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A Plea for Long-term Orientation in Organizations

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Abstract. The stress field between short- and long-term orientations is the epitome of organizational problematics: In many enterprises the latter is dominated by the former. The consequences of a dominant short-term orientation are negative in the best case, but the cases that result in destruction and catastrophe are legion. Few sustainable solutions for the conflict between the short- and long-term perspectives have been developed, and among those concerned many have not sufficiently reflected on this shortfall, or even become aware of it. Frequently, practical constraints obstruct a balance between short- and long-term orientations. The aim of this contribution is to enquire into this dilemma and to find a way of coping with it. Any progress in that direction would help to further the viability of organizations and the quality of life within them. As a pertinent contribution we present the Model of Systemic Control, a framework with a long-term view for the governance of organizations. Even though we are emphasizing the conceptual aspect, our theoretical statement is underpinned by an empirical approach and simulation experiments.

Keywords: Long-term Orientation, Pre-control, System Dynamics Modeling and Simulation, Model of Systemic Control, Organizational Governance

PACS: 89.65.Gh

1. INTRODUCTION

Whenever economic and financial crises arrive or recur, harsh criticisms of the short-term orientation of actors are audible. At the same time, the orientation towards long-time goals and values is called upon. In principle, these arguments are right. Wrong, however, is the assumption, that the next crisis could be avoided. Even so we should not abandon the hope, that the crises due to the myopia of agents could at least be mitigated in the future. Currently, in organizations of all kinds short-termism appears to predominate over a long-term orientation (Brown 2007, Mintzberg 2007, Mizic 2007, Krugman 2001, Berger, Dertouzos et al. 1989). Much of that may be caused by emotional forces, namely greed and anxiety (Mitroff 2005). A factor of similar strength appears to be the rational, - an insufficient knowledge of the conceptual fundamentals of long-term causalities and interrelations.

2. SHORT- AND LONG-TERM ORIENTATION – A CONCEPTUAL MODEL

Human thinking and action are heavily influenced, if not determined, by the models on which they are based. The dominant short-term orientation in many companies is closely connected with the management models that prevail in them. These are the models based on double-entry bookkeeping, with the profit and loss statements, which are largely or exclusively directed to the profit objective. These kinds of model have been useful and proven for a long time: double-entry accounting traces back to Fra Luca Pacioli (1494). As has been shown elsewhere (Gaelweiler 2005; Schwaninger 1989, 2009), they are necessary but insufficient for the support of general management in our time. While in the epochs of low growth and small rates of change, economic downturns in a company could be corrected with a relative ease, the situation today is normally of a different kind: at the moment, when the economic difficulties become manifest, it is already too late to carry out successful adjustments, on time and with passable effort.

Management models are insufficient, if they neglect the pre-control by those variables which ultimately enable or hamper the profitability and finally the liquidity of a company. Under the evolutionary pressure of increasing complexity and turbulence, a sophisticated view about the criteria of competent management has emerged. It is a conceptual innovation to which we owe that nowadays new management models are available, whose potential for

an effective coping with complexity is much higher than in the case of the traditional ones. In these new models, the criteria of competent management are defined in the sense of a comprehensive organizational intelligence. There, profit is the result of preconditions created at higher logical levels. Therefore, profit is not a strategic goal.

These new developments have crystallized in a Model of Systemic Control (MSC) which leads beyond the traditional models of organizational control (Schwaninger 1989, 2009). The MSC integrates the traditional accounting model on a higher level, in recognition of the fact, that it is an important building block for a management system. And abridged version referring to private enterprises is depicted in Figure 1.

