Systemic Understanding of Trust and Ethics of Interdependence in Innovative Business [i]

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Abstract
Business practice proves: innovative business yields more value added than a routine-based one. Humans, enterprises and other organizations in business relations can from this viewpoint be business systems (BS). Organizations as BSs face important challenges, including: 1) How to satisfy demanding customers, and 2) How to make their own business requisitely innovative to make customers happier with it than with competitors. Synergy of findings about both challenges says: one-sided humans don't perceive their need for requisitely holistic thinking leading to cooperation and success. One should develop and maintain mutual trust beyond borders of single jobs / professions. Hence, one should consider mutual interdependence and synergy of (1) personality traits, (2) many cultures: professional, job, department, BS's, (6) local communities, (7) regions, (8) nations, and (9) beyond their borders. Ethic of inter-dependence leads to mutual trust. Trust can be abused, e.g. when one-way dependence and lack of reliability replace inter-dependences. Trust results from practical experience with positive outcomes of mutually complementing differences. They lead to informal systems thinking in decision-making and action resulting in requisite holism and BS's success.

Keywords: Ethics of interdependence, Innovative business, Socio-cybernetics, Systems thinking, Trust.

0   Introduction

Business practice proves that innovative business tends to yield much more value added than a routine-based or even a routine-loving one. Business systems (BS) (be them enterprises, individuals, regions, countries, etc.) face two important challenges, at least: 1) How to satisfy needs of demanding (potential) customers, requiring the best possible / total quality of supplies, and 2) How to make their own business requisitely innovative to make customers happier with it than with competitor's supplies. Let us define innovative business and its relations with (total) quality and systemic thinking, first, and then move to the role of trust and ethics of interdependence in it.

2   Innovative business and systems thinking

Innovation is defined as every novelty found beneficial in the experience of its users (EU, 1995; OECD, 1971; Mulej, Likar, Potocan, 2005). Or, in other words: Innovation = Invention + commercialization (Afuah, 1998). In the modern conditions the buyers'

market prevails. Therefore, innovation must be a permanent result of any BS trying to survive or even prosper in market (See: EU, 2000; Collins, 2001; EU, 2001; Bastic, 2002; EU, 2002; Rebernik et al., 2002; Rebernik et al., 2003; Potocan, 2004; Bastic, 2004; Florida, 2005; Rebernik et al., 2005). Thus, BS must run their business as an innovative business (Mulej et al., 1987; Mulej et al., 2000).

Innovative business can be simply defined by the following (interdependent!) five sentences (Mulej, Zenko, 2004; and earlier, e.g. Mulej et al., 1987):
1.   In principle, every cost is unnecessary, avoidable. In reality it is so, if we work smarter, not harder, and create innovations.
2.   Today, every product and process becomes obsolete, sooner or later. That's why we must know their life cycles, do research, do development (connecting research results with the daily needs and practices), create other inventions and make from them innovations as a new, useful basis of survival, on a continuous basis.
3.   Survival and therefore both good and poor work is everybody's business. Nobody, neither the superiors nor the subordinates, are entitled by their own life reality to be irresponsible and unmotivated for innovation.
4.   Therefore let us continuously, all the time and everywhere, search for possible novelties! Only a small portion of them may become inventions (= new, perhaps making sense and potentially useful ideas). From some of them, by (formal or informal) research and development, sometimes something both usable and new might be created, a potential innovation. Customers will accept only a fragment of them as useful and worth paying for, hence making a benefit to both customers and suppliers, therefore deserving the name of innovation.
5.   The entire business policy and practice is innovation-oriented, not just a fragment of it. We work as the smart and not as the crazy ones.

A further part of the essence of the innovative business is that the five sentences of its definition no longer apply to the producing part of the organizations only, but to all activities and all parts of life in all organizations. This makes an innovative society. The effort must be broadly disseminated and permanent, because the pressure of competitors is permanent, and for competitiveness the quality must be systemic. This includes surpassing the customers' expectations in terms of price, quality, range, uniqueness, and environmental care, as a dialectical system (See: Ecimovic, Mulej, Mayur, 2002). It is starting to include social responsibility, too (Hrast et al., 2006; Kovac, Rozman, 2006). The systemic quality is a demanding requirement of the modern market, which is impossible without continuous innovation. These demands are complex enough to require systemic thinking. See Figure 1.

