Extended Abstract

Information dynamics, self-organization and the implications for management

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I start with a brief summary of kinds of information used in science, showing how they are nested (or hierarchical), with inner kinds inheriting properties of the outer kinds. I further argue that within each kind there is also hierarchical organization, and that the major kinds are distinguished by their dynamics, not just being ordered in a hierarchy. Next I argue that similar rules that apply to non-equilibrium thermodynamics apply also to information systems, and give some examples of resulting self-organization, or what we have called "rhythmic entrainment" [1]. I point out that entrainment that results from properties within a system are more efficient than ones that are entrained by outside forces. This also gives a sort of resilience to such systems, and in higher kinds of information allows for self-adaptation via accommodating both external forces and internally generated forces. I then apply these lessons to management and argue that the most efficient and creative form of management comes not from severe control from the top, or from imposed "efficiency" but through self-organization allowed by a low degree of control and the encouragement of diversity. This form of management I call *facilitation*. There may be specific people assigned a facilitation role, but this is not required; any member of a group can act as a facilitator. What is required, however, is that members of the group are accustomed to being open-minded and flexible. This form of management is most compatible with anarchism as a political (and management) theory, but has benefits in pretty much any political system. I then go into some complications of this view and some of their consequences.

References

1. Collier, J.D..; Burch, M. Order from Rhythmic Entrainment and the Origin of Levels through Dissipation. *Symmetry: Culture and Science Order / Disorder, Proceedings of the Haifa Congress* **1998**, *9*, 165-178.

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