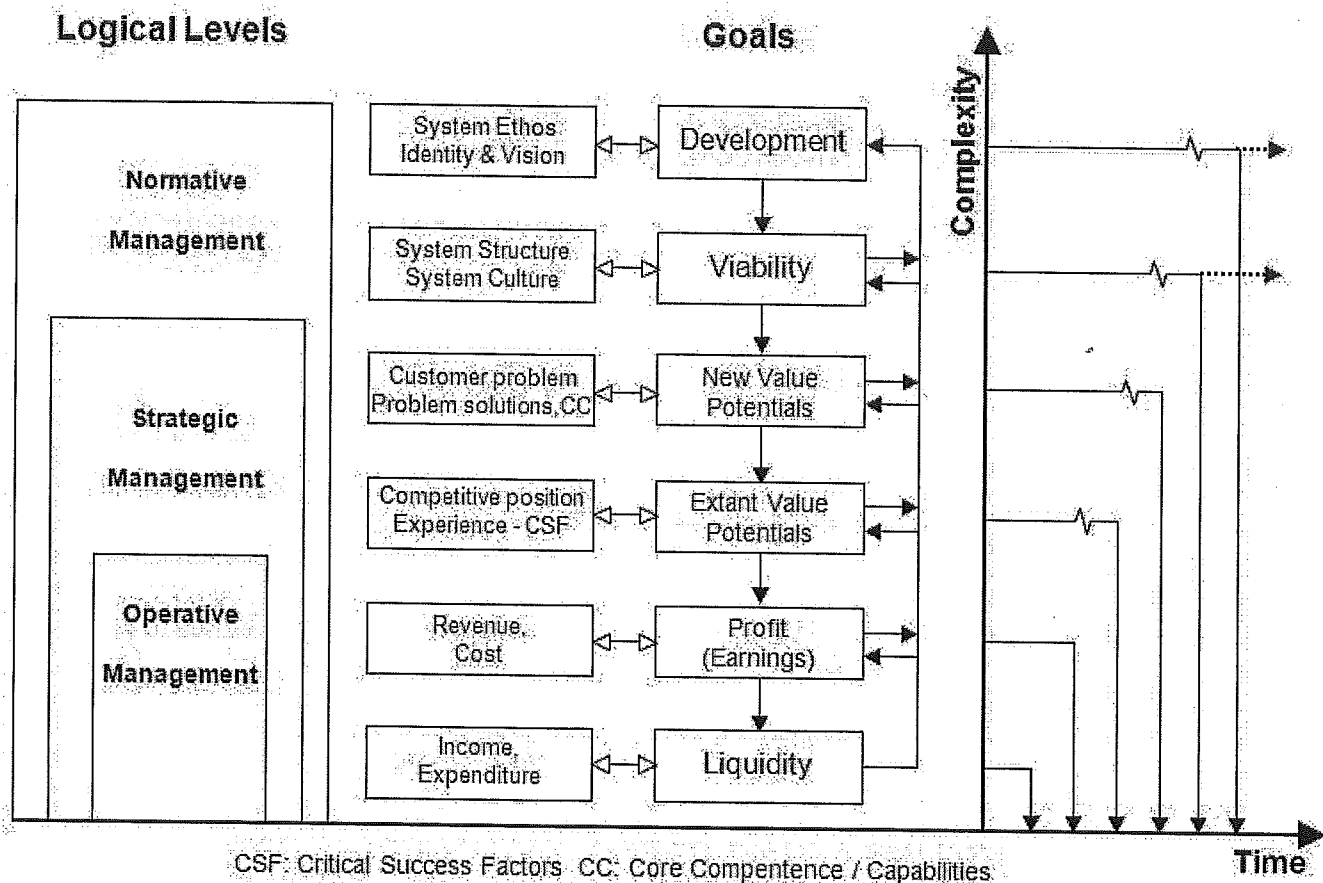


FIGURE 1. Model of Systemic Control (Version for private enterprises, slightly abridged; after Schwaninger 2009)

The MSC represents management as a process with several logical levels (operative, strategic and normative). A viable enterprise governs itself, in principle by means of control variables of all three layers, even though contradictions between those levels can arise.

As shown in Figure 1, there are specific relationships between the three levels. In particular, the reference variables of the higher logical levels exert a pre-control on those of the downstream levels (Gaelweiler 2005). Pre-control means, that in earlier phases, on the higher logical levels, preconditions are created, which largely determine what kind of results can be attained in later phases, and on the downstream logical levels.¹ If we are talking about different levels of management, this does not refer to specific persons or organizational units, but to three different logics. Each one of the three levels obeys to a specific logic expressed in its own language. In any organization, even in a one-person-enterprise, all three languages must be spoken, understood, and distinguished consciously. If that is not the case, the viability of the organization is likely to be impaired or imperiled.