No.	Systems / Systemic / Holistic Thinking	Un-systemic / Traditional Thinking
1	Interdependences, Relations, Openness, Interconnectedness, Dialectical System	Independence, Dependence, Closeness, A single viewpoint/system
2	Complexity (& Complicatedness)	Either Simplicity, or Complicatedness alone
3	Attractors	No influential force/s, but isolation

4	Emergence	No process of creating new attributes
5	Synergy, System, Synthesis	No new attributes resulting from relations
6	Whole, Holism, Big Picture	Parts and partial attributes only
7	Networking, Interaction, Interplay	No mutual influences

Figure 1: The Seven Interdependent Basic Sets of Terms of Systems / Systemic / Holistic vs. Unsystemic Thinking (as a dialectical system)

Therefore a practical transition from one-sided and routine-loving practice to systems/innovative practice in the daily experience of BS can normally not be attained, if there is no or poor interdisciplinary co-operation. In the case of the innovative business it includes technological and marketing researchers and developers, and all professions on shop floor and in other operation offices, as well as everyone with whom they connect to learn and develop more (Huston, Sakkab, 2006; McGregor, 2006). They are all interdependent – needing each other and needed by each other, because they are mutually complementary with some parts of their attributes. The process can, in terms of contents, be defined as an entity made of discovering and formulation of new ideas and of elaborating them in inventions, suggestions, potential innovations, and finally innovations and broadly diffused innovations becoming a beneficial routine, for a period of time. Later on, a new innovation replaces the previous one.

All process participants use their subjective starting points (knowledge, values, emotions, talents) and their objective starting points (needs in the market, possibilities in BS) in order to provide an innovative application of all the requisite and available knowledge, entrepreneurial spirit, entrepreneurship, co-operation capacity and ethics of interdependence. (Mulej, Kajzer, 1998; Potocan, Mulej, 2003; Mulej, Likar, Potocan, 2005). All of these attributes are complex enough again to require systems thinking, and they are also interdependent enough for it. See Figure 1 again.

3   Making of innovative business as the prevailing practice – the human part

In transitional countries, such as Slovenia, as well as in the more traditional areas inside the innovative countries (See: Dyck, Mulej, 1998; Gansel, Raith, Wilker, 2005; Spielkamp, Volkmann, 2005), making the innovative business the prevailing practice requires systemic thinking and practice about changes in the inherited culture and practice (See: Mulej et al., 1987; Mulej et al., 1994; Mulej et al., 2000; Odbor, 2005; Republika, 2005; Vlada, 2005). At least, it requires making and implementation in a harmonised working of both:

1) Institutional economic and legal order supportive of innovative business;
2) Innovation-friendly behaviour of decisive participants of innovative business.

Traditional economists tend to suppose that the institutional system alone is able to work (CJE, 2003; Odbor, 2005; Republika, 2005; Vlada, 2005; 2006; etc.) well enough. This may mean a misreading of the Adam Smith's invisible hand theory, which has presupposed moral sentiments as a basis of economic behaviour of people in market

relations; Smith meant consideration of interdependence rather than independence, too (Petzinger, 2000). Influential persons in BS tend to read the institutional systems measures from their own viewpoints. Thus, the business reality is not only based on economics, but to an equal level of importance on management and organisation of human relations. This experience makes business, including the innovative business, a socio-cybernetic topic.

In the innovative business, a central role belongs to co-operation and therefore to interdependence of the professional invention/innovation teams. They do not consist of the research and development professionals only, but marketing professionals, at least, must be equal-footed for teams to make inventions and make innovations from them. The tendency of growing specialisation made all professions, including the ones of these three groups (i.e. R, D, M), closed-in and disregarding interdisciplinary co-operation. (Barabba, 2004; Potocan, Mulej, 2003; Mulej et al., 2005) The contemporary need for requisite holism requires professionals to accept their practical interdependence and enter interdisciplinary co-operation concerning all the invention/innovation process and all resulting novelties – inventions, suggestions, potential innovations and, at the very end of this long and very selective process, innovations, and their diffusion in markets. Not even research, development, and marketing professionals are enough, all operation managers and professionals in production, design, finance, human resource services, law, etc, are equally unavoidable – for innovation to result. Even if their co-operation is quite holistic, everything cannot be foreseen and in every phase mentioned above a small portion of its results proceeds to the next stage. Stages do not follow each other in a simple linear style, but in interdependence: the later ones also impact the earlier ones, e.g. through expectations, estimations, future research, prognoses etc., not only by feedback feeding a next cycle.

