

Compression Thinking Lexicon of Terms and Phrases

(Work in Progress)

The business, economics, and trade press is filled with different terms used to mean almost the same thing, and the same term often means different things depending on context. Compression ranges through several fields of thought, but the business and behavior terms seem to dominate this first pass developing at lexicon. It is pretty bare-bones, so we can add to it.

Absolutism: The belief that any system of thought is absolutely correct, complete, and adequate for all purposes. Such a belief is an obvious constraint on learning.

Assumptions, hidden: Ideas or conditions that we accept as “given” when analyzing issues or problems, and may not be aware of it. “How things are” being our normal experience, we forget we’re assuming “normal.” (Formal science terms these “axioms.”)

Behavior: The emotional or motivational aspect of how we think, and how we influence each other. This obviously affects what we do, but mechanical human work procedures are often described or analyzed independently of any emotional content.

Behavior for Learning: Collective objectivity – patterns of behavior that stimulate both collective and individual learning. Ability to control emotions in order to agree on facts, resolve issues, mentor others, and be mentored by them, commonly illustrated in a limited way by ability to concentrate on improving a business model or work process, not “who shot John.” Sounds easy; takes practice. (See Culture.)

Biomimicry: Designing products or processes using ideas garnered from observations of phenomena in nature. Usually done to replicate unusual properties (like adhesion of gekko feet) or to minimize use of resources.

Bonding, group: A feeling of confidence or trust among members of a group, which depends on prior experience with each other. Members of the same credit union have an affinity, not a close bond, whereas members of a SWAT team must trust others with their lives, so either they form a close bond, or have trouble performing. A close bond is a major ingredient in “high morale.”

Business Model: A structure or network of activities that is intended to take in more cash than is spent. Applies to business, but non-profit and government organizations may also have business models. “Giving away razors to sell the blades” is a well-known example. May also be discussed as a business strategy.

Business Process: Usually a structure or network of activities directly related to money flow in an organization – as distinguished from a production process, learning process, natural process, etc.

Compression: Refers to resource limits, locally and globally, that require us to learn to do more while using less, and that in turn to require us to simplify the complexity and waste in work processes in order to decrease resource use. Non-growth, at least in the

traditional sense, is also a form of Compression. Tightening learning networks is a form of it. Many physical processes involving compression are analogies.

Compression Economics: Both macro and micro economic concepts based on the assumption that resources are finite in supply, and that economic growth based on ever expanding use of them cannot continue.

Compression Thinking: Learning to think about these issues in a practical sense in order to make headway is head turning. One has to devise remedies case by case based only on a few principles, and that requires Compression Thinking.

Continuous Improvement: Always making improvements in work processes. Usually these are considered small-step, not major innovative shifts, but sometimes a series of small-step improvements adds up to a major change.

Constitution for Learning: Most governments today operate from a constitution, a set of agreed ways for people to make collective decisions and resolve differences. A constitution for learning is a set of practices to agree on facts, analyze problems, and resolve issues where personal interests may be affected. (See Wicked Problems.) To have a constitution, people must share some of the same beliefs and values.

Culture: In an organizational or social sense, culture is the set of common values, beliefs, behaviors, and assumptions that are the basis for group affinity.

Deduction or Deductive Thinking: In general, form a theory or concept of how things work; then test the hypothesis. Science is usually explained as hypothesis testing. See Induction.

Dialog: Engaging in discussion as equals. Listening to other views.

Dis-economy of Scale: Becoming too big to function efficiently by the present methods.

Double Loop Learning: Seeking the antecedents of a problem and seeking a more permanent fix by correcting an antecedent condition. (Asking lots of whys to get to root cause.)

Economy of Learning: Structuring a situation or an organization to learn at maximum speed. Learning to fix problems before they happen. Learning to seek root causes. Setting up processes so as to learn more about them as they operate. Clarifying and codifying what is learned so that others, if attentive, can learn too. (Not making the same mistakes over and over.)

Ecosphere: The thin layer of the earth from several meters below ground to 20,000 meters or so above ground, where nearly all biological processes take place.

Enterprise: When applied to an individual, it is energy, initiative, and imagination – especially of a practical sort. Applied to work organizations, it encompasses all layers of suppliers to a core group and all layers of customers from it. A total “supply chain.”

Entrepreneur: Someone who forms an organization, usually a business. Some may form a new business inside a large company and be called “intrapreneurs.”

Expansionary Economics: Traditional macro or micro economics which assumes growth and expansion, assuming that in the long run resources are unlimited, or that limitations can be circumvented by substitutions.

Explicit Learning or Explicit Knowledge: That which can be reduced to text, graphics, computer codes, or other symbology, and frequently can be transmitter in that way. (See Tacit Learning.)

Feedback Loop: Conditions sensed in a process and fed back to its controller. See Learning Loop.

Footprint, resource: The quantity of energy or materials required to bring a product or processes to its present state (also called “emergy” or embodied energy by H. T. Odum). Sometimes it’s only the current energy or materials used by a process. The most popular version of this is the carbon footprint, which is only part of any total resource footprint. (See life cycle analysis.)

Framing (a problem or issue): The context including preconceptions from which we think about a problem or issue and draw conclusions. Framing has been popularly used to denote changing a conversation in order to “re-frame” an issue -- look at it from another viewpoint, a method well known to ad writers and PR executives. “Framing” is associated with the work of George Lakoff.

Goal, common: A specific objective that aids an organization to carry out its primary social mission. For example, a health care organization might have three sub-goals to its mission of improving quality of life: 1) Discharge patients healthier than when they came in. 2) Conduct mental and physical preventive health programs for the community. And 3) Improve the work life and capabilities of staff and other stakeholders.

