

The Dynamics of Organizational Inertia, Survival and Change

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Abstract

The main objective of this work is to use system dynamics to contrast two alternative visions of the organizational world. According to the first, mature organizations wield increasing power in defence of their dominant positions. The implication of this view is that age and experience protect old organizations from failure. According to the second, old organizations become increasingly vulnerable to challenges by innovative newcomers. The implication of this view is that with age and experience organizations become obsolete by progressively losing responsiveness and ability to take advantage of new market opportunities.

Which of these alternative visions of the organizational world is closer to reality depends crucially on assumptions about organizational inertia? The first, according to which we face a relative unchanging organizational world dominated by few large corporate actors who use their economic and political power to protect their vested interests and profit margins from innovative newcomers, or the second according to which we face a Schumpeterian world of continuous creation, destruction and recombination of economic, social and organizational resources?

To illuminate this central question in current theories of organizations, we develop a system dynamics model of organizational inertia and change according to which organizational survival is enhanced by the amount of experience accumulated over time, but is disrupted by attempts to change core dimensions of the organizational structure.

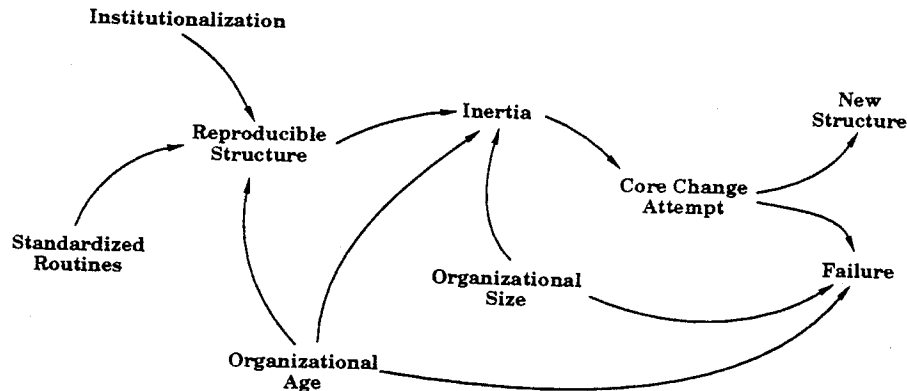
Introduction

Organizational change has attracted the attention of a large number of researchers from many disciplines studying different aspects from the need for change over the implementation of the change to the effect on the organization afterwards. Our starting point is Hannan and Freeman's theory of structural inertia (Hannan and Freeman, 1984). Hannan and Freeman posed 3 basic questions:

- (i) Does the probability of organizational change increase in response to environmental change?
- (ii) Does the probability of organizational change decrease over an organization's life time?
- (iii) Does the probability of organizational failure increase as a result of organizational change?

Kelly and Amburgey (1991) recently presented a systematic analytical framework to address these questions Figure 1 shows a formal representation of the structural inertia theory (Kelly and Amburgey, 1991) as presented by Hannan and Freeman. The model represents a linear view on the inertia process.

Figure 1 : The linear view of the inertia theory (Kelly and Amburgey, 1991)



A Feedback View of Structural Inertia

A feedback perspective of the structural inertia problem might generate some insight and a better understanding of the dynamics underlying processes that increase and inhibit organizational change, and that affect the chances of organizational failure or survival. Figure 2 show a basic feedback diagram based on the concepts from the structural inertia theory.

We assume that there is a stock representing the accumulated need for change. This concept, *Change* in Figure 2, when the stock reaches as critical value, the threshold will a change take place and the stock will be depreciated. The Threshold is dynamics as well, their will be a *Base threshold*, depending on industry, organizational form, leadership style etc. This threshold will get modified by the *Multiplier of the Threshold*, which again is driven by another stock *Inertia*. The need for change is driven by the *Pressure for Change* in the organization.

The main driver of the model is the *Reliability Performance Gap* their might be created between the actual *Reliability of Performance* the organization delivers and the *Expected Reliability of Performance* the organization and its environment have. *Reliability of Performance* can be measured in numerous ways e.g. the financial performance, increasing market share, morale in the organization, delivery time, etc. The *Expected Reliability of Performance* can be measured in similar ways, and influenced by the organizations expectations of Reliability Performance as well as shareholder, government and others expectations of the organization. Finally has the *Size* of the organization also some influence on the development of a *Reliability Performance Gap* as the *Size* works as a multiplier of the difference, i.e. a bigger organization will be more likely to see a gap evolve.