The tasks of management are distributed between the three logical levels as follows:

- The *operative level* is about the creation of value for different stakeholders. In Figure 1, the financial-economic variables (particularly profit as a determinant of company value) are named, which represent the value for owners. For other stakeholders in particular customer benefit, social benefit and ecological benefit are the pertinent valuables.

¹ The aspect of pre-control between strategic and operative management was at first conceptualized by Aloys Gaelweiler (2005).

- The *strategic level* is concerned with the creation of value potentials, which enable to generate the values just named.
- At the *normative level*, the task of management is to ensure the viability and development of the organization.

There is a pre-control relationship between the parameters of the three different levels. Pre-control is the prospective creation of pre-conditions at higher logical levels for an effective governance at the downstream logical levels of management (Figure 1). Why do well-managed companies reap sustainable profits in the long run? The answer is a general one: independently of the efficient governance of day-by-day events, they have at their command powerful control mechanisms of higher order, which operate in a larger time horizon.

At the strategic level, the distinction, which is of particular importance here, is between extant and new value potentials is of importance. Extant value potentials express the preconditions for success, which emanate from the mastery of critical success factors, such as market position, experience, relative quality. In a still larger time horizon, however, these factors, which express present strengths, are tendentially not sufficient, for staying in business continually. In a larger time- and factual horizon it is therefore necessary to build new value potentials, in particular the capability of solving customer problems effectively and generating new problem solutions (products, services, technologies). These capabilities are embedded in core competencies, which have to be constructed with a long breath. Core competencies distinguish themselves by being valuable, rare, and neither imitable nor substitutable (Barney 1991). In other words, they are in principle difficult to grasp.

3. CASE STUDY

In this chapter we will describe the practical case, a model-building project, demonstrating the significance of the principles laid out so far. We will start off by describing the company in question and the situation it faced at the outset of the project. To ensure anonymity, we are calling the company *Parts*. Then we will go through the key questions posed and the general modeling setup and model boundaries, before delving deeper into the System Dynamics (SD) model details in Chapter 4.

The principles illustrated primarily revolve around the failure to develop new value potentials in an industry, where long term steady market growth created the impression that the critical success factors (CSF) – cost efficiency and end consumer marketing prowess – would suffice for long term growth. The limits to growth came from the assumption of continuous market growth suddenly no longer holding true. This was turning the industry wide focus from growing the sector onto a (zero-sum) market share game. In such an environment appropriate value potentials are crucial. While the cost leadership aspect is undoubtedly an asset, the possibilities for further advances in that area were increasingly limited. The other CSF – marketing prowess turned out to not be relevant to the industry, as it did not increase the likelihood of end-customer purchase.

The example clearly demonstrates the distinction between the operative and strategic management levels on the one hand, and between extant and new value potentials on the other. The focus on extant value potentials, which had ensured high profitability in a growing market, was shown to fall dramatically short in the changed competitive landscape that hit the industry.

3.1. The Company

The case study revolves around an industrial components manufacturer, which is the market leader in two of the markets examined and globally makes it into the top five². The components manufactured are fitted as visible – and branded – parts of a larger, durable product and are sold to industrial goods manufacturers for first fitting, as well as to end consumers in the replacement market. They namely need to be replaced on a relatively infrequent schedule – depending on use – however the complete products will be mounted with several sets of these specific components over their lifetime.

One complicating issue is that there is little lock-in to those components, come replacement time. Namely, in most cases components of most competitors are perfect substitutes and the performance difference is very rarely apparent to the end-customer. As the components in question are visible parts of the overall product – and branded –

² For validation purposes we examined a market, where the competitive position of the components manufacturer was weaker: as opposed to fighting for market supremacy, it only achieved 6th place in market share and was thereby in a significantly weaker position than the main competitors. The results were stable across all the countries, increasing our confidence in the robustness of the model.

the whole industry has relied on heavy use of end-consumer marketing, utilizing an equivalent of the 'Intel Inside' approach.

The replacement market generally is being hailed as the 'Holy Grail', as it accounts for more than two thirds of the overall volume, and much more in terms of profitability. Replacement components are namely sold to the individual end consumer, whose bargaining power is significantly lower, when compared to OEMs, which would annually order millions of said components. After this brief introduction we will continue with describing the market situation in greater detail, followed by a description of the problems faced at the outset of the project and the goals of the modeling endeavor.

