

Systems Thinking in ACTION

Learning Laboratories Give Hanover Insurance a Competitive Edge

By Robert S. Bergin and Geraldine F. Prusko

"It was as if I knew something was there, but I didn't really see it. The clarity I gained was like putting on a pair of glasses for the first time. Things became much clearer and more focused."

This is one manager's response to his experience in Hanover Insurance Company's "learning laboratory"—the heart of a systems-based approach adapted by the company about four years ago.

The dynamic complexities of the insurance business, including tumultuous changes in the social environment, prohibit all but the best players from being successful. Hanover, one of the largest companies writing property and casualty insurance in this country, has responded to this challenge by using systems thinking.

"By its nature," explains Bill O'Brien, Hanover's president, "the property and casualty industry is interconnected with many other systems. It deals with diverse and complex issues. We believe the greatest competitive advantage an organization can possess is its capacity for learning."

It has been said that the shortcomings of systems come not from the people who work within them but from defective designs. Systems thinking (and the field of system dynamics) requires one to view the structural aspects of performance rather than just the individual performances of people.

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This thinking is carried into the learning laboratory where organizational learning is distinguished from individual skill learning. Organizational learning transcends one person learning a skill on a case-by-case basis; it creates a shared base of knowledge across the organization, not just

within senior management.

The learning laboratory came about partly as a response to a problem Hanover needed to solve: During 1985 and 1986, Hanover found the number, size, and complexity of claims increasing, and this created a need for more people to handle the volume. Claims managers at Hanover found it difficult to recruit and hire experienced claim personnel. The pool of candidates was either too small or the skill level was not of a sufficiently high caliber to fit the company's professional image. Therefore, a large number of trainees were brought into the work force just when Hanover

Learning Lab Benefits

- Shortens learning curve for new managers
- Improves communication skills
- Creates an atmosphere for organizational learning
- Clarifies and tests assumptions
- Makes mental models explicit
- Integrates qualitative with quantitative measures of performance
- Provides a shared experience for decision making and problem analysis

needed to respond to more complex issues and to project more accurately the future size of claims.

Systems thinking was used to deal with these issues. The learning laboratory was developed to explore and test assumptions relative to claim management function.

A simulated environment

The learning laboratory uses management simulators (computer models that allow one to see the dynamic consequences of one's decisions), which operate like the simulated cockpit pilots use.

In the learning laboratory, a simulated claim environment is created where feedbacks are discussed and weighed with other managers who have had similar experiences. This is done using a computer simu-

lation based on a dynamic model of relationships in the claim environment. Playing with simulated events in teams is combined with periods of debriefing, to reflect on what has occurred.

Claim managers analyze issues of the day and begin to test their assumptions about time availability and quality and how these concepts relate to adjuster capacity. It is when they question their long-held beliefs about claim management that they begin to get insights about how to manage differently. This is when their behavior can change.

One example of how systemic thinking has clarified priorities and created more balanced thinking—and practice—is its application to the issue of fluctuating workload.

Devising a means to deal with the peaks and valleys of workload is a primary function of a claim manager. At times, skilled claim adjusters are inadequate to handle the incoming and pending workload; at other times, insufficient workload can cause good work habits to slacken. Time is then filled by the work available.

How a manager responds during times of pressure and times of less activity is critical to the success of the entire organization. To be effective, his or her response must take into consideration all of the feedbacks in the system.

One manager who dealt with the workload issue after he attended the learning laboratory explained it this way: "When I came back from the learning laboratory, I had a much better understanding of what the important issues were. Before the lab, I would have said that lack of quality was the only important factor. After the lab, it was obvious to me that productivity was also a key issue. So I restructured some units to enhance their ability to settle claims.

"After I saw dramatic increases in productivity, I applied pressure to improve quality—and I have seen a difference."

It works

When claims managers integrate the system dynamics approach into their own decision-making, they accelerate the

changes that need to occur in the organization. When they "experience" the consequences of their decisions, they are motivated to look for points to intervene in the system, rather than to just rely on older, tried, and supposedly true methods to solve the problems of time availability, quality, and adjuster capacity.

