Creating a Learning Organization: For Renewal of Academic Medicine

1997 Forum on Emerging Issues
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Hedwig van Ameringen

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MEDICINE

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Creating a Learning Organization: For Renewal of Academic Medicine

1997 FORUM ON EMERGING ISSUES

OF THE

HEDWIG VAN AMERINGEN

EXECUTIVE LEADERSHIP IN ACADEMIC MEDICINE

PROGRAM FOR WOMEN

PROCEEDINGS





Introduction

"We can build a learning organization where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together..."

THE FIFTH DISCIPLINE by Peter Senge

he Hedwig van Ameringen Executive Leadership in Academic Medicine (ELAM) Program for Women reflects the heritage of the Medical College of Pennsylvania¹, founded in 1850 as the country's first medical school for women. ELAM's goal is to increase the number of women chairs, deans and other senior academic administrators in medical and dental schools in the U.S.

The second Forum on Emerging Issues, the final two days of the 1996-97 ELAM Program, was held April 9-10, 1997. Participants included the ELAM fellows, their dean or senior delegate from their home institutions, and several invited guests. The 29 women selected for the 1996-1997 Program were primarily associate or full professors and many also held administrative positions such as chair or vice chair of a department, chief of a clinical division, or assistant or associate dean. They represented 15 disciplines and came from 25 schools of medicine or dentistry.

During the Forum, participants explored in interactive sessions Peter Senge's Five Disciplines² and how they can be applied in academic health centers (AHCs) to create *learning organizations* with the skills and flexibility to thrive in the rapidly changing environment of health care and higher education. The Five Disciplines are:

- ◆ *Personal Mastery* develop capacity to clarify what is most important and master the ability to achieve it.
- ♦ *Mental Modeling* develop capacity to reflect on our internal pictures of the world to see how they shape our actions.
- ◆ Shared Visioning build a shared sense of commitment in a group based on what people want to create.
- ◆ *Team Learning* develop capacity for collective intelligence.
- ♦ Systems Thinking develop capacity to put pieces together and see the whole.

¹ In 1993, the Medical College of Pennsylvania merged with Hahnemann University; the combined institution was renamed Allegheny University of the Health Sciences in 1996.

² Resources for learning more about the Five Disciplines include:

Peter M. Senge, The Fifth Discipline: The Art and Practice of the Learning Organization, Doubleday, New York, 1990.

Peter M. Senge, Charlotte Roberts, Richard B. Ross, Bryan J. Smith and Art Kleiner, The Fifth Discipline Fieldbook: Strategies and Tools for Building a Learning Organization, Doubleday, New York, 1994.

Daniel H. Kim, Systems Archetypes 1, Toolbox Reprint Series, Pegasus Communications, Inc., Cambridge, MA, 1992.

The biggest challenge facing an organization is no longer survival - it is Renewal. While survival has an end point, renewal enables an organization to continue moving forward to meet present and future challenges through a dedication to 'lifelong learning.'

Richard Teerlink, President and CEO, Harley Davidson

Many academic health centers have implemented redesign and realignment efforts that have proven beneficial, particularly in health care delivery. Application of the Five Disciplines enables organizations to achieve success organizationally and personally, as faculty and staff learn and explore ways to create their own future and to effect large scale change. Mastery of the Five Disciplines can be viewed as the third level of organizational growth.

- LEVEL 1 **Events Orientation:** do the work as originally designed.
- Patterns, Trends, Observations: improve organizational processes and LEVEL 2 procedures through approaches such as reengineering and continuous quality improvement.
- LEVEL 3 Systems, Structures Orientation: improve the quality of thinking and interactions - how we, as leaders, work - the way we think, communicate and lead.

Even successful academic health centers are poor learners. We are often prisoners of our own thinking. It's easier to see others' mental models and harder to see our own assumptions and beliefs, since they are often unconscious. Thus, academic health centers survive but seldom live up to their full potential. In assessing the past of AHCs and projecting the desired future, Forum participants concluded:

What Old Traditions are we bound to? ⇒ What Future Traditions do we want?

Faculty oriented ⇒ Student and patient centered

Disciplinary focus ⇒ Interdisciplinary focus

Reward individuals ⇒ Reward groups and individuals

Multiple competing missions ⇒ Vertically aligned mission unique for AHC Discovery-oriented research predominates

⇒ Translational and applied research valued equally with basic research

SYSTEMS THINKING: A PRIMER OF SYSTEMS ARCHETYPES

The Forum focused primarily on one of the Five Disciplines – Systems Thinking archetype tools – that provides a conceptual framework to help see the "whole" and how to change effectively. This process allows academic health center leaders to confront dynamic realities that are in a continual state of flux - complex systems in which problems are chronic and long-term success using previous problem solving efforts have been few.

An archetype – description of typical patterns of relationships within systems – includes either or both:

- Balancing loop a feedback loop often found in situations that seem to be self-correcting and self-regulating (whether participants like it or not), which leads to homeostasis and stability; and
- Reinforcing loop a feedback loop that amplifies the change (for either good \mathbf{O} or bad outcomes).

Other elements of an archetype include:

- Variables nouns/noun phrases (not action words)
- **Arrow** link/relationship causing a change between variables
- **Delay** link/relationship causing a change between variables //
- Same direction predominant in reinforcing loops S
- Opposite direction usually occurring equally with S direction in balancing 0 loops

Forum participants studied and analyzed four common systems archetypes:

- ♦ Fixes that Fail,
- ◆ Shifting the Burden/Addiction,
- ♦ Limits to Success, and
- ♦ Escalation.

Participants described typical problems in their AHCs and diagrammed these scenarios into one of the four archetypes. The following examples illustrate how even quick brainstorming about systems problems through archetypes can be useful in analyzing complex problems in AHC systems, and can direct attention to:

- 1. identifying the underlying issues or root causes,
- 2. exploring unintended consequences,
- testing assumptions, and
- 4. identifying the most valuable leverage points.

The diagrams show the applicability of the process to a wide range of educational, clinical, research, and socioeconomic issues that affect AHCs today.

