



ENTROPY

A FACTOR FOR CHANGE

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GOALS

1. Understand the implications of entropy within the work setting
2. Develop methods for leadership that will help prevent excessive entropy

KEY WORDS FOR APPLICATION

1. Erosion
2. Inevitable Change
3. Disorder
4. Documented Control
5. Employee Noncompliance
6. In-service Reminders
7. Mastery of a "Rolling Ship"

Erosion of everything occurs. The term for this uncontrollable change is called "entropy." Everything in the world goes through the entropy process; that is, everything decays-- a change to be less or different than the original. The understanding of the concept of irreversibility is the central theme. The concept involves a scattering in various directions, which causes a dispersion of all things.

Such a term (entropy) is often used in regard to an emphasis on uncontrollable disorder. Things do not remain in the original state or cannot be returned to the normal state. It is inevitable in all things because nothing ever stays the same, whether it is a choice or a natural happening. It is seen every day in work and expectations of others. Why should there be concern over uncontrollable change and disorder? Because, it can change drastically the desired and intended direction of an organization due to the randomness and confusion associated with aberrant misguided organizational behavior!

Prevention and the control of the extent and rapidity of the change is the only hope for the curtailment of entropy. We are living, breathing, responding individuals that are dynamic in the way we respond to the world. Through our knowledge of this process and our appropriate response to entropy we, as nursing leaders, have the key to organizational success.

Originally, the word "entropy" was a physics thermodynamics construct. That is, the concept took into consideration the change related to heat and mechanical energy/work and the conversion into one or the other. The concept is used (and not limited to) most disciplined areas, including psychodynamics, economics, evolution, health care, and informational theory.

METHODS TO SLOW ENTROPY

Every organization has documented expectations of employees known as job descriptions . Whatever the expectations are known to be, the leader is responsible for making sure that every employee knows these expectations and follows them. These expectations are safety valves that permit employees to practice safely within the organization with diminished health and organizational legal concerns.

Every employee will experience excessive entropy in the work setting (including the leader) unless the leader determines how to remind and reinforce the content of work expectations. The more employee *noncompliance* to these organizational expectations, the more effort is needed/required by a leader to slow the entropy process.

Some of the statements/documents/behaviors that help hold entropy in check are usually known as:

1. Policies and procedures
2. Rules and regulations
3. Accreditation requirements
4. Job descriptions/Performance standards
5. Mission statements
6. Organizational and personal philosophy
7. Organizational and personal objectives and goals
8. Scheduling of employees
9. Observation of performance
10. In-service meetings
11. On-call staff
12. Family support and expectations
13. Physical repairs on equipment and building
14. Satisfaction surveys

AND SO IT GOES—ON AND ON—NEVER ENDING

It is possible that an in-service meeting time could be used to reinforce expectations of job-related behaviors that could or are currently experiencing significant entropy. To further reinforce the topic(s) being discussed at an in-service meeting, it is important to have the attending employees:

1. Recognize the definition and occurrence of entropy
2. Verbally identify the unwanted occurrence(s) to the existing expected behavior that has undergone entropy
3. Verbally state the *expected* future behavior to positively control the extent and rapidity of the entropy process by giving job-related examples
4. Collectively commit as a person/group to the performance of the expected behavior(s)
5. Updated job descriptions to accommodate the change due to entropy

Once employees begin to understand and are able to recognize deviation(s) from the expected behavior, there is a tendency to identify other entropy concerns within the organization that need to be addressed.

Because time changes everything (even an organization), there should be concern that the existing mission, goals, policies, and procedures represent the *current* changing organizational needs and their relevancy to the current organization. This requires ongoing possible changes in expected employee job descriptions, policies, mission statement, philosophy, objectives, and goals. Administrative changes require a review with employees and a signed recognition by the employees that they understand and are committed to the new changes.

Meeting or in-service minutes should have documentation of all concerns regarding organizational entropy and the teaching/reminding method(s) used to accommodate the change(s). A signature by the employees that they have reviewed, participated, and had an opportunity to clarify the information presented as a part of the in-service meeting should be required and maintained with the minutes of the meeting. Evidence of an informed employee's noncompliant behavior to follow a required organizational behavior intended to control entropy changes should be stated as such on his/her employee evaluation and dealt with accordingly. Reminders (whether in writing or verbal) should be given to employees who appear to be wandering from the expected behaviors or attitudes required as an employee.

THE FORGETTING CURVE IN THE ENTROPY PROCESS

Hermann Ebbinghaus (1850-1909 German psychologist) performed an experimental study on memory. Even though the study is considered to have poor *external* validity, because *he was the only participant* in the study, the study was considered "good" by psychologists due to his conscientious efforts to control the *internal* validity to measure what it was purported to measure. Regardless of the questionable *total* validity of this memory study, it gives an example of entropy by comparing it to the process of forgetting.

The forgetfulness in humans occur exponentially along a curve. That is, the *fastest loss of any recall* occurs within the first few days and then tapers off, thereafter, to a slower rate. This process of entropy (forgetfulness) is encouraged, enhanced, and increased by stress!! So—this tells us that initial learning under stressful situations should be reduced, if possible. Positive reinforcement (*positive feedback*) to employees through a leader's verbal recognition of employees remembering to perform job expectations (instead of their forgetting) will help, also, to curtail entropy. A planned approach to teaching and *reinforcement again and again* of the same or updated content or expectation on a regular basis decreases the chance of excessive entropy of what is/was learned.

"ENTROPY"—A ROLLING SHIP TO BE CONTROLLED!

The leader's role is like being at the helm of a rolling ship and trying to hold the ship steady through the rolling waves. Figuratively speaking, there is a constant attempt to keep the ship in an upright position to prevent sinking. The expectations, mission, goals, and many other checks and balances of an organization (including job descriptions) are like the compass of that rolling ship, keeping the organization on the right course.

Just when you think everything is under control—think again! Evidence of disrupting entropy is just a few minutes away. Your mastery of nursing leadership skills and knowledge of entropy can control

the *extent and rapidity* of negative change as it occurs and will keep the changes from literally redirecting the mission and goals of the organization.

CRITICAL THINKING QUESTIONS

1. What are some recent changes in your work situation that is a result of entropy?
2. What did you do to accommodate the entropy?
3. What are you doing to positively reinforce positive behavior in the nursing staff?
4. What are you currently doing as a nurse leader when you recognize negative changes in behavior relative to a nurse's job description?

LAST THOUGHTS

*ANYONE CAN HOLD THE HELM STEADY WHEN THE SEA OF LIFE IS CALM. THE PROBLEM IS THAT THE SEA (LIFE AND ITS HAPPENINGS) IS NEVER CALM! – HENCE, WE EXPECT TO SEE ENTROPY.

*"PEOPLE BELIEVE THEMSELVES TO BE DEPENDENT ON WHAT HAPPENS FOR THEIR HAPPINESS, THAT IS TO SAY, DEPENDENT ON FORM. THEY DON'T REALIZE THAT WHAT HAPPENS IS THE MOST UNSTABLE THING IN THE UNIVERSE. IT CHANGES CONSTANTLY. " (ECKHART TOLLE)

*SHH—THE SECRET IS THAT YOU NOW KNOW THAT EVERYTHING CHANGES AND KEEPS CHANGING, NEVER TO RETURN TO ITS ORIGINAL FORM. THIS GIVES YOU AND OTHERS A LEGITIMATE POWERFUL REASON TO KEEP APPROPRIATELY CHANGING YOUR MIND---AND UPDATING JOB DESCRIPTIONS TO MEET THE CURRENT NEEDS OF THE FACILITY/ORGANIZATION.