3.2. The Market Situation

For some 60 years the growth in both the durable goods and the component sectors in question has been practically uninterrupted. This led to a situation of relative complacency in the industry, especially since demand for the components in most markets outstripped supply slightly. Even when the durable goods industry started experiencing the first demand shocks and overcapacity, this left the components manufacturers relatively unscathed, as they depended on the replacement market for the majority of their business, where demand remained largely inelastic.

Growth under such conditions was directly related to the growth of the durable goods pool. In order to accelerate the growth further, an industry-wide lobbying effort was undertaken, to legislate for different component types being required under differing operating conditions. This initiative succeeded in a change of legislation, as well as of customer perceptions, seeing the market move towards including a large fraction of customers with more sets of such components – to account for different operating regimes.

An increase in the fraction of end-consumers with more sets of components could be noticed and continued up until the point of the new legislation. As this affected not only the newly sold durable goods but also the complete pool of such goods already in the market, the components demand grew at a much faster rate than the underlying growth of the durable goods. The above normal growth became regarded as standard and perceptions of the management in the whole industry adapted to include this fraction in their forecasting. Shortly after the law was passed, though, the component sales fell dramatically.

In that situation, we were engaged to build a dynamic simulation model. The decade long growth in turnover as well as profitability had suddenly stopped in the year before the engagement. While this was not dramatic in itself, it led to first internal doubts and calls for carefully examining the management models, to ascertain, whether they were still adequate for the seemingly new situation faced.

The main questions being posed were therefore:

- Is the long-term growth likely to continue along the same path as previously or is it about to stall?
- How can growth in the whole market volume or at least on a companywide level be reinvigorated?
- Which part of the distribution system needs to be subjected to more support in order to achieve maximum results?

The purpose of the model then was to give managers of *Parts* a conceptual device for helping them answer these questions and establishing policies in order to cope with the challenges faced. The answers to these questions will be described in some more detail in the discussion section, after a description of the modeling effort undertaken as an attempt at answering them.

4. MODELING

The purpose of this section is to describe the simulation model – an SD (System Dynamics³) model – in detail and explore the scenario results, before continuing with their analysis in the following chapter. In order to examine the established business model in the enterprise, a complete model of the replacement component business was necessary. This would then help validate the intuition of various decision makers and form a coherent picture of how to reframe the business model going forward.

The main dataset used for the modeling came from a longitudinal consumer panel running over 6 years. The panel generated over 20.000 responses linked to a replacement purchase occasion, as well as a base of around 5.000 respondents, who carried out more than one replacement purchase in the period examined.

³ System Dynamics is a methodology for modeling and simulation, established by Jay W. Forrester. SD models are essentially made up of stock, flow and auxiliary variables, by which causal loops are formed. The simulation mode is continuous. Delays are incorporated. The dynamics generated by the models is mainly generated by the closed loops and the delays. See e.g., Forrester (1961) and Sterman (2000).

4.1. Individual Model Sectors

The main components are an overall demand estimating section, an end-consumer component brand section, and further sections on end-consumers' attitudes towards the replacement outlet brands, the endorsement levels of the service outlets in relation to different component brands, and finally a conversion probability tree – determining the likelihood of the purchase of a specific replacement product depending on the combination of above factors.

4.1.1. Overall Demand Estimation

The purpose of this model sector was to determine the overall future market size – specifically answering the first key question the company posed. Given that replacement demand is still relatively inelastic, when it comes to the quantity of products – less so in terms of overall turnover⁴ – this step would determine what the size of the pie to be played for was. The first step in estimating the overall demand level was to use historical data on both the stock and flows associated with the durable goods in question. The size of their pool already in existence is of obvious importance – being an estimate of replacement demand of said components. Sales were tracked separately for the various types of components over the whole period of time. Some additional modeling was necessary in order to establish more detailed sub-structures of demand.

4.1.2. Brand Perception in the Components Sector

In order to test the assumption, to what extent brand awareness or even preference plays a role in increasing any given company's share of the overall market, an end-consumer choice pipeline was included in the model. This divided end customers into four distinct groups – unaware of brand in question, aware of brand in question, preferer of the brand and preferer of another brand. As all preferers seemed to have an awareness of the brand being examined, the possible flows went from unaware to aware and then to either the preference for the brand of interest or another brand, with the possibility of a flow between the two groups of preferers as well.

