



Complexity in a business

COMPLEXITY:

What is it? How to beat it!

business, systems approach, complexity, dynamics, future development, change, uncertainty, decisions, probability, risk, speculation, strategic states, generic targets, standards, Taylorism and thereafter, business 2.0, problems and solutions, empirical theory and best practice, leadership

COMPLEXITY: Buzz-word or Biz-word?

It is generally agreed, that a business is a complex undertaking and a complex system [1]. This is not surprising, because a business or an enterprise is regarded as a four(or more)-in-one system, made from at least four poorly compatible disciplines, namely economy, technology, sociology and psychology (this particular order reflects the current paradigm!). But there is little agreement about complexity. There is common lack of definition and understanding. What is complexity? Complexity is best being defined in the framework of a specific content; otherwise its definition is rather useless. The widely used metaphors to explain complexity, like a quantum statistical system or the evolution of life is not exactly helpful to gain further insight. A knowledge transfer from evolutionary biology or statistical physics or some other buzz to a biz like a giant car wash company or a mobile communications network provider is a nice challenge anyway. But does it really help?

What else is said about complexity?

- Complexity is difficult to understand.
- Complexity is difficult to manage.

This attribute “difficult” makes complexity a subject for experts.

What is the conclusion about complexity so far?

- Complexity is complex; a popular but useless self-referring statement.

Self-reference is a better sounding synonym for “I really don’t know.”

Obviously complexity is really a big problem for businesses. Numerous solutions for this problem for complexity are proposed. Many of these solutions are just a verbal claim without any proof.

Complexity and complexity management are worth to be looked at in more detail.

COMPLEXITY: Empirical Observations

The word complexity is creating a perception of certain states of the business. Asking managers, “How do you perceive complexity in your business?” will give you answers like that:

- “I see many alternatives.”
- “I see fast dynamics.”
- “I see big change.”
- “I see chaotic behavior.”
- “I see loose logic everywhere.”
- “I see changing logic everywhere.”
- “I have too much information.”
- “I don’t see what is going to happen next.”
- “I don’t see structure.”
- “I don’t see what is the best thing to do next.”
- “I don’t have the full information.”
- “I don’t have the correct information.”
- “I don’t have the information I really need.”
- “I am not sure.”
- “I am not convinced.”

These are pretty familiar statements. Obviously, the managers are in a principal dilemma with complexity.

COMPLEXITY: Theoretical Considerations

Complexity in business can be defined in rigorous terms [2], or a - bit simpler - described on a phenomenological (describing a phenomenon, which can easily perceived) basis as follows:

Complexity is the root cause of the uncertainty of the future development of a system. Uncertainty is the primary effect of complexity.

This definition has the following implications. Complexity is about:

- information and knowledge
- future
- uncertainty
- risk
- speculation

Complexity is found in systems which:

- are dynamic
- consist of many elements with many relations
- have open borders towards their environment



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- do exchange of something with their environment
- exhibit varying relations among their elements
- undergo irreversible change
- have many possibilities for change
- change their rules irregularly

Replacing the word “system” with “business” in this definition and in these statements does transfer the context from a general system theory to a specific business practice.

Taylor style management did address complexity in business by focussing on details and isolating elementary facts. A complex system like a company was usually divided up into the smallest bits and pieces, which were “scientifically” analyzed, measured, improved, optimized, documented and standardized in order to be re-used and re-peated.

Post-Taylor style management (some may prefer to call it business 2.0 or management 2.0) addresses complexity in a very different way, which is characterized as follows:

- new relations are identified and used
- synergy effects are searched for and exploited
- strategy is given high priority
- environment is considered as well
- context becomes high importance
- interdisciplinary approach is preferred
- total view becomes more important than detailed perspective
- information is interacting with knowledge
- and more ...

COMPLEXITY: Practical Conclusions

Business needs practical solutions to deal with complexity. Managing complexity does not mean to suppress complexity completely. This is impossible. Managing complexity means to live with complexity. Managers need brains-on and hands-on advice and tools to do so. The following concepts and measures help managers to address the phenomenon of complexity:

- a framework of standards
- stability from fixed points in the future, acting as attractors
- criteria for decisions and actions
- strategic directions to set and to follow
- unambiguous communications
- transparency of relations
- strategy rather than operations

- action to follow strategy to follow goal
- new relations, which drive change
- feedback controlled processes
- and more ...

Most of these concepts and measures were derived from Post-Taylor management ideas. All of them are linked to Post-Taylor management ideas.

COMPLEXITY: Practical Solution

The recommendations how to cope with complexity by using new approaches has recently been applied by Hagmayer et. al. [3] to strategic and normative leadership. Strategic and normative leadership is focussing on immaterial business issues an values, like potentials of the organization and behavior of the people in and outside the organization. The concept of a fully standardized framework of operational, respectively financial accounting has successfully been transferred to accounts for strategic and normative issues. A generic management of immaterial targets has been facilitated. Strategic and normative states are successfully controlled by feedback regulated processes. Further transparency is put in place by using a standardized vocabulary and grammar for communications. The use of standards is complemented by a set of stable and generic targets. New cause – effect relations, which drive the overall performance of the organization, have been identified and used. The strong role of strategy has been recognized. Hagmayer established Leadership Intelligence as a solution with strong links to Post-Taylor management. Note, that this solution is available and in practical use.

References for further Reading

[1] brand eins - Wirtschaftsmagazin: Komplexität: 8. Jahrgang, Heft 01, Januar 2006

[2] Peter Meier, t. b. published elsewhere

[3] Harald Hagmayer und Ralph Zürcher "Leadership Solutions - Schneller und nachhaltiger Unternehmenserfolg durch strategische Führung"; CM Controller Magazin (Spezial: Business Intelligence - Lösungen für Controller); 33. Jg., Ausgabe 3, S. 6; Verlag für ControllingWissen AG, Freiburg, 2008 [ISSN 1616-0495] (available on request from service@communic.eu)