

Somatic Stock and Flow

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Stock and flow - content and process

Stock is the basic essence of any system (Meadows, p. 17, 2009). It is the tangible element that is used, sold or bought.

People can be that essence of a system in the form of an organization. Thus the department of an company which deals with the people part of an entity refers to people as resources or assets. When searching for new people the person charged with this responsibility is known as a talent acquisition specialist. These titles and terms make people components or objects.

The apparent purpose is not to dehumanize people (though that may be a potential benefit in the minds of upper management) but to better deal with an organization from a systems perspective.

Technology can easily be seen as the fundamental component of a system. Whether discussing hardware or software, technology must be view from a point of systems thinking.

Flow is the in and out or up and down; the processes that cross boundaries between stock objects (Meadows, p. 90, 2009).

Processes can be as simple as the UAW worker with an impact driver installing the lug nuts on a particular wheel of a car. It could also be the analysis of a highly polished optical piece including measuring certain parameters such as its reaction to various frequencies or wavelengths of light or energy levels of electrons. In any case a manufacturing system

Convection of course is literally flow of a fluid.

Natural or organic flow is the wind blowing as a result of pressure and/or temperature differentials in the atmosphere. The same is evident in the oceans, seas and lakes of the earth. The flow of a river, or any other like body of water, is not based upon the kinetic energy of the molecules of fluid, as in the flow in the aforementioned but is based upon its potential energy as a result of gravitational pull. That is, the water is falling.

Forced convection is by way of a propeller or fan or some other such implement for increasing pressure. A centrifugal pump uses an impeller while a positive displacement pump uses pistons or worm screws. Whatever the method forced flow would normally be a result of some human invention.

In a system where there is a natural rhythm to the flow between stock elements there will generally be less friction or resistance in the operations. This can be seen in an organization that has been well defined. The people have the necessary training and tools to perform their function and the processes are devised to optimize efficiency and productivity.

A sports team is a system of sorts. When it has team members properly selected to fill their respective positions, then conditioned to perform specific functions it can be expected that they will do well. It can be assumed that an opposing team will have gone through the same process. The deciding factors for who will win however can include others which might lie hidden. It would seem impossible to quantify the emotional condition of the individual players much less the support staff or the spectators. Yet all these are likely to contribute to the outcome.

Thus we are introduced to the element of the systems of our life world which is unseen, yet can be a major factor in the outcome of any endeavor. We can call it attitude, spirit or culture, but it is the hidden heart of an entity which rules in the end. Low morale amongst a group of employees can manifest itself in a higher defect rate for the product of the enterprise or poor performance provided by a customer support service. To overcome this type of situation, or to preclude its development, it is necessary to assure open communication within the community. Misunderstandings between individuals or groups within an organization are analogous to the proverbial "monkey wrench in the works". Honest communication, in every directions within an organization, is like grease, when cohesiveness is needed or glue when adhesiveness is required. In system component such as an error amplifier, a corrupt signal, or a crimped hydraulic line, will end in the output being incorrect. This is another analogy to the organizational communication paradigm. In the end the whole system is impacted if there is an incorrect signal.

Human systems exist from the basic individual on their own, to a couple living together, to a so called nuclear family and to the utter most we could say that the world (and perhaps the universe), that is the people therein, are a system. People make up families; families make up barangays; barangays make up municipalities; municipalities make up provinces, provinces make up regions and regions make up the nation (The Republic of the Philippines, in this case). Each is a system unto itself and a part of the larger system. And, in theory, we might say that the Philippines (and each member nation) is a part of a system known as the United Nations. In any case all are a part of humanity on planet earth.

In the end the lives of an impoverished family of subsistence farmers may seem to have no impact on the rest of the world. Yet, in a small way (and perhaps a larger way that we cannot imagine) the lives of these must affect the whole and the whole affects them. The affluent family of the west might seem to have a greater affect on the whole; but this would remain to be seen in each peculiar circumstance.

The breakdown within family relationships causes the student/faculty relationship to breakdown. Of course the latter might have a breakdown on both ends. The net result is that many (perhaps most) students do not receive an education requisite for beginning life on their own. They are in many cases taught to think highly of themselves to the point that they believe they deserve the wealth of the world on a silver platter. Yet they might not be able to fill out a job application.