Managers are encouraged to clarify and test their assumptions about why things happen as they do. They make their own mental models explicit, and by doing so can change those models that are not useful. Besides shortening the learning curve for the many new managers in the company, the learning laboratory accelerates the acquisition of communication skills they need to pursue their goals. Systems thinking provides the language through which management can understand and communicate what to do about the dynamics they experience.

The learning laboratory is a place where managers become familiar with formulating hypotheses, measuring results, and comparing actual results to expectations. When a manager learns through experience to take a systemic view of the operational decisions that must be made, the transfer of learning from a workshop setting or laboratory to the workplace is complete.

The use of systems thinking has given Hanover a competitive advantage in dealing with the complexities inherent in the property and casualty insurance industry.

The use of insurance as a means of transferring costs seems like a simple process. But managing that process is extremely complex. Over time, the connections among cost transfer variables (pricing, taxation, risk transfer) are obscured and become blended with other feedbacks in the system.

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Then, if we push one lever (such as reducing costs in an attempt to impact profitability) another may go out of balance. Solving one problem almost always creates other problems. Using a learning laboratory to understand the dynamics of systems, so that we know what kinds of problems our current decisions are likely to create down the road, has given Hanover the ability to leverage, balance, and more effectively manage the cost transfer system.

Like many other businesses, the property and casualty insurance industry's prof-

its are cyclical in nature. Periods of relatively good results lead to intense price competition and the lowering of underwriting standards. This invariably causes deteriorating results

and leads to increased prices and tightened underwriting standards.

Over time, the industry begins to experience improved results and increased profits, which initiates the next cycle of intense competition. During periods of unprofitability, the market for insurance becomes highly unpredictable.

Hanover has distinguished itself from its competitors by providing a consistent market to both long-term policy holders and independent agents throughout several of these cycles. By exercising management discipline and understanding the dynamics of the insurance cycle, Hanover is able to balance underwriting, marketing, and investment considerations over periods of years, rather than months. We are able to

The Learning Laboratory Concept

A learning lab (LL) can be viewed as a manager's equivalent to a sports team's practice session or a pilot's flight simulator. It is a place where managers can not only accelerate time by simulating a model (or microworld) of a real life system over long time periods but also slow down the flow of time at each decision point to reflect on potential outcomes. The LL is a managerial "practice field" where managers can test out new strategies and policies, reflect on the outcomes, and discuss pertinent issues with others.

manage the insurance cycle rather than be managed by it.

By combining the freedom to act with the skill to make better decisions, system dynamics has given Hanover a way to manage change. ↻

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From The Headlines

Certain phenomena occur with such regularity that they constitute a generic set of structures called systems principles. Many of these systems principles are played out in the headlines of newspapers and magazines. The following anecdotes carry lessons for systems thinkers.

Eroding Goals

"When Tater Tots sales fell in the period from 1985 to 1987, managers first blamed changing eating habits in the U.S. But further study revealed startling news: Cost-cutting had led plant managers to step up line speeds and change storage and cooking methods. Over a decade, the moves had changed Tater Tots. Their once-chunky insides had turned to mashed potato. The outside had lost its light and crispy coating. 'We were pressing so hard on cost that we were affecting quality,' says Gerald D. Herrick, president of Ore-Ida Foods Inc. 'It's pretty embarrassing.'"

"Heinz Ain't Broke, But It's Doing A Lot Of Fixing," Business Week, December 11, 1989.

Challenging Our Mental Models

On the Chinese New Year in 1989, Mr. Huang, a researcher at AT&T Bell Labora-

tories who is trying to develop an optical computer, gathered his research group for a progress report. "But instead of talking logic devices and laser diodes, a deadpan Mr. Huang presented each person with an egg and a seemingly impossible mission: to balance it on end. Chinese folklore said the new year was the perfect time to do it...Eventually, all five researchers managed to balance an egg. 'When we left that room,' Mr. Huang remembers, 'no one could believe we had ever thought that balancing an egg was impossible.' Mr. Huang hopes his research will play a similar role in convincing people that optical computing isn't so difficult that it should be ignored."

"Speed of Light: Is Optical Computing The Next Frontier, Or Just a Nutty Idea?" Wall Street Journal, January 30, 1990.