FIXES THAT FAIL ARCHETYPE

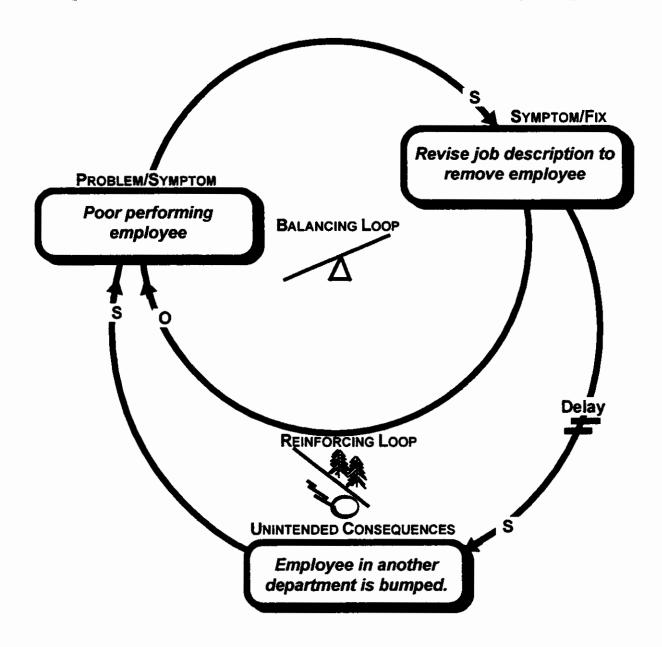
This archetype describes applying a traditional solution that quickly remedies a recurring problem, but that over time has unforeseen consequences. By understanding this archetype, academic health centers can:

- recognize that the fix addresses the symptom and not the underlying problem,
- increase awareness of unintended consequences, and manage or minimize their impact,
- reframe the original problem for a long-term solution, and
- use a two-pronged approach: apply the immediate symptom fix and plan out the fundamental solution that will eliminate a perpetual cycle of solving yesterday's 'solutions' over and over again.

The following diagram illustrates unintended consequences from Fixes that Fail:

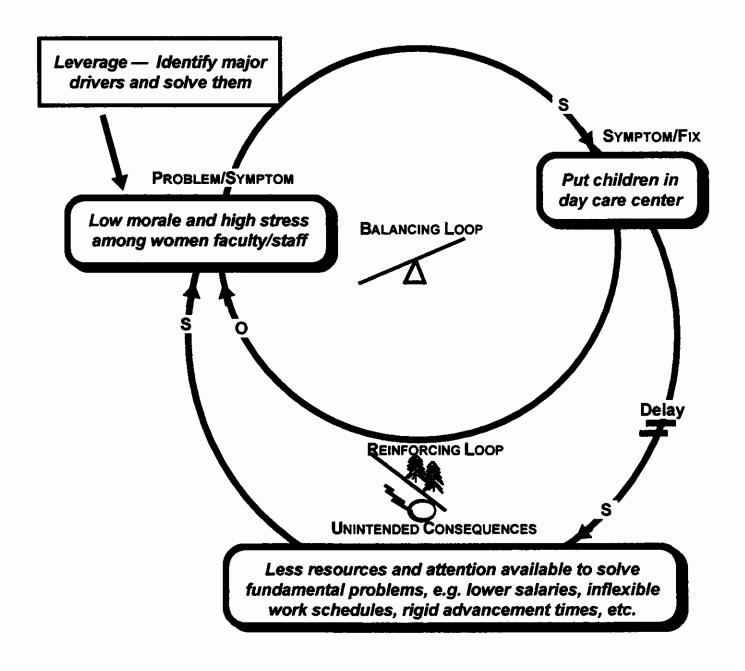
- 1. look at a symptom poor performance of an employee,
- 2. solve the symptom revise the job description to remove that employee,
- 3. results in *unintended consequences* bump a capable employee in another department, replacing him/her with the poor performing employee, possibly creating a domino effect where less experienced or capable employees are moved into several positions and resulting in overall loss of productivity.

Diagram 1: Fixes that Fail — Poor Performing Employee



Another example of Fixes that Fail is shown in Diagram 2, which describes a wellintentioned intervention of providing a day care center to solve the symptomatic problem of low morale and high stress among women faculty and staff. The unintended consequence may be that so much energy and resources are diverted to this effort, that little attention or resources are available to solve the deep-rooted, underlying problems. This can lead to a cycle of continuing need to address the morale and stress issues among women faculty and staff with other 'symptomatic solutions' for the current 'squeaky issue,' which only provides short-term relief, followed by exacerbation and then by another issue cropping up.

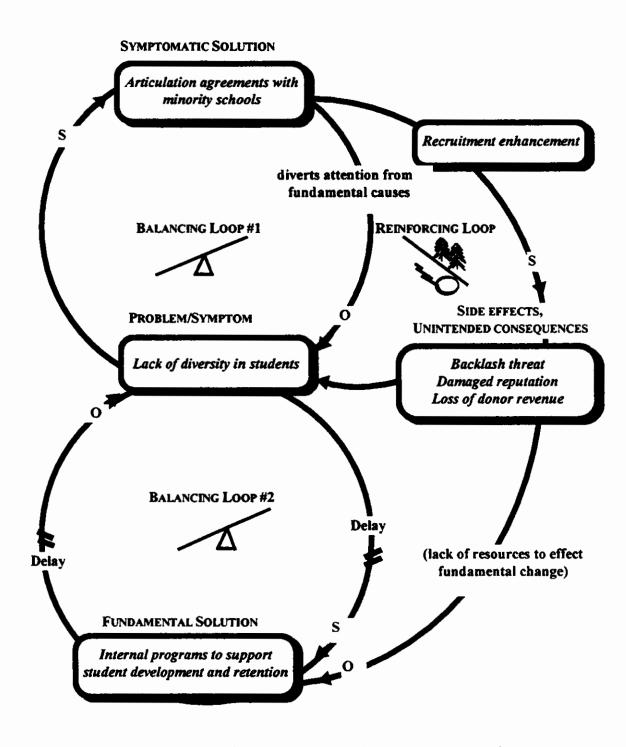
Diagram 2: Fixes that Fail — Solving Women Faculty/Staff Problems with a Day Care Center



Through analyzing such Fixes that Fail, AHCs can acknowledge that the quick fix often merely alleviates the problem temporarily. A more prudent approach is to launch a two-pronged attack:

- apply the immediate "fix," and
- plan out the fundamental solution.

The archetype described in Diagram 3 demonstrates how archetype systems analysis can provide a useful tool for productive dialogue around very difficult and complex dilemmas facing AHCs today. The group tackled the problem of how to achieve diversity among AHC faculty and students that is more appropriate for meeting the health care needs of the diverse U.S. population of the 21st century. The diagram is helpful in analyzing, from a systems perspective, some of the unintended consequences that might occur if a single intervention strategy is selected without considering implications for the system as a whole. Unintended consequences might occur from a well-intentioned intervention – increased articulation agreements with minority schools - that could divert attention and resources from equally important or even necessary system changes.



