

# Service Quality Erosion

Entire industries get locked into vicious cycles of eroding service standards

Why? Eroding Goals and False Learning

**Systems Thinking:**  
It's more than you think.<sup>SM</sup>

### Why is service quality important?

Because the market value of companies depends on customer satisfaction. One point on the UofM Business School 100-point American Consumer Satisfaction Index (ACSI) scale translates to 3% of company market value.\*

And not just because of concern about losing customers. Examples: Bank loan officers who less time with customers sell fewer ancillary services. Insurance claims agents who take less time per claim give excessive payouts.

Based on work at MIT,<sup>†</sup> this paper describes the structure that can drive entire industries into a vicious cycle of declining service quality.

### A free market foundation

Free market economies depend on the relationship between customer satisfaction and profit. Sellers compete for buyers based on their ability to satisfy customers. This competition should bring economic growth and financial rewards to firms ... and, overall, it should increase profits, but it doesn't always do so in the service sector.

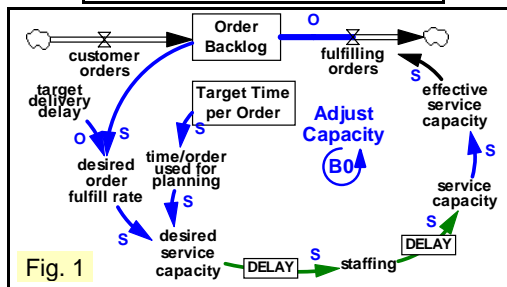
### A market failure?

From 1994 to 2001, the

*"The purpose of business is to create a satisfied customer."*  
Peter Drucker

### What is systems thinking?

Seeking to understand system behavior by examining "the whole" ... instead of by analyzing the parts.



Adding capacity in the face of increased demand should stabilize the order fulfillment rate ... but it takes time to realize more staff are needed and then more time to hire and train them.

**Loop B0 logic:** Maintaining a **target delivery delay** (units: weeks) in the face of a rising **Order Backlog** (units: orders), requires a greater **desired order fulfill rate** (in orders/week), which in turn requires a greater **desired service capacity** at a **Target Time/Order** (hours/order).\*\* This increases **staffing, service capacity & the rate of fulfilling orders** to reduce the **Order Backlog**.

Transportation-Communications-Utilities services index fell by 9.4% (to 68.4%), while Manufacturing Durables fell by only 0.6% (to 78.7%). This tells us that customer satisfaction in service industries is lower than, and falling more rapidly than, in manufacturing.

Why is service quality more vulnerable to declining customer satisfaction than product quality? Because service quality is intangible, which makes objective standards difficult to describe and measure. And customers evaluate not just the outcome, but also the process from which their participation is inseparable.

### What should prevent this?

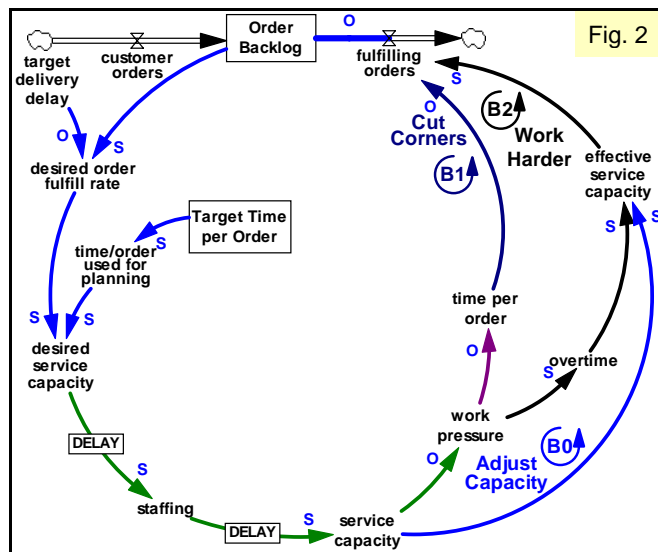
Adding service capacity. Figure 1 shows the balancing loop **B0, Adjust Capacity**, which increases **service capacity** by increased **staffing** when **Order Backlog** accumulates.

### Two faster alternatives

Figure 2 shows two quicker and easier options for increasing **service capacity**: **B1, Cut Corners** (decrease **time/order**) & **B2, Work Harder** (more **overtime**). **Work Harder** and **Cut Corners** win over **Adjust Capacity** because they provide quick flexibility *without apparent cost*.

### The problem is ...

But it takes time to realize orders aren't up simply due to statistical variation. Then it



Quicker ways of dealing with a need for increased capacity are to reduce time/order or put in overtime. Less time/order is less immediately painful.

\* <http://www.bus.umich.edu/research/nqrc/Q1-00-c.html>

† See note other side

\*\* orders/week \* hours/order = hours/week

takes time to justify, hire & train new staff. And of the other two options, **Cut Corners** wins over **Work Harder** because it's easier and less immediately painful than **overtime**. We know because MIT interviews revealed that employees prefer spending less time on documentation and selling additional services instead of **overtime**. And management sends signals: "... if you have to work overtime, you must not be working very smart."

**But less time/order has side-effects**

Figure 3 shows **R3, Eroding Goals**, we cope with more **work pressure** by reducing **time/order**. We get used to taking less time ... and the lesser **time/order** becomes the new goal. And MIT data showed **time to adjust desired time/order** is asymmetric; we adjust **time/order** down when **work pressure** increases, but not back up again when **work pressure** decreases.