High-Context Culture: Group tendency to see background in detail before focusing on some central interest. Very relationship oriented, and not time-oriented in human interaction. Tend toward Inductive Thinking.

Induction, or Inductive Thinking: Deriving hypotheses or drawing conclusions from observations rather than having an initial predictive concept in mind for testing. Both induction and deduction are scientific in the sense that the hypothesis has to be validated by actual observation. The difference is in how hypotheses or concepts are developed. (Philosophy of science flounders around with induction and deduction every which way.)

Industrial Agriculture: The kind of agriculture that has been made possible by equipment, machinery, and technology – usually much larger in scale than small holder pre-industrial agriculture.

Industrial Society: The kind of society that has been made possible by industry consuming large quantities of resources. Most of it consists of services enabled by industrial and technical development, not just manufacturing per se.

Innovation: Something that enters accepted use that has not been seen or done before. A substantial deviation from prior practice, or big-step improvement as contrasted with small-step continuous improvement.

Learning Loop: Feedback from a process that is used to correct errors (single loop learning) or to prevent their recurrence (double loop learning). See Precursor Learning Loop.

Learning Organization: One that emphasizes learning and improvement, although almost any viable organization must learn and adapt a little. (See Vigorous Learning Organization.)

Life Cycle Analysis: The analysis of the functions and resource footprints of a product or process from birth to death – or birth to rebirth in some form. Generally done to maximize service over a life cycle while minimizing consumption of resources and generation of toxic releases.

Low Context Culture: One in which members are less aware of background conditions, but concentrate on objects or objectives of primary interest. Members tend to be less relationship oriented and more time-oriented – “all business” in demeanor.

Messy Problem: An early phrase from Russell Ackoff meaning a Wicked Problem.

Meta-Perception: Ability to see a system as if from outside looking in. See yourself as others see you. Project far into the future, imagining what will be, or what can be. See the interconnections between processes, so as to track causal chains of logic. See events and factors far removed from one’s immediate environment.

Mission, common: The primary social role or purpose of an organization’s existence. For example, the mission of a health care organization is simple: Improve the quality of life of all whom it serves. A good mission should partly bind people together in a common cause, but it is usually general and has to become more specific with sub-goals.

Neural Learning: The mechanism by which our brains learn. In general, our neural circuitry has to be re-trained to handle news tasks. This does not occur without either a deep learning experience or much repetition before a new concept becomes “automatic.”

Precursor Learning Loop: When possible, anticipating what can happen or go wrong, and precluding it before it does. An objective of a vigorous learning organization is to learn how to better anticipate what can go wrong as new processes are developed.

Quality of Life: Measuring or judging human welfare by subjective, qualitative measures and not just quantitative ones like income. The United Nations, World Bank and other organizations have for years rated quality of life based on access to potable water, fairness of a judiciary system, freedom from disease, quality of nutrition, and so on. This is sometimes called well being, but much data is kept under the heading quality of life. In industrial countries, quality of life is most often used to adjudge the status of those who have debilitating diseases or other medical conditions.

Quality before Quantity: A phrase that in many people evokes giving long-term service or outcomes priority over short-term gains or fixes. Also captured by, “First do the right thing; then do the right thing right.”

Rigorous Learning Systems: The logic based on scientific method (such as PDCA) that is learned and practiced by all members of an organization, so that it is a basis for a common communication system learning directly from what they actually do. Systems may be adapted to the technology and environment of the organization. Also refers to a knowledge documentation system that everyone inputs findings to, and refers to first when faced with a problem. Should be able to access expert people, plus locate almost any relevant external information wanted.

Scientific Method, or Scientific Thinking: Everyone learns some version of this in school, and the pattern is promoted in work places as PDCA, DMAIC, 8D and other step-wise systems. In short, seek facts as best you can determine them and abide by the facts in making decisions or solving problems.

Servant Leadership: An attitude. Putting an organization’s mission, continuation, and welfare of its stakeholders before your own. Aggressively developing the abilities of others. Not egotistical, but willing to take responsibility. Depends on facts.

Stakeholders: Those who have a direct tie with some working organization as employees, investors, suppliers, customers, and communities in which they operate. Taken to the ultimate, the ecosphere is a “stakeholder” with needs that should be satisfied too.

Sustainability: The ability of any process or organization to continue. Today, sustainability often means environmental sustainability, meaning to keep the earth in a state in which humanity can survive on it.

Systems Thinking: Looking at connections and interactions between parts as a whole, not just parts. Big picture. Holism. Meta-vision. Etc.

Tacit Knowledge: Knowledge than can only be completely learned by doing, like swimming and riding a bike, but it also applies to learning read people or situations, like understanding when to not to accept an offer because too few specifics have been revealed to you.

Tribalism: The tendency of the human race to cluster in ethnic groups and be suspicious of antagonistic with those outside it. Similar tendencies abide between people in different companies, departments, and professional specialties (silos). Bridging these gaps is one of the challenges of getting an organization to unify around a mission and goals.

Vigorous Learning Enterprise: A collection of vigorous learning organizations that assist each other, or that work together on the same programs, projects, or products.

Vigorous Learning Organization: An organization that quickly absorbs learning from outside, and discovers new knowledge itself. Plus, it quickly refines waste out of internal

operations. “Vigorous” suggests an organization that does things, not an institution for strictly vicarious learning.

Value Stream Map: As used in lean operations, this is a flow chart of some value-adding part, product, or process – in part or (rarely) as a complete life cycle map. The length of a value stream map is one indicator of whether thinking is advancing toward dealing with Compression, or stops with whatever boundary is designated for transactional exchanges.

Wicked Problem: One in which human interests conflict, and facts may be so obscure (or not accepted) so that people can’t even agree that a problem exists.