Fixes that Fail — Diversifying AHC Students Diagram 3:

A large number of additional factors could be added to reflect a more complete archetype diagram. One of the major benefits in such an analysis is to provide a process for productive, systematic dialogue on the multiple issues, so that alternative approaches can be considered thoughtfully and completely.



SHIFTING THE BURDEN/ADDICTION ARCHETYPE

In this archetype, the 'obvious solution' to the symptom or problem provides immediate relief but diverts attention away from the real source of the problem and, more subtly, over time causes the original solution to deteriorate. This reinforces the perceived need for more of the symptomatic solutions. Through this archetype, academic health centers can understand that:

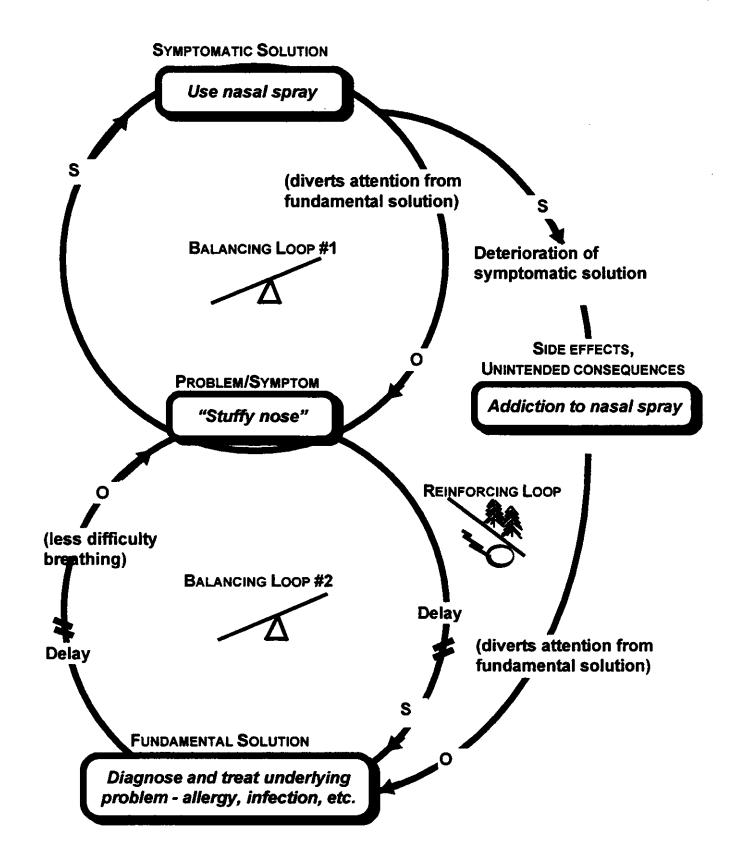
- problem symptoms are usually easier to recognize than their underlying elements,
- the pressure to apply a symptomatic solution is great,
- ♦ the viability of a symptomatic solution deteriorates over time; well-intended solutions shift the problem to another variable, creating a 'side effect' that may be an addiction, and
- whether a solution is 'symptomatic' or 'fundamental' depends on one's perspective. Exploring the problem from different perspectives allows more complete understanding of what the fundamental solution might be.

Diagram 4 illustrates Shifting the Burden:

- 1. see problem symptom that prompts intervention "stuffy nose,"
- 2. provide immediate solution use nasal spray, which
- 3. *diverts attention* from fundamental source of problem (respiratory infection, allergy, anatomical problem, etc.) and its solution;
- 4. symptomatic solution deteriorates depend on nasal spray to breathe easily, thus
- 5. reinforces perceived need for more of the symptomatic solution addiction to nasal spray.



Shifting the Burden/Addiction — Addiction to Nasal Spray Diagram 4:



The archetype of Shifting the Burden is also typical in organizational patterns where the burden of:

- poor employee performance is shifted to managers to solve, rather than focusing on the fundamental solution of providing necessary training;
- crisis in local units is shifted to central departments to solve, rather focusing on the fundamental solution of increasing service capacity at the local level; and
- declining revenue is shifted to the sales office (or development office in universities) to solve, rather than focusing on the fundamental solution of developing new products to attract more revenue.

What additional organizational patterns does your AHC have that may be analyzed with Shifting the Burden archetype?

LIMITS TO SUCCESS ARCHETYPE

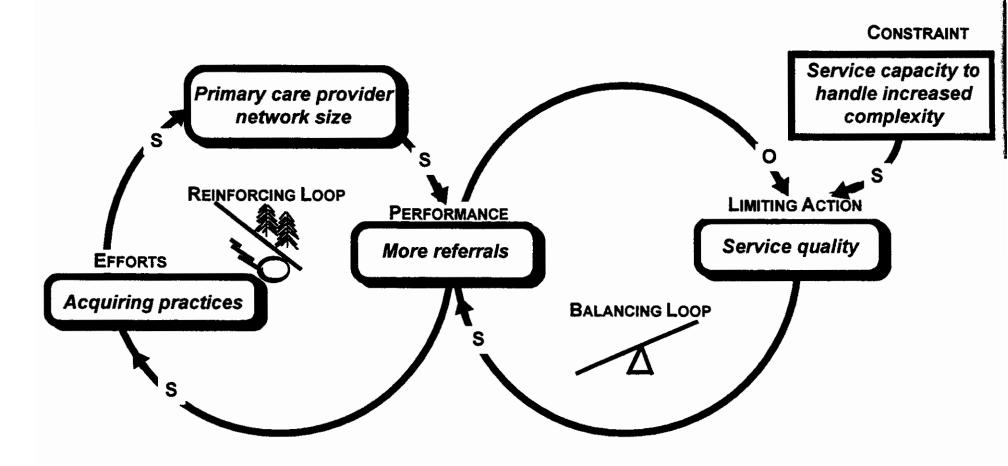
This archetype describes how continued efforts initially can lead to improved performance. Over time, however, the system encounters a limit that causes the performance to slow down or even decline. It is useful to apply this archetype prospectively to see how cumulative effects of continued success might lead to future problems. When times are good and everything is growing rapidly, we tend to operate with an "if it ain't broke, don't fix it" attitude. By the time something breaks, however, it may be too late to apply a fix. This archetype helps highlight potential problems by raising questions such as, "What kind of pressures are building in the organization as a result of the growth?" By tracing through their implications, one can then plan for ways to release those pressures before an organizational gasket blows. By applying this archetype, AHCs can:

- understand that nothing grows forever,
- anticipate upcoming limiting forces,
- beware of doing more of what worked in the past; rarely is there leverage in pushing harder on the success loop, and
- focus instead on freeing up limiting forces and constraints; this will give the most leverage.