4.1.3. Brand Perception of the Replacement Outlets

The end-consumer chooses both the replacement outlet and the component brand; this has to be reflected in an appropriate model structure. The explicit model structure differentiates between types of outlets – whether durable good manufacturer controlled or independent. In addition, subscripts / arrays have been included for all major brands of outlets, accounting for approximately 95% of the overall replacement business. End-consumers were being assigned to those outlet brands where they had made their last replacement purchase. In effect the overall components market was being divided / weighted according to how much was purchased from each specific outlet brand.

4.1.4. Relationships between Outlet Brands and Component Manufacturers

The ingoing assumption of both the management team and the outlets examined was that the relationships between an outlet brand and the component manufacturer played a large role. In order to test this assumption, a simple first recommendation behavior of the outlet brands was built into the model. The components industry performs a monthly mystery shopping study with the purpose of evaluating the pricing situation for equivalent product at different outlets, as well as their overall recommendation behavior – i.e. what brand will get recommended to an end-consumer, who does not express a specific preference. Usually over 100 such conversations per outlet brand are recorded monthly, providing the industry with a reliable estimate of recommendation behavior.

After some preliminary fitting recommendation levels and actual sales shares⁵ by component brand, a strikingly good fit (strong positive correlation) was observed between recommendation⁶ and actual sales shares.

The component necessary to complete a holistic picture of this industry sector is a conversion probability tree, as described in the following section.

⁴ In times of economic decline demand would shift towards cheaper brands or cheaper products of a specific brand, rather than drop off altogether.

⁵ Sales shares is a component brand's percentage of the overall sales of an outlet.

⁶ Recommendation share is a brand's share of overall dealer recommendations in an outlet.

4.1.5. Conversion Probability

In order to understand the interplay between the components discussed and thereby complete the simulation model, a conversion probability tree was constructed. The principle behind it is that for each possible combination of endorsement behavior (i.e., dealer recommendation, end-customer brand awareness and component brand preference, a likelihood of actual purchase of that brand is calculated, and captured in the formula:

$$\text{Probability of purchase}_{(\text{brand } A)} = \text{Brand awareness}_{(\text{brand } A)} * \text{Brand Preference}_{(\text{brand } A)} * \text{Endorsement levels}_{(\text{brand } A)}$$

With a description of the individual model sectors concluded, we will briefly summarize the complete model and the possibilities it offered in terms of simulation.

4.2. The Complete Model

The simulation model used enabled us to test the validity of the current approach which was focused on end-consumer marketing and to assess to what extent a continuation of status quo was likely to enable the company to meet its performance targets - durable market share leadership and continued growth of profits. It also allowed a demonstration of the need to develop new value potentials in order to reach high levels of performance at the operative level, in the future.

The modules are named as described above:

- Brand Perception in the Components Sector → End customer's choice of component brand
- Brand Perception of the Replacement Outlets → End customer's choice of channel brand
- Relationships between Outlet Brands and Component Manufacturers → Endorsement of brand by outlet

A summary of the overall model is given in Figure 2. To strengthen the representation of the complex and intricate aspects of the business under study, we have abstracted from the demand estimation module, which is more straightforward anyway.

