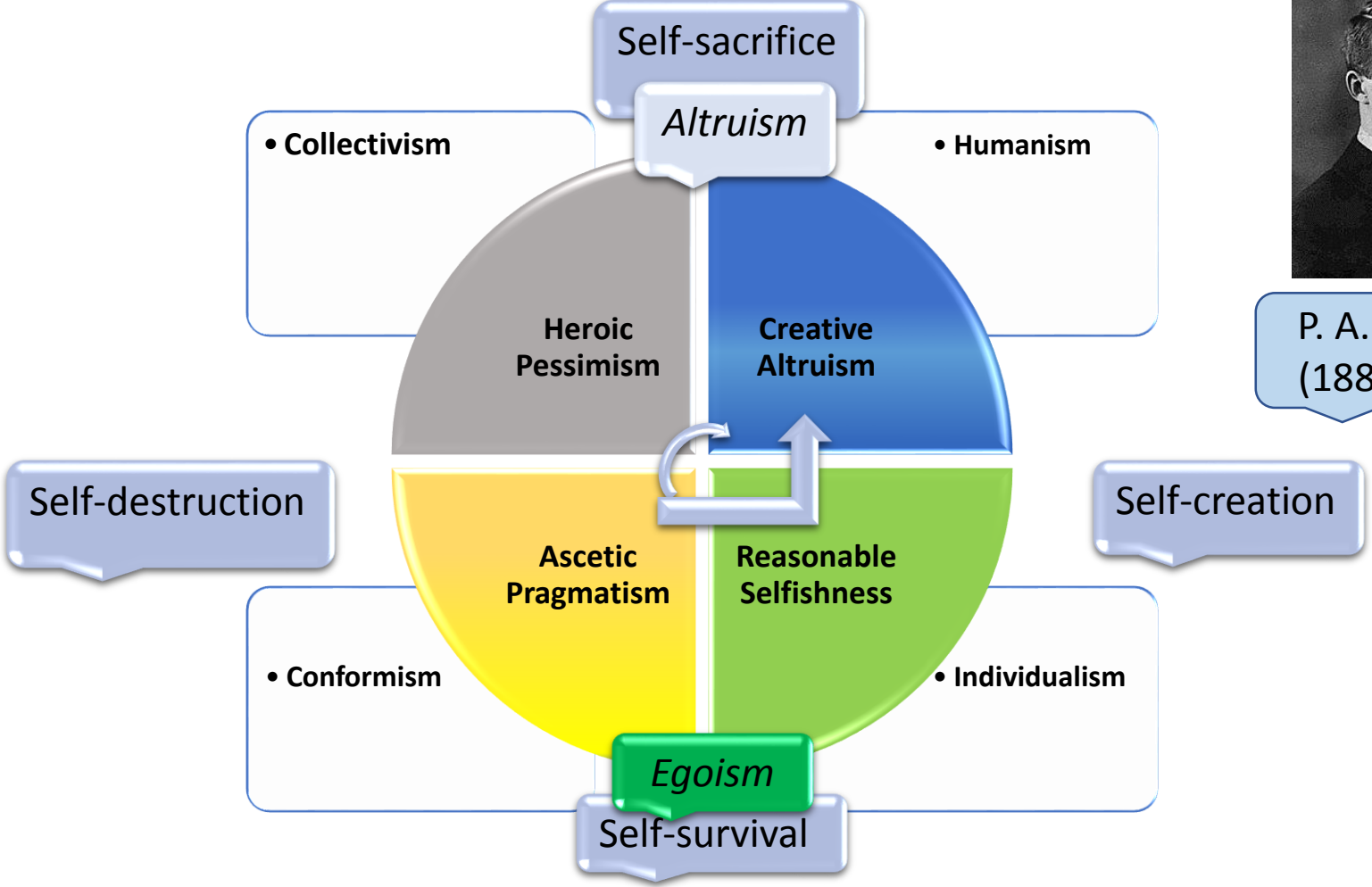
Moral (Reputational) capital

Spiritual creativity

- Climbing to the understanding of his mission.
- Creation of new values for humanity.

Spiritual capital

Moral tetralemma of joint-creative activity (P.V.Malinovskiy, 2003)



P. A. Sorokin
(1889-1968)

Thank you!

Questions???