A current organizational trend in AHCs illustrates Limits to Success:

- 1. apply a solution to a problem acquire primary care provider practices to increase referrals,
- 2. see positive results increased referrals,
- 3. continue to apply the solution, but get unexpected limits to success fewer referrals due to customer (patient and primary care provider) dissatisfaction;
- 4. by analyzing this system prospectively, one can focus on the leverage points, which lie in freeing up the limiting forces to increase service capacity through slow, steady systems improvement.

Diagram 5: Limits to Success — Primary Care Provider Network Expansion



Another common example of **Limits to Success** is given in Diagram 6, which describes the success of a department in obtaining research grants. By such analyses as these, a department and institution can anticipate these types of problems, and plan for them prospectively rather than when crises from success unexpectedly occur.

Diagram 6: Limits to Success — Departmental Success with Research Grants

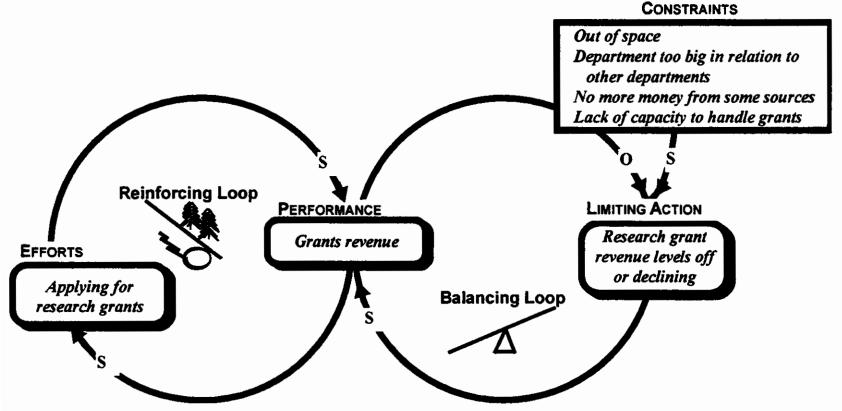


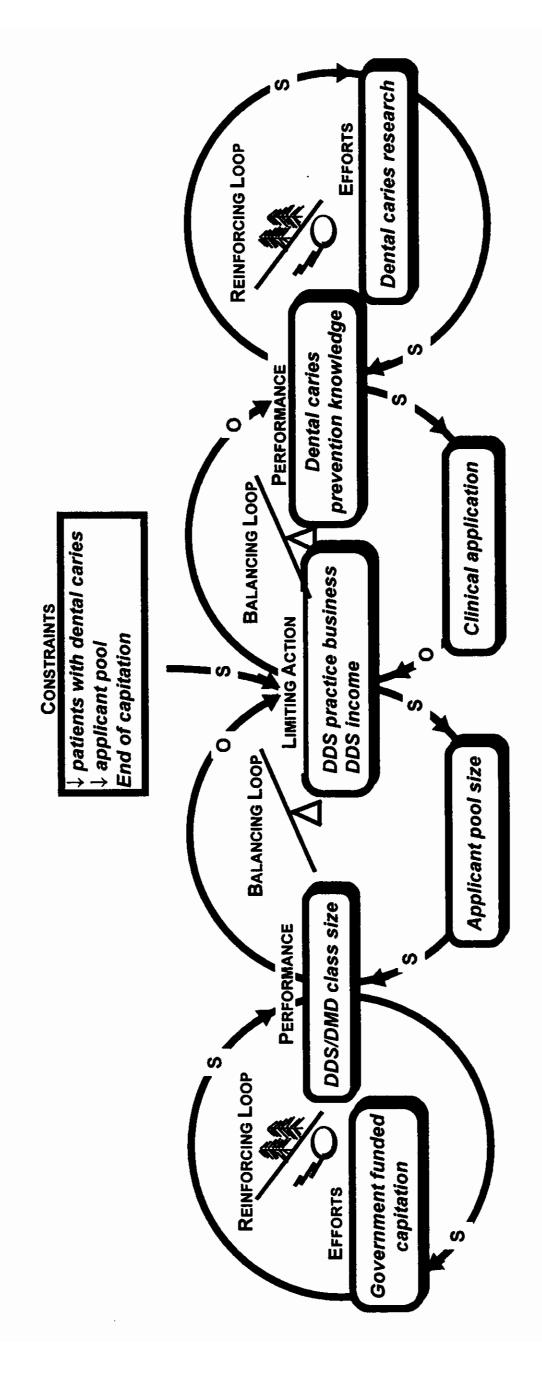
Diagram 7 illustrates a classic **Limits to Success** archetype. From 1960 to 1985, dental schools experienced a cycle of major growth followed by a remarkable downsizing by one-third. Six private dental schools closed and others reduced class size, resulting in an overall decrease in the number of graduates per year from about 6,000 to 4,100. Diagram 7 describes this history. There are numerous points that have relevance for medical schools to consider.

The growth in dental schools was fueled by several factors:

- increase in the population desiring dental education as baby boomers reached the age for entry into professional schools, beginning in 1960-1965,
- government-funded capitation initiatives for schools to educate more dentists,
- ◆ presence of a common medical problem dental caries that needed attention and sufficient research knowledge and technology to address it.

Forum participants identified a number of constraints that limited continued growth of dental schools: (i) success of prevention strategies for dental caries, which led to less demand for dental services; (ii) elimination of government-funded capitation; and (iii) decline in the applicant pool due to demographic changes, decreased interest in dentistry as a profession, and other factors.

These factors can be diagrammed as two interrelated **Limits to Success** systems, one driven by economic factors and the other by biomedical research. The success of dental caries research and prevention programs led to a perceived need to decrease the number of practitioners. Analysis of this archetype reveals that at least one major leverage point for continued success of dental schools might be to develop new programs and services. Indeed, this has been a major strategy as dental schools have developed patient care, research and academic programs that focus on a comprehensive approach to oral health.