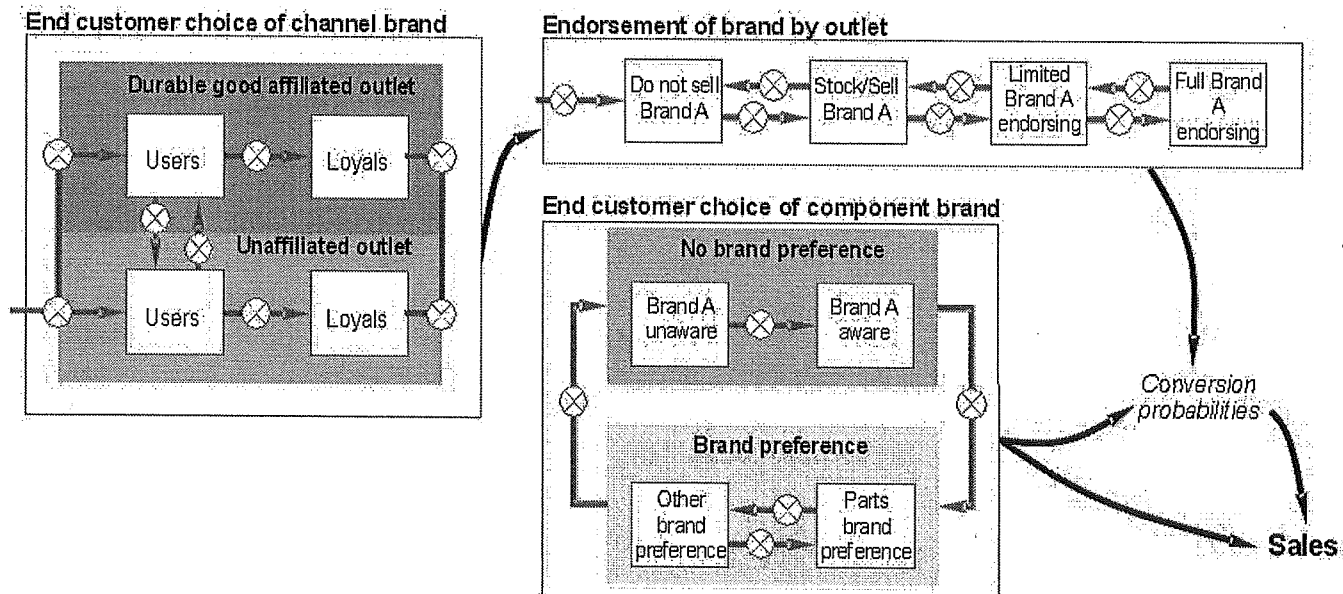


FIGURE 2. Conceptual summary of the complete simulation model: High-level map

The model enables simulation at the purely tactical level, answering questions such as which specific dealer outlets to target. It also provides answers on a broader scope, for instance, will a continued investment in our extant value potentials suffice for generating future success at the operative level, or is additional pre-control in the shape of new value potentials necessary. The model is also of great help in identifying concrete areas, where those new value potentials need to be sought.

The model is focused on the strategic and operative levels of the Model of Systemic Control (Section 2); it does not portray the normative level explicitly. Such a representation would not be evidence based, as it is difficult to quantify the impact of normative level values on lower levels of the MSC.

Following the model description, we will now proceed to show some simulation results, underlining the principles laid out in this paper.

5. DISCUSSION OF SIMULATION RESULTS

In the modeling exercise the focus of simulation runs was on testing scenarios and initiatives, which would on the one hand match potential threats and possible actions of the company, while also demonstrating the consequences of choosing to continue with the status-quo short term orientation, versus adopting a longer term approach involving the generation of new value potentials.

5.1. Expected Performance Shortfall

The simulation results demonstrated an undoubted performance shortfall in case the existing value potentials alone were to be focused on while significant performance improvements were feasible, in case *Parts* would concentrate on new value potentials. An increase in the number of brand preferrers – from the ranks of brand aware consumers – was typical of new value potentials. It would need both understanding how to accomplish that and the creation of the necessary resource – brand preference. It would also be a lengthy undertaking, only yielding significant results with a delay of a decade or longer. Further research into preference building stages in three different markets confirmed both the timing and the difficulty of building brand preference amongst end consumers. In fact, all non-preferrers, who were not already intending to purchase the brand of components, were of very low economic value, leaving only a small group of potential customers, who could likely be converted into brand preferrers over the medium term.

On the other hand, focusing on dealer endorsement carried the potential of a much quicker turnaround. Concrete policies in current grasp of the management could yield some results immediately. The fruits of the buildup of necessary resources to ensure a long term capability and leadership in the field of binding dealer recommendations to *Parts*, and end-consumers to dealers, would be reaped later.

As already briefly touched upon in Section 3, the expectation for the market to continue growing at a steady rate proved to be unfounded. The switch market - those who buy the new type of component for the first time - drove growth expectations to levels beyond underlying demand.

This meant a significant performance shortfall, in case the components manufacturer would not manage to source growth in a market share battle.