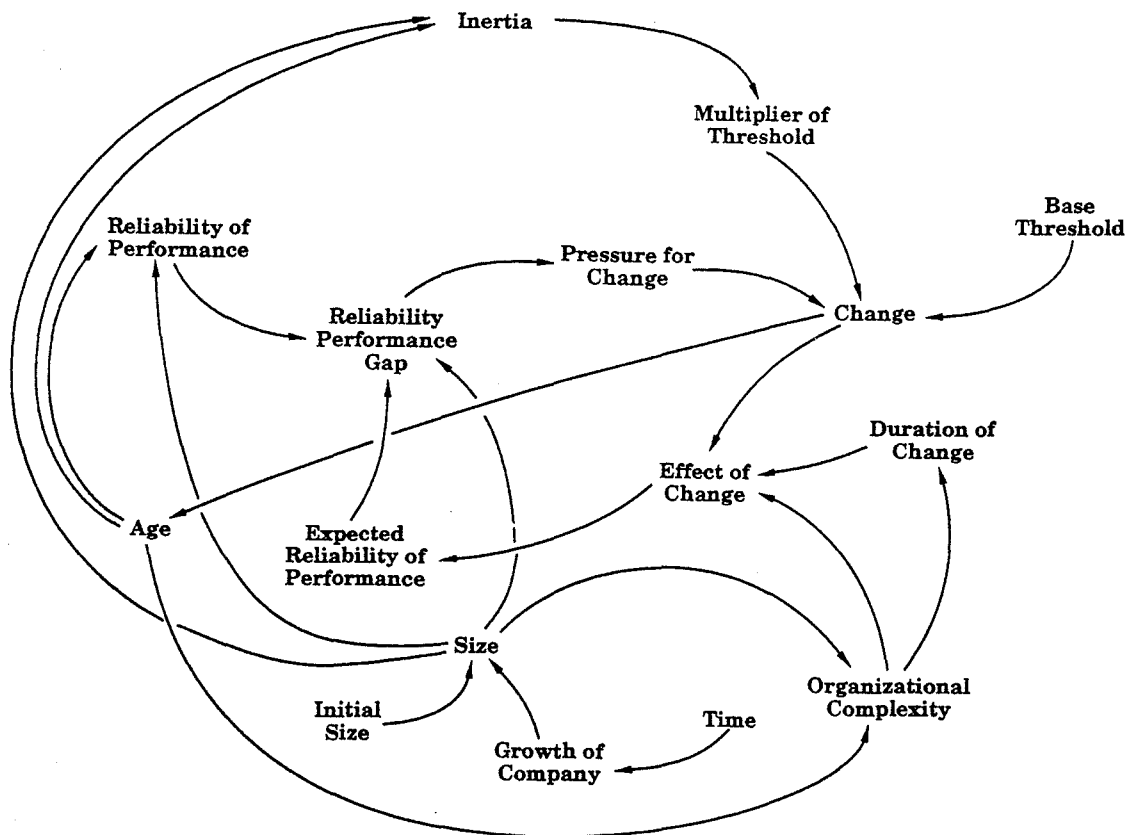
The *Effects of Change* is influenced by a number of factors (Hannan and Freeman, 1984). These include the duration of the change, i.e. is it fast or does it drag on forever, it is assumed that a process of change

that takes long will not be as effective as a relative fast change. The duration of change is directly affected by the *Organizational Complexity* of the organization. The more complex the organization is the longer will a change process take. The complexity also has a direct influence on the *Effect of Change*. The more complex an organization is the harder is it to change it.

There are many factors determining the *Organizational Complexity*. We have only taken into account the two main elements suggested by the structural inertia theory: organizational *Size* and *Age*. In this first version, *Size* is taken as external to the model, the organization grows by a certain fraction per year. One could internalise size in future version and make it dependent on performance, and on resources for growth. As an organization grows older it becomes more reliable (Kelly and Amburgey, 1991). However, as major changes in an organization take place it can be imagined that the "clock" that regulates the vital dynamics of the organization experiences problems of reliability once again (Amburgey et al., 1993). The positive effect of this resetting the clock is that the *Inertia* in the organization should decrease, as one of the main drivers for *Inertia* is the establishment of rules and routines in the organization.

The other main driver of *Inertia* is the *Size* of the organization, as the organization become larger, the amount of bureaucracy will increase (in most organizations) and this will induce more resistance to change.

Figure 2: A Feedback View of Structural Inertia



Even this simple, and far from complete representation of the structural inertia theory gives raise to a number of both positive and negative feedback loops.

Conclusion

We have here offered a new interpretation of the structural inertia theory based on a feedback view of organizational processes. We have shown how it is possible to internalize many of the effects that affect the likelihood of successful organizational change. To get a better understanding of the effects, the next step will be to build a full simulation model. Using this model we can run simulations under a variety of different evolutionary assumptions to explore both the adaptive as well as disruptive consequences of organizational change.

References

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