Limits to Success — Size of Dental Schools

Diagram 7:

In the fourth **Limits to Success** archetype, described in Diagram 8, a dean of a medical school mandated a student-focused curriculum. The reinforcing loop describes how grant funds were used to institute high-level integration, consolidating basic science departments to present an interdisciplinary view of the sciences relative to medicine. The curriculum was revised to (i) identify a set of specific "core" competencies within a discipline (e.g. pharmacology, physiology, anatomy) and (ii) provide the students with the skill sets necessary for a process of lifelong learning. Evaluation criteria were developed to assess effective teaching and acquisition of core competencies by faculty and students, respectively, and to determine whether the students had developed the requisite skills to achieve the objective of lifelong learning.

The balancing loop describes the limits to success that occurred when primary care clerkships were placed at a site 17 miles distant from the school, with a significant number of students not owning cars, necessitating the allocation of \$250,000 to cover the travel costs and development of mechanisms to reimburse students. The second reinforcing loop describes how the limiting action – resources provided by the hospital for student travel – might be overcome by demonstrating directly to the hospital the value added by having better trained students and housestaff. Such an archetype provides a process for determining what aspects of the educational process are valued by stakeholders such as the hospital site, which can lead to discovering how best to measure and document that value.

CONSTRAINTS Resources required Perceived value to Ambulatory clinical hospital experience located distant from school BALANCING LOOP Restructuring of faculty curriculum administration LIMITING ACTIONS **Faculty** Hospital \$ development contribution for REINFORCING LOOP student travel **PERFORMANCE EFFORTS** Grant funding New curriculum better care REINFORCING LOOP better reputation Improved training for students/house staff

Diagram 8: Limits to Success — Curriculum Reform

ESCALATION ARCHETYPE

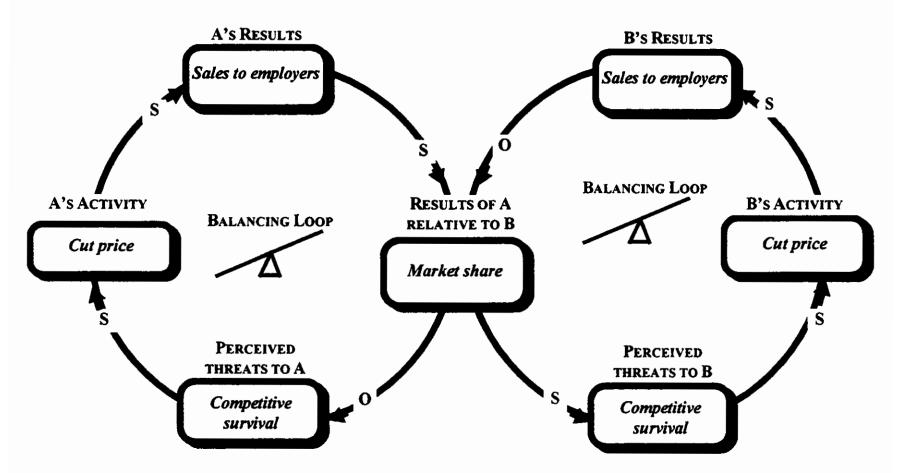
In this archetype, one party (A) takes actions that are perceived by the other as a threat. The other party (B) responds in a similar manner, increasing the perceived threat to A and resulting in more threatening actions by A. Using this archetype, academic health centers can:

- identify the relative measure that pits one party against the other, and focus on how to change that dynamic,
- identify the significant delays in the system that might distort the true nature of the threat, and
- unearth the deep-seated assumptions that lie beneath the action taken in response to the threat, and enable reframing of the entire issue.

Price wars among health care insurers provide a classic case of Escalation:

- 1. Health care insurer A cuts its price in order to gain market share from employers
- 2. Health care insurer B feels threatened and cuts its price
- 3. Health care insurer A feels more threatened and insecure and cuts its price even more, leading to decreased capacity in the industry as a whole to invest in new product development and customer service.

Diagram 9: Escalation — Price Wars Among Health Care Insurers



This archetype reveals each organization's insecurity about its ability to retain customers on a basis other than price. Analysis of the archetype can provide perspective, through asking questions (adapted from Kim, p. 14), such as: What are the deep-rooted assumptions that lie beneath the actions taken in response to the threat (e.g. we cannot survive if we do not increase sales; we cannot survive unless we look similar to how we look today; our customers only care about cost)?

ESCALATION ARCHETYPE—C ARDIOVASCULAR SERVICES

Carol A. Aschenbrener, M.D.

Many academic health centers have built large cardiovascular clinical services with major emphasis on invasive diagnostic and therapeutic procedures. The initial rationale for program development in cardiovascular services was educational: clinical experience with patients having a broad spectrum of cardiac disorders is essential for undergraduate medical education. After the passage of Medicare, many cardiovascular programs at AHCs grew rapidly, propelled by one or more of the following:

- 1. need for additional patient base to train cardiology and cardiovascular fellows who contribute to the prestige of the program;
- 2. desire to capture significant new clinical revenue made available by Medicare;
- 3. desire for clinical services to complement cardiovascular research programs and to increase competitiveness for extramural funds; and most recently,
- 4. strategy to increase competitiveness for health plan contracts by providing a broad array of tertiary services.

The 30 years following passage of Medicare also saw tremendous explosion of cardiovascular services in community hospitals, with the academic and community centers often in direct competition. At many such hospitals, the development plan for cardiovascular services seems directly linked to the perceived threat to competitive advantage rather than to the actual needs of the target population.

The two balancing loops in Diagram 10 describe the resulting classic Escalation Archetype. The AHC adds new cardiology services that enhance its market position (patient base and revenue) in comparison to the local competitors. This reduces the perceived threat to AHC's competitiveness, and it may maintain service development stability of a time. However, the local competitor – a community medical center (CMC) in this example - perceives its own competitive position to be compromised. In response, it adds or expands cardiovascular services in an effort to enhance market position. In turn, the AHC feels threatened and begins a new round of service expansion. The expansion or addition of services is usually accompanied by a blitz of advertising. Each institution follows its own service development cycle. There is no joint planning and often little assessment of community needs. The outcome, locally and nationally, has been explosion of cardiovascular services with attendant massive increases in cost, especially to Medicare.