In the briefed invention/innovation process very different people show up, per functional areas, professions, human personality attributes, values, etc. (Treven, Mulej, 2005). Thus, leading them and managing their different cultures (See Fig. 2) is difficult.

Individual values (interdependent with knowledge)	_	Culture = values shared by many, habits making them a round-off social group
_		_
Norms = prescribed values on right and wrong in a social group	_	Ethics = prevailing values on right and wrong in a social group

Figure 2: Circular interdependence of values, culture, ethics, and norms

Managers must become leaders, i.e. co-operation-friendly rather than commanding, to attain more of the requisite holism (Creech, 1994; Mogensen, 1980; NYSE, 1982; Peters, Waterman, 1982; Peters, 1985; Peters, 1995; Peters, 1997; Potocan, 2004; Rozman, Kovac, 2004). This requirement to owners and managers has been raised for eight decades since the first Mogensen's publication, but again and again new methods had to be invented all way to e.g. Business Reengineering and Twenty Keys etc. of today – to fight the bosses' desire to give no authority up and still have many creative ones in their

personnel (See: Peters, 1997; Potocan, 2003; Ojasalo, 2004; Scott, 2005). Attributes in Fig. 3 and 4, at least, need consideration

Psychological Sources of Cultural Differences	Sociological Sources of Cultural Differences	Economic Sources of Cultural Differences
Individualism : Collectivism Big : Small risk avoidance Big : Small power distance Masculinism : Feminism	Social structure of society Religion Language Education	Economic philosophy Political philosophy Communication Management style

Figure 3 Three interdependent groups of sources of cultural differences

Leaders' competencies to act about psychological sources of cultural diff.	Leaders' competencies to act about sociological sources of cultural diff.	Leaders' competencies to act about economic sources of cultural diff.
To not close oneself into own values, by listening to other opinion To get accustomed to others (empathy) To accept the change of the viewpoint in the discussion (own and of the others) Curiosity for other cultures Tolerance to everyone, self-control, patience Ability to trust and to be honest, worth trusting	To accept, that your values, knowledge and comprehension are relative To be adaptable To bi tolerant to ambiguity To develop bridges regarding language questions To solve conflicts Personal relations To re-establish common culture of nations and similar Diplomatic treatment	All members of the team have influence The group should meet on different places, which have different cultures Heterogeneous ideas Experiments and mistakes Common visions and aims Understanding aims of all participants of the process Willing to cooperate

Figure 4: Framework for mastering the cultural differences in e.g. international business networks

Bosses must change / innovate themselves to become role models of co-operation based leadership. Psychology demonstrates that this can be done: nearly two thirds of humans seem to behave in the "wait-and-see" passive and adaptive style, one sixth of humans are willing to take risk and co-operate, only the remaining one fifth are free-riders (Lester, 2005). Thus, the old Mogensen's experience is back: if bosses behave in a commanding style, they can get from their subordinates a small fraction of their real capabilities, including creativity. But co-operative bosses gain much more of enthusiastic values and creative capacities.

Hence, the first socio-cybernetic issue in this framework is bosses' self-transformation from managership to leadership (Creech, 1994); it tackles values management rather than knowledge management only, and reaches beyond motivation to personality (re)formation and (re)education. (See: Balgiu, 2005; Loeckenhoff, 2005; Menanteau, 2005; Potocan, 2005; Scott, 2005) Afterwards, managers – leaders can start developing their personnel's capacities of creativity and co-operation. Both is difficult, especially

when education includes no or poor insight into other professions with whom a businessperson, a lawyer, or an engineer, etc., will co-operate in practice. Education in systems theory is missing, too. Thus, cultural differences need a bridge. And people must learn to use it.