In this family/school social paradigm the individual entity is as the stock. This can be a person, a classroom, a department, the immediate family, extended family in addition to a circle of friends. Interaction between the various stock elements and sub-elements is as the flow within and between autonomous systems. Ideally interaction is

Integrated systems compete and subsist in horizontal like layers, as the peels of an onion, and vertical stocks as bamboo in a cane break. A three dimensional rendering of these realities does not do the concepts justice; they potentially exceed these principles. Each article may exist on its own, separate and isolated but the interrelated entities proliferate where the lonely units might wither. The neighborhood where I lived in Virginia was adjacent to a wooded area. The trees there survived several decades of hurricanes. But when the trees were thinned out and houses were interspersed throughout, the aggregate strength of the woods was abated and many a tree fell. It is

evident that the natural system of the woods provided strength to weather the storms which the synthetic system developed by humanity could not. This is an important concept which we cannot ignore when we attempt to alter the environment of this planet.

The effort of the US government to eradicate wolves led to the last one being killed in the states of Montana, Wyoming and Idaho in early in the twentieth century. Following this extermination the ecosystem of the area was impacted by the sudden increase in population of the extinct predators prey. The elk caused the deepest impact via overgrazing the flora (Stolzenburg, 2009).

The reintroduction of wolves into Yellowstone (NPS, 2014) appears to have been a boon for the ecosystem whereas the eradication thereof during the 19th and 20 century had a negative effect. It begs the question of what would become of the planet if humanity were to subdue every square inch and eliminate every alleged unwanted or unnecessary creature. If we could be rid of flies, though; how would various fruits, vegetables and feces fully breakdown? Even pestilence plays a part in the larger scheme of things.

The idea is that we are taking Newton's third law of motion to another level; to every action force there is an equal and opposite reaction force. You take a glass that is filled with air (~20% oxygen, 78% nitrogen, and about 2% many other things not so nice if you live in a heavily polluted area) and displace that air with your favorite beverage. Thus the volume of the liquid generates a reaction in, through or on the air molecules. Not only is there action and reaction force, there is also action and reaction volume and therefore mass. Of course this assumes that there is such a thing as what we perceive

to be mass. Perhaps there is only an electromagnetic force as a result of interactions of innumerable radiating hosts (what we call subatomic particles) which produces a characteristic which manifests itself as this thing we call mass. In any case, if you take a seat on a bus you are without a doubt changing the interior of the bus but by virtue of your motion and mass you have altered the universe. Probably not a cataclysmic change but a change nonetheless.

This extension of Newton's third law is applying the principles of somatics; that is, the wholeness. There are many pieces, parts, components, etc. But they are altogether the whole. The easiest way to see this is in the New Testament's Greek terminology used to describe human kind as tripartite beings. A person has a koufari, that is a carcass; a pneuma, a spirit and psuche, a soul. But the three together are the soma. Soma is derived from the same root as sodzo, which means, whole or complete, though it is mostly translated in the Bible as some various of the word "save". And of course this is the essence expressed by the Christian triune god; father, son and holy ghost. From a somatic perspective each is not a part of the person but is the person; or, as I like to express it, each is an entity-element. And what happens in one of the individuals entity-elements does not stay there but impacts the rest. This is seen in the cases of psycho-somatic illnesses. A person believes that he is sick and thereby manifest very real symptoms. The converse is also true; when I was suffering as a result of a ruptured thoracic spinal disk, the unbearable pain and inability to do work or do anything about the pain left me quite depressed. And then there is the placebo effect where a person is physically healed because they believe in the efficacy of the sugar pill. Of course in that they believe it is medicine, therefore it is medicine.

If this same sense of somatics were applied to a society or an organization what might be the theoretical outcome of the various socioeconomic systems and management systems could be astounding. When each component of a system is not only self aware but also system aware, then the operations would be all but autonomous from a management standpoint. But the miniscule layer at the top must learn to be hypersensitive to the reality of the lowest and reenergize its empathy so as to reactive positively to the negative alterations.

I was going to make some tea at work the other day while at work. The kitchen in my building can only be accessed by going outside; its doors opening onto a patio area adjacent to a parking lot. The doors have a sign which says that they are supposed to stay closed but are often left open. I generally close them when I find them open, not just to save a buck on energy for the company and to reduce my carbon footprint but because I have seen little creatures walking around the parking lot and do not relish the idea of walking in on one with a white stripe down the back of its furry black body and getting the results of its astonishment all over me.

As I was walking back to my cube I was thinking that they were here first and they are a part of this eco-system. But then I thought; if this is their place, then where is our place? If this is our place as well, then how should we, from a systems perspective, live in it? We are all (even the skunks) part of the same somatic system reality.

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