The reinforcing loop in Diagram 10 describes the associated reinforcing cycle of program growth. As new services are added and patient visits increase, faculty insist that new additional cardiovascular faculty be added to spread the clinical work and protect faculty time for research. Faculty press for more cardiology fellows, who can do clinical work and provide help in the research program. As program size grows, more resources patients and revenues - are needed to sustain it. This resource need then fuels the continued expansion of cardiology services. In a national context, this cycle has resulted in the paradoxical situation in which there are:

- excess of cardiologists (decreasing incomes, rising concerns about adequate numbers of patients to maintain practitioner skills, increasing payer concerns about unnecessary procedures, etc.) and
- continued high rate of production with more that 2,000 cardiology fellows currently in training in 1997. Graduates from these training programs migrate into the community, generating more pressure for service expansion.

Cardiovascular training programs spawn new high technology services, often extending effective treatment to individuals who were beyond help in the past. The second reinforcing loop in Diagram 10 shows that, as word of successful treatment spreads – often aided by vigorous efforts of the institutions' marketing departments – consumer demand grows. The perception of an expanding market for new services encourages both AHC and CMC to further expand their clinical services. In reality, the "new" market may represent a shift from other less invasive and less expensive services, sometimes with minimal or no gain in cost/benefit ratio.

Diagram 10: Escalation — Cardiovascular Services High tech services Resources needed to sustain program **REINFORCING LOOP #2** Successful REINFORCING LOOP #1 treatment Program size (faculty and fellows) Consumer demand AHC RESULTS CMC RESULTS Cardiology services Cardiology services **RESULTS OF** BALANCING LOOP #2 AHC vs CMC **BALANCING LOOP #1** AHC's CMC's Patient dase **ACTIVITY** and revenue PERCEIVED THREAT PERCEIVED THREAT то АНС TO CMC Competitiveness Competitiveness

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It is difficult to break such an escalation cycle. This archetype reveals each organization's insecurity about its ability to retain its competitiveness on a basis other than by increasing invasive cardiology services. Analysis of the archetype can provide perspective about possible solutions through this complex problem, through asking questions such as (adapted from Kim, p. 14):

- ◆ Who are the groups that we consider as threats?
- What is actually being threatened, and what is the source of the threat? Is it cardiologist salaries, protected time to do research, ability to garner managed care contracts, reputation among our AHC peers, etc.?
- ♦ What relative measure pits one party against the other, and can we change that? What are the significant delays in the system that may distort the true nature of the threat? What's the effect of the time for training cardiology fellows before they go into competitive practice with us, etc.?
- Can we identify a *larger goal* that will encompass the individual goals? Can we develop collaborative relationships between the AHC and CMC?
- ♦ What are the deep-rooted assumptions that lie beneath the actions taken in response to the threat? We cannot survive unless we look similar to the way we look today; basic molecular biology research into the fundamental causes of heart disease is more scientifically valid than behavioral health research; high technology treatment is more valuable than 'soft' prevention programs because it's impossible to change someone's lifestyle, etc.

Archetype analysis helps in identifying the best leverage points to consider in breaking the vicious cardiology services cycle. Forum participants identified these points:

- Increase emphasis on medical and non-invasive therapy over interventionalist medicine.
- Change the revenue incentives to decrease rewards for interventionalists. \Diamond
- Re-examine the number of cardiology fellows.
- Replace cardiology fellows with physician assistants, nurse practitioners, etc.
- Collaborate with local competitors in joint ventures (e.g. for equipment or contractual services for the AHC).
- Engage in joint planning with other local providers to segment the service market. \Diamond
- Focus on the patient base needs linked to the academic programs, rather than on "winning" the market share race.
- Lock in the patient base through health plan contracts, decreasing volatility.
- Be reasonable and truthful in marketing stories about new treatments. Don't advertise services too soon, in order to prevent prematurely fueling customer demands.
- Investigate whether short-term solutions for cardiology (e.g. buying community hospitals) will lead to an unintended reinforcing loop that will erode resources available for other programs.
- Investigate whether fueling the cardiology service escalation is diverting attention and resources that could be used to create new capacity in other areas.

ANALYZING THE SAME COMPLEX PROBLEM THROUGH TWO ARCHETYPES:

OPTIMIZING CLINICAL PRODUCTIVITY

Several groups of Forum participants focused on this complex issue currently facing AHCs. This challenge can be viewed in a variety of ways. Diagram 11, a Fixes that Fail archetype, describes a common intervention of providing compensation incentives to faculty for clinical service. The unintended consequence may be that there are fewer resources available for faculty development to address the deeper problem of the new skills and knowledge - both in the health care management and in the academic scholarship aspects of their responsibilities - that faculty need for long-term career success. Thus, the fix is only short term, and faculty dissatisfaction will continually recur.

SYMPTOM/FIX Clinical incentives PROBLEM/SYMPTOM to retain faculty Level of satisfaction among clinical faculty **BALANCING LOOP** REINFORCING LOOP Unintended Consequences Decreased resources for faculty development

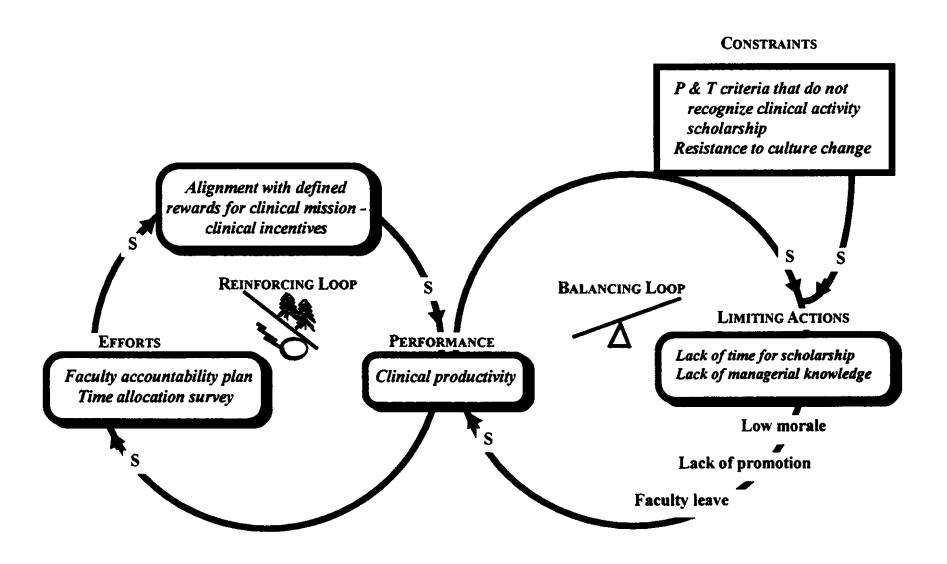
Diagram 11: Fixes that Fail — Clinical Incentives

Diagram 12 describes how this problem and strategy also can be viewed as a Limits to Success archetype. The ultimate success is limited by the traditional faculty culture that expects faculty release time for scholarship. Thus faculty again become dissatisfied when they cannot be promoted, leading to low faculty retention. Underlying constraints identified here include:

- deep-rooted faculty culture that values discovery scholarship over applied clinical activity scholarship, and
- lack of health care management knowledge and skills necessary for faculty of today.