The model »Global Leadership Competencies« (Moro Bueno, Tubbs, 2004) can help one's persistence in developping oneself's and others' capability of co-operation over the boarders of different cultures (their case tackles international co-operation of firms) over several stages:
1st stage: *Ignorance:* When diverse cultures face each other, one knows nothing about them. Every party considered its own behavior correct and best.
2nd stage: *Awareness:* During contacts of diverse cultures, impressions begin to be created, and links begin to evolve. One becomes aware of importance of exchange.
3rd stage: *Understanding:* Individuals start showing a conscious effort to find out why people are as they are, and do what they do. They start developing some feeling for the other culture/s and some tolerance for the new way of behavior.
4th stage: *Appreciation:* Individuals are really tolerant to views different from their own. They start to appreciate and perhaps even prefer some views of the other culture/s.
5th stage: *Acceptance/Internalization:* Chances for cultures' mutual impacts grow a lot. People start to respect and to really accept their understanding of the other culture/s. They start to comprehend that diversity, globalization, and competition from the other parts of the world is a fact.
6th stage: *Transformation:* Globalization becomes way of life. Situation is well described with notions including: professionalism, adaptability, equilibrium, broad-mindedness, and internationalism. Fear from new and different things is off. On the contrary, one is interested in trying new and different things. Capacity to accept others' attributes is growing.

Cultural differences belong to central social and economic issues (Ojasalo, 2004). This author suggests the following three framework steps in mastering them:
1. Recognizing different cultures showing up in a business network;
2. Recognizing the most crucial differences between cultures;
3. Creation and application of ways to master cultural difference.

He suggests one should use three groups of sources of cultural differences: see Figure 3 (adapted by grouping of sources). To master differences, managers must (1) first discover (1.1) who are individuals with impact in the network, and (1.2) what are their cultures. Then they must (2) discover (2.1) what relations exist between influential network members, (2.2) relations between cultures, (2.3) cultural differences inside relations between cultures, and (2.4) pay attantion to sources of differences (in Fig. 3). In order to be able to (3) develop and apply ways to master intercultural differences, one can receive help from experiences and skills concerning competencies in Fig 4 (See also: Potocan, Mulej, 2003; Rosi, 2004; Treven, Mulej, 2005; Udovicic, 2004).

Attributes in Figure 4 lead to informal systems thinking summarised in Figure 1 due to interdependence of values, culture, ethics and norms summarised in Figure 2.

4 Conclusions

Synergy of findings in Fig. 1, 2, 3, and 4 says, in terms of the topic of this contribution, that one needs systemic thinking to develop and maintain mutual trust beyond borders of single cultures. In this effort, it makes sense to consider mutual interdependence and synergetic effects of (1) personality traits, (2) professional cultures, (3) job cultures, (4) department cultures in a given organization, (5) cultures prevailing in organizations at large, (6) in local communities, (7) in regions, (8) in nations, (9) beyond their borders.

In this framework it is ethic of inter-dependence, which fortifies bases for mutual trust. Then, trust results from practical experience with positive outcomes of mutual complementing by mutual differences. This leads to (informal) systems thinking – left column in Figure 1 – and applies to decision-making and action as well.

Last, but not least: in recent European Experience, the tendency toward innovative business provides room for several cultures to help Europe to unite more than over the recent centuries. A shared worldwide model of innovative society, based on innovative business prevailing, is still quite far from an obvious reality.

References:

1. Afuah, A. (1998): *Innovation Management.* Oxford University Press, New York.
2. Balgiu, B. (2005): Psychology Perspective on the Inventor's Personality. In: Buchinger, E., Hornung, B., Geyer, F., Dijkum, van, C. (eds.): *Proceedings of the 6th International Conference of Sociocybernetics,* ISA, RC 51, SDSR, FEB.
3. Barabba, P. (2004): Surviving Transformation. Oxford University Press, Oxford.
4. Bastic, M. (2002): Analiza slovenskih novih izdelkov z okoljskega vidika (in Slovene). *Nase gospodarstvo*, Vol. 48, No. 3-4, pp. 249-260.
5. Bastic, M. (2004): Success factors in transition countries. *European journal of innovation management*, Vol. 7, No. 1, pp. 65-79.
6. CJE (2003): Proceedings. Cambridge Journal of Economics. Cambridge.
7. Collins, J. (2001): *Why some companies make the leap... and others don't.* Random House Business Books, Sydney.
8. Creech, B. (1994): *The Five Pillars of TQM.* Truman Talley Books, Dutton.
9. Dyck, R., Mulej, M. (eds.) (1998): *Self-Transformation of the Forgotten Four-Fifth.* Kendall/Hunt, Dubuque.
10. Ecimovic, T., Mulej, M., Mayur, R. (eds.) (2002): *Systems Thinking and Climate Change System.* SEM, Korte.
11. EU (1995): *Green Paper on Innovation.* www.cordis.lu/cordis/grnpaper.html.
12. EU (2000): Innovation in a knowledge-driven economy. Commision of the European Communities, Brussels.
13. EU (2001): European trend chart on Innovation. European Commission, Directorate-General for Enterprise, Brussels.
14. EU (2002): Innovation tomorrow. Innovation policy and the regulatory framework. Innovation papers No 28. Louis Lengrad & Associés, PREST, ANRT. Directorate-General for Enterprise, Luxembourg.
15. Florida, R. (2005): *Vzpon ustvarjalnega razreda. In kako ta spreminja delo, prosti cas, skupnost in vsakodnevno zivljenje* (in Slovene). IPAK, Velenje.
16. Gansel, B., Raith, G., Wilker, M. (2005): Die Hochschule als regionaler Impulsgeber fuer Unternehmensgruendung. In: Schwarz, Harms, quoted here, pp. 53-72.

17. Hrast, A., Mulej, M., Knez-Riedl, J. (eds.) (2006): *Konferenca Druzbena odgovornost in izzivi casa 2006. Zbornik.* IRDO – Institut za razvoj druzbene odgovornosti, Maribor

18. Huston, L, Sakkab, N. (2006): Connect and Develop. Inside procter & Gamble's New Model for Innovation. *Harvard Business Review*, March, pp. 1-8

19. Kovac, J., Rozman, R. (eds.) (2006): *7. znanstveno posvetovanje o organizaciji: Druzbena odgovornost in etika v organizacijah. Zbornik referatov.* Univerza v Mariboru, Fakulteta za organizacijske vede Kranj, Univerza v Ljubljani, Ekonomska fakulteta, Zveza organizatorjev Slovenije Kranj

20. Lester, G. (2005): Researchers Define Who We Are When We Work Together. *Complexity Digest*, 2005, Vol. 05.

21. Loeckenhoff, H. (2005): Innovation for Societal Evolution: A Transdisciplinary Approach to Guided Change. For data on publication see: Balgiu.

22. McGregor, J. (2006): The World's Most Innovative Companies. *BusinessWeek*, April 24, pp. 63-74

23. Menanteau, D. (2005): From Innovation to Sociocybernetic Transformation. For data on publication see: Balgiu.

24. Mogensen, A. (ed.) (1980): *Work Simplification.* Lake Placid, NY.

25. Moro Bueno, C., Tubbs, L. (2004): Testing a Global Leadership Competencies (Glc) Model. *The Business Review*, Vol. 1, No. 2, pp. 11-15.

26. Mulej, M. (and co-authors) (1987): *Innovative Business (In Slovene).* GV, Ljubljana.

27. Mulej, M. (and co-authors) (1994): *Innovation Management: Innovation of Management (In Slovene).* FEB, Maribor.

28. Mulej, M. (and co-authors) (2000): *Soft Systems Theories as a Basis of Successful Management (In Slovene).* FEB, Maribor.

29. Mulej, M., Kajzer, S. (1998): Ethics of Interdependence and the Law of Requisite Holism. In: Rebernik, M., Mulej, M. (eds.): Proceedings of STIQE. ISR, Maribor.

30. Mulej, M., Zenko, Z. (2004): *Introduction to Systems Thinking with Application to Invention and Innovation Management.* Management Forum, Maribor.

31. Mulej, M., Kajzer, S., Potocan, V., Rosi, B. (2005): Requisite Holism by Co-Operation of Systems Theories. In: *Proceedings of The WOSC and The 6th International Conference of Sociocybernetics.* FEB, IESM, Maribor.

32. Mulej, M., Likar, B., Potocan, V. (2005): Increasing the Capacity of Companies to Absorb Inventions from Research Organizations and Encourage People to Innovate. *Cybernetics and Systems,* Vol. 36, No. 5, pp. 491-512.