5.2. The Possible Contribution of Extant versus New Value Potentials

In order to gain an understanding of what effect various value potentials could have on the company performance, we started off with an elementary leverage analysis –examining the effectiveness of all possible levers available to the decision-makers of *Parts*. On that basis, a workshop with managers of the company was realized in which specific initiatives were elaborated and tested – by simulation – in respect of their impact.

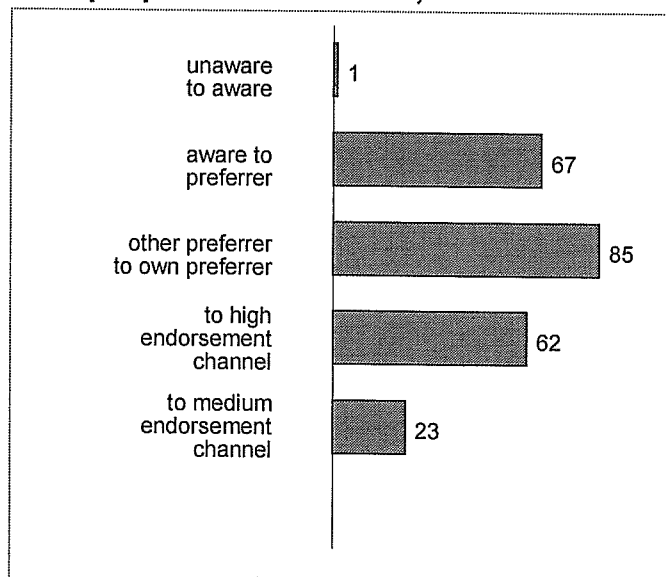
We will consider levers driven at different logical levels in the MSC. As a measure of success we will base the effects both on a relative customer count as well as on a profitability count. In the interests of client confidentiality the numbers presented are ratios, rather than nominal customer counts and profit contributions.

The three main levers we will present are the change in end consumer component brand awareness, component brand preference, and the number of end consumers driven to a specific dealership chain. The two not tested for explicitly are further cost cutting and an increase in endorsement levels between dealerships. The reason for not including the former is that the team could come up with no initiative, which would meaningfully squeeze the cost to an extent to materially alter profitability. As for the latter, there are two reasons – first of all the effect is similar in principle to driving customers towards high endorsing dealer chains, and second, one cannot produce a comparable metric for leverage as in the other case.

The effects of pulling the three levers described above – i.e. testing for performance effects of increasing the number of people who are component brand aware, or who have a preference for a component brand, or who go to an outlet endorsing a specific component brand – can be seen in Figure 3. One can clearly see the effectiveness of relying on each of the possible value potentials. The left side shows the relative number of additional components

sold by moving end-consumers between different awareness / preference / dealership affiliation states, while the profit contribution figures on the right. For the first three vertical columns in Figure 3 the relative profit increase exactly matches the increase of products sold – as there are no differential assumptions to which outlets those additional brand aware / brand preferrers will go to (with the associated profitability differences). In the last two cases the profitability increase differs, depending on the margin levels the component manufacturer enjoys with different retail brands.

Additional components sold, from moving 1000 people between stocks, 2009



Additional contribution, from moving 1000 people between stocks, 2009

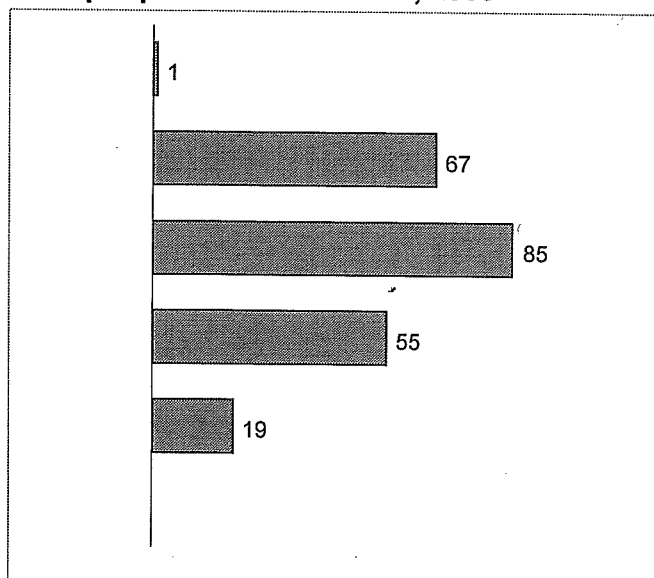


FIGURE 3. Leverage comparison on additional sales volume and profit contribution⁷

The results shown indicate clearly that increasing brand awareness – which is building on the existing value potentials of the company, only brings an insignificant amount of additional value. In fact the profit contribution of such measures is lower than the cost of successfully implementing them, meaning that any further push in that direction is likely going to be value destructive for *Parts*.