A leverage point might be working with promotion and tenure committees at the institutional level, as well as with scientific disciplinary societies at the national level, to broaden the view of scholarship so that it is more closely aligned with current faculty responsibilities.

Diagram 12: Limits to Success — Optimizing Clinical Productivity



CLOSING COMMENTS

We hope that these 12 archetype analyses of some of the complex problems facing academic health centers will stimulate you to try this tool on issues specific to your institutions. More information on these and other common archetypes can be found in the references cited in footnote 2. As Daniel Kim states, "The value is not just in the 'answer' that is generated, but in the greater understanding of the system that is gained as we go deeper into the underlying issues....[We can] continue peeling back different layers of reality....There is always more leverage at the next level of understanding."

"How technically complex this is!" A dean

> "The process [of working in groups to describe problems through the archetypes] gave more amplification of thinking – like a reinforcing loop." An ELAM fellow

> > 'The goal is to use the models to facilitate understanding of the complexity of the problem." Another ELAM fellow

We also encourage you to find out more about how Senge's Five Disciplines might be helpful in your evolution to learning organizations. At a recent meeting of AAMC's Forum on the Future of Academic Medicine, Nicholas DeGrazia, Ph.D., noted the importance of examining the total system. "When you're engaged in the dance, it's nearly impossible to see the patterns on the floor. Too many professional leaders get too caught up in daily realities to get to the balcony. You must find time to get to the balcony." DeGrazia also emphasized the need to challenge our mental models by asking, "Why do we do this? and Why do we do it this way?" Several ELAM Forum participants indicated the usefulness of the Five Disciplines in providing these types of tools and perspective.

"This has come at just the right time. I can go back and read The Fifth Discipline now and study it with my administrative team." A dean

> "I want to teach my junior staff these tools - to enroll them [in this way of thinking]." An ELAM fellow

> > '[This can be useful as] 'systems' rounds - use it as a tool." A chair





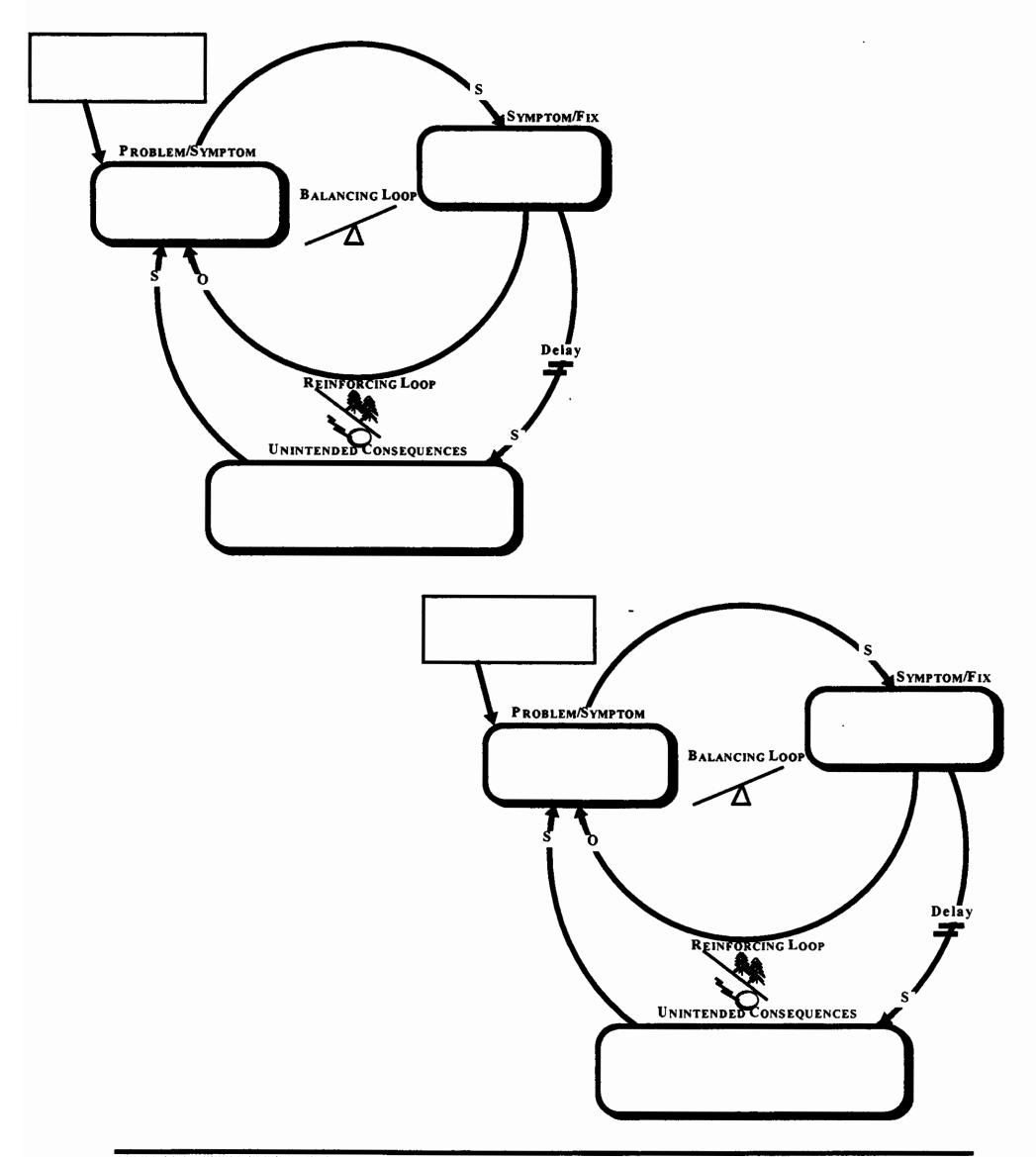




ARCHETYPE TEMPLATES

If you want to experiment with Systems Thinking, you can make copies of these pages and use the following templates to describe the unique problems of your institution.