33. NYSE (1982): *People and Productivity.* New York Stock Exchange, New York.

34. Odbor za reforme (2005): *Predlog konceptov ekonomskih in socialnih reform za povecanje konkurencnosti slovenskega gospodarstva (in Slovene).* Ljubljana, 6. oktober 2005 (multiplied).

35. OECD (1971): *Frascati Manual.* OECD, Paris.

36. Ojasalo, J. (2004): A Framework for Managing Cross-Cultural Differences in International Business Networks. *The Business Review*, Vol. 1, No. 2, pp. 77-83.

37. Peters, J., Waterman, R. (1982): *In Search of Excellence.* Harpers, Row, New York.

38. Peters, T. (1985): *A Passion for Excellence.* Random House, New York.

39. Peters, T. (1995): *The Pursuit of WOW.* MacMillan, New York.

40. Peters, T. (1997): *The Circle of Innovation.* Alfred A. Knopf, New York.

41. Petzinger, T. (2000): *The New Pioneers.* A Touchstone Book, New York.

42. Potocan, V. (2003): *Business Organization (in Slovene).* Doba, Maribor.

43. Potocan, V., Mulej, M. (2003): On Requistely Holistic Understanding of Sustainable Development from Business Viewpoints. *Systemic Practice and Action Research*, Vol. 16, No. 6, pp. 421-436.

44. Potocan, V. (2004): The Role and Importance of Trust in Organization. *Organization,* Vol. 37, No. 9, pp. 537-541.

45. Potocan, V. (2005): Efficiency or Effectiveness? *Organization*, Vol. 38, No. 10, pp. 570-576.

46. Rebernik, M., Mulej, M., Rus, M. (eds.) (2002): *Zbornik posvetovanja 23. PODIM – Podjetnistvo, inovacije, management (in Slovene). FEB, SDSR, Maribor.*

47. Rebernik, M., Mulej, M., Rus, M. (eds.) (2003): *Zbornik posvetovanja 24. PODIM – Access to resources for Invention Transfer.* FEB, SDSR, Maribor.

48. Rebernik, M., Mulej, M., Rus, M. (eds.) (2005): *Zbornik posvetovanja 25. PODIM – Shaping the Environment for Innovation Transfer.* FEB, SDSR, Maribor.

49. Republika Slovenija (2005): *Strategija razvoja Slovenije (in Slovene*). Vlada RS, 23. 6. 2005 (multiplied), Ljubljana.
50. Rosi**,** B. (2004): *Prenova omreznega razmisljanja z aplikacijo na procesih v zelezniski dejavnosti* (Dr. Diss.) (in Slovene). FEB, Maribor.
51. Rozman, R., Kovac, J. (eds.) (2004): *5. znanstveno posvetovanje o organizaciji: Zaupanje v in med organizacijami (zdruzbami) (in Slovene)*. FOV, EF, Brdo pri Kranju.
52. Schwarz, J., Harms, R. (Hrsg.) (2005): *Integriertes Ideenmanagement.* DUV, Wiesbaden.
53. Scott, B. (2005): Facilitating Organizational Change. For data on publication see: Balgiu.
54. Spielkamp, A., Volkmann, C. (2005): Fuehrungsinstrumente im Innovationsmanagement kleiner und mittlerer Unternehmen. In: Schwarz, Harms, quoted here, pp. 267-290.
55. Treven S., Mulej M. (2005): A requisitely holistic view of human resources management in innovative enterprises. *Cybernetics and Systems,* Vol. 36, No. 1, pp. 45-63.
56. Udovicic, K. (2004): *Metode nematerialne motivacije za inoviranje managerjev v tranzicijskem podjetju (Dr. diss.) (In Slovene)*. FEB, Maribor.
57. Vlada Republike Slovenije (2005): *Predlog Resolucije o Nacionalnem raziskovalnem in razvojnem programu za obdobje 2006 – 2010 (in Slovene)*. Ljubljana, julij 2005 (multiplied).
58. Vlada (2006): *Program ukrepov za spodbujanje podjetnistva in konkurencnosti za obdobje 2007-2013.* Vlada RS, Ljubljana.