**... which management misinterprets.**

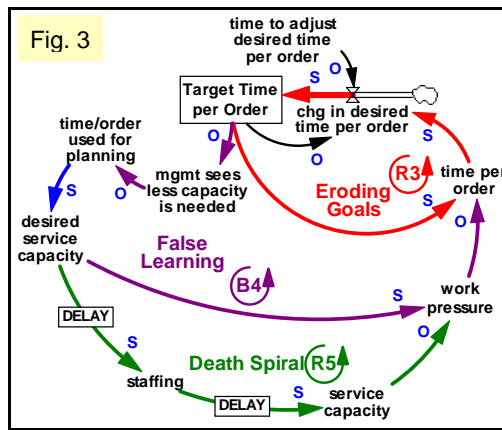
Loop **B4, False Learning**, shows it's logical (& tempting) for management to believe that the lower **time/order** is because of "productivity gains from learning." Their conclusion: **mgmt sees less service capacity is needed**.

**Oops ... a "side-effect"**

**R5, Death Spiral**, shows that a lower **desired service capacity** leads to less **staffing**, less **service capacity** and more **work pressure**. This leads workers to decrease the **time/order** even more to complete the work.

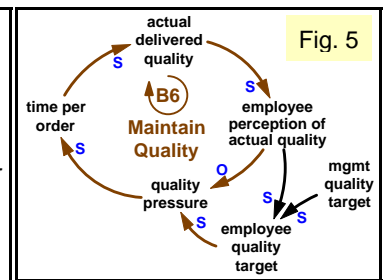
**What about quality?**

Figure 5 shows employees compare their perception of ac-



R3 shows the time/order drifts ever downward as we let the lower time/order become the target. Management interprets this decline as productivity gains (B4). Less staff increases work pressure and leads to spending even less time/order: a death spiral (R5).

**Loop R3 logic:** Compare time/order against Target Time/Order. The difference "flows" into Target Time/Order over the time to adjust desired time/order ... goals erode.  
**Loop B4 logic:** This loop appears to counteract declining time/order. That is, there would be less decrease in time/order than there would otherwise have been without the False Learning (and less decrease = an increase).  
**Loop R5 logic:** There's no reasoning with a death spiral ☹



tual quality against their quality target, which is influenced by both their perception and management's target. When actual is less than target, this increases **quality pressure** and **time/order**. BUT, it only does so **AFTER time/order** goes down, so **time/order continues to erode**.

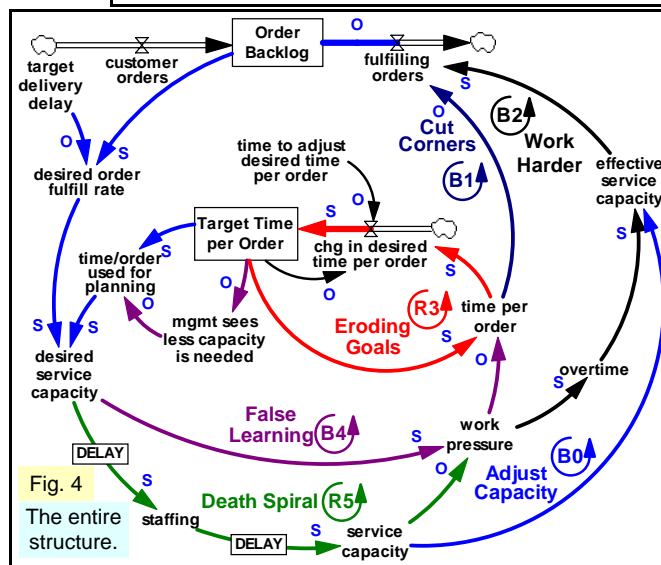
**Summary**

Because **Cut Corners** wins over both **Work Harder** and **Adjust Capacity** in balancing workload, **time/order** erodes. **False Learning** appears to regulate **time/order**, but instead it leads to a **time/order** and **service capacity Death Spiral**.

**Conclusion**

This structure helps us think through policies that influence service capacity and service quality erosion. What's your guess as to which policies avoid the death spiral? Surprisingly, one that doesn't is management acting to bring quality targets back up to expectation. Why is this?

Call us, we'll enjoy talking with you about policies and effects.



**Feedback is Power - Tap It**

Thinking through this structure helps determine policies that work. Do these? • Maintaining the management quality target at expectation? • Faster staffing or training? • Increased overtime pay? • Reducing the negative impact of work pressure on time/order?

There are no "side effects" ... only effects, some of which we do not foresee.

**Workshop Benefits**

- A group examines and answers the following questions (among others):
- How well are customer expectations understood?
- What are the skills and attitudes that customers value?
- How well are employees hired & trained for those skills & attitudes?
- Customers participate in the service process ... how are service specifications adjusted to ever-changing customer needs?
- How do employees & management form quality target perceptions?
- Are there opportunities for sales of ancillary services? Are such sales monitored and tracked over time?
- What relief mechanisms are available when work pressure mounts?

**Temporary Imbalances ... Permanent Erosion**

"We find that temporary imbalances between service capacity and demand interact with decisions rules for effort allocation, capacity management, overtime, and quality aspirations to yield permanent erosion of the service standards and loss of revenue."

Rogelio Oliva and John D. Sterman "Cutting Corners and working overtime: Quality erosion in the service industry"

*Continuous Improvement Associates*

Bob Powell, Ph.D., MBA  
 6992 Blackhawk Place  
 Colorado Springs, CO 80919  
 Phone: (719) 599-0977  
 Website: exponentialimprovement.com  
 E-mail: scuba@usa.net

† Based on Oliva & Sterman, "Cutting corners & working OT: quality erosion in the service industry" <http://web.mit.edu/jsterman/www/>