FIXES THAT FAIL

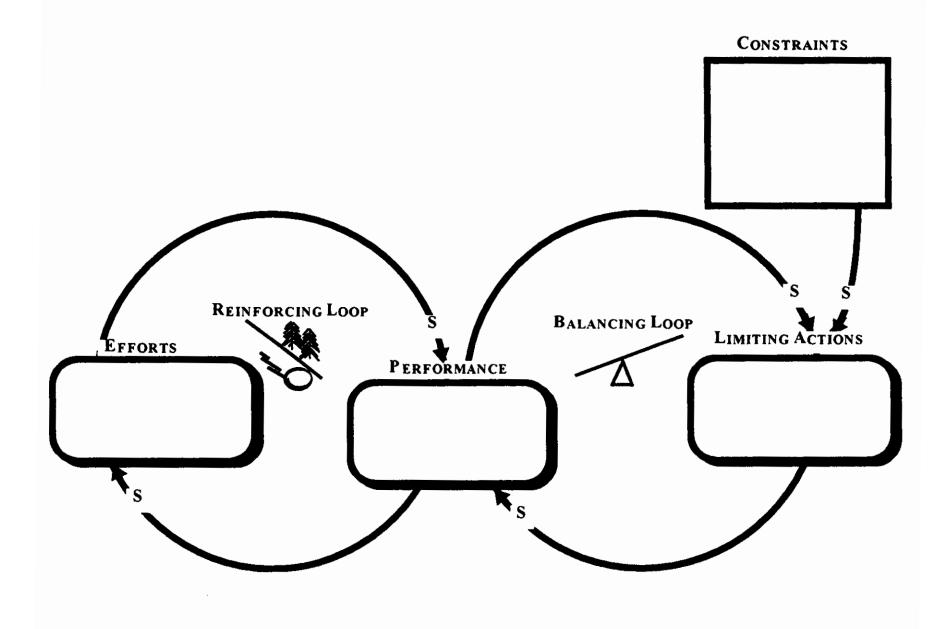


SHIFTING THE BURDEN/ADDICTION SYMPTOMATIC SOLUTION (diverts attention from fundamental solution) Deterioration of symptomatic BALANCING LOOP #1 solution SIDE EFFECTS, Unintended consequences PROBLEM SYMPTOM REINFORCING LOOP **BALANCING LOOP #2** Delay Delay SYMPTOMATIC SOLUTION **FUNDAMENTAL SOLUTION** (diverts attention from fundamental solution) Deterioration of symptomatic **BALANCING LOOP #1** solution SIDE EFFECTS, Unintended consequences **PROBLEM SYMPTOM** REINFORCING LOOP **BALANCING LOOP #2** Delay Delay **FUNDAMENTAL SOLUTION**

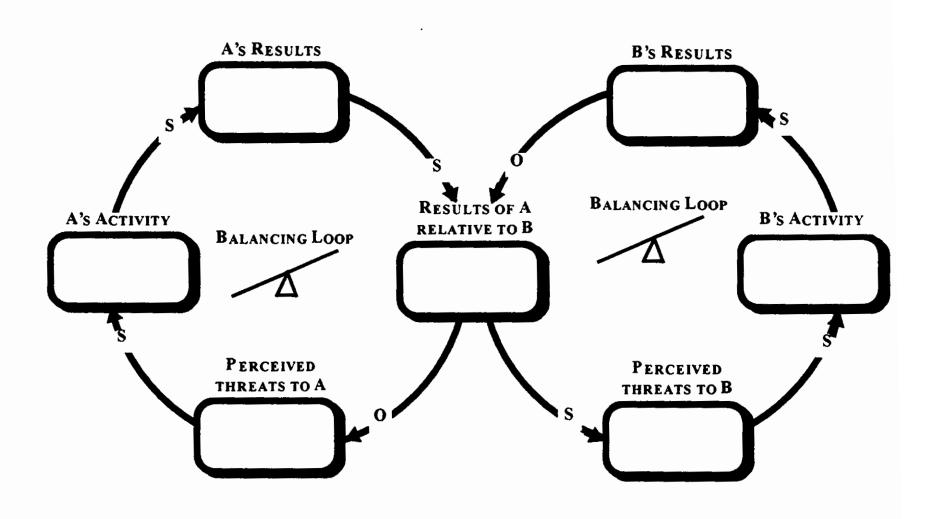
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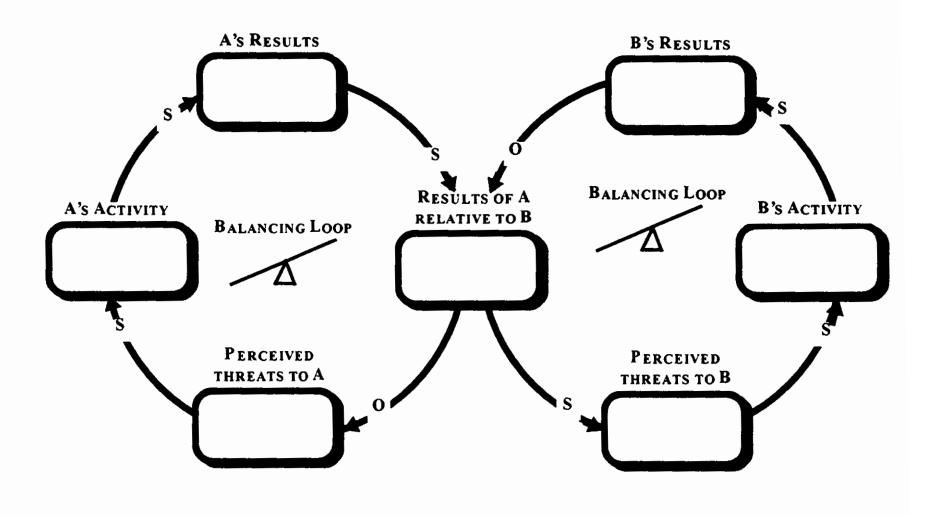
Page 23

LIMITS TO SUCCESS CONSTRAINTS REINFORCING LOOP LIMITING ACTIONS **BALANCING LOOP** EFFORTS PERFORMANCE



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