On the other hand, both levers based on new value potentials - company brand preference and dealer recommendations - show significant upside potential in terms of additional volume generation. Generating preference seems to be the larger of the two, however further study of brand preference in three markets revealed that the potential increase in preference that could be achieved was very small, and likely to take more than 10 years to accomplish.

Finally, actions to drive customers towards high endorsing dealers could be devised quite rapidly. In fact several concrete intervention steps were identified, which could increase the end-customer loyalty towards high endorsing dealers by 48% or more over the period of a year. The cost of such initiatives is significantly lower than the profit contribution, which strongly favors taking this approach going forward. In a longer term additional skill-sets in engaging components dealers / fitters can then be developed, which would be harder for competitors to copy. The first steps towards the new value potentials, though, would already ensure sufficient success at the operative level to finance any such development. This now brings us towards synthesizing and concluding the findings of this case study.

⁷ Several further scenarios were tested, including all the steps along the awareness chain. These do not change the overall message and have been omitted for brevity.

6. TOWARDS A NEW ORIENTATION OF *PARTS*' MANAGEMENT

In the past, nearly all the energy in *Parts* flowed into the short- and mid-term issues. For example, the focus of management was almost exclusively concentrated on cost reductions. The determinants of extant value potentials were known; market share, relative quality, technological position and strength of marketing were considered important, but they were not managed systematically as were revenue and cost. In the final analysis, the profit and loss statement was the measure of all things for the managers. Operative thinking and acting dominated, and it even ousted the strategic orientation. In addition, a potentially calamitous behavior was even observable at the strategic level: even if the extant value potentials still had a certain weight, in contrast the new value potentials were excluded from consideration. For example, in the relevant market, a convergence of all competitors was lurking in the longer run. All of them optimized their products, used the same technologies, followed the same quality standards, fought for the same distribution channels etc. Hence, it was foreseeable, that all differentiation was about to disappear, - a dangerous development ((Kim & Mauborgne 2005). Furthermore, drastic changes in the distributive trade were looming, which would most likely entail obsolescence of the current distribution mode. However, "radar screens" of the organization were not tuned in a way that developments of that kind could have been recognized.

Parts and the whole industry had essentially channeled their efforts in a wrong way for decades. They had almost exclusively invested in brand image and technology. *Parts* had subscribed to a practice of over-engineering, which was driven by a technocratic culture, - the engrained belief, that the success hinged on product features.

The necessity of a new orientation became evident, through the simulations and analyses we have described. Also, this topic became ripe for discussion, with the help of the model. The transparency of the modeled affairs facilitated communication with and among the managers. An informal survey in the context of our more recent interactions with *Parts* conveys a promising trend: At this stage, one can already ascertain that the managers' mental models are evolving towards a new understanding. Several managers of the company assured us that the new insights are increasingly informing decisions. In the meantime, SD-modeling of wider aspects of *Parts*' business has been implemented, embedding the approach in the company.

7. CONCLUSIONS AND OUTLOOK

We have highlighted the dilemma of leadership in the stress field between short- and long-term orientation. Using a simulation model for the complex organization we have attempted to make the implications of that tension palpable. We have shown how a company can live better with the dilemma identified here. In cases like this one all factors have to be pondered to begin with, generative structures have to be analyzed and the complexity has to be fathomed with the help of scenarios. On that basis, a desirable future can be designed, and sustainable ways for bringing it about can be found (Ackoff 1981).

This is exactly what was done in the present case. With the help of computer experiments, the contributions of further investments into extant and new value potentials were assessed. At the outset, the company under study suffered from myopia. Continuously, the important matters were crowded out by the unimportant ones, and foresight gave way to shortsightedness. That disease could not be cured by simply building a simulation model. However, the model was enthusiastically received by the circle of the leading executives, and soon integrated into the decision processes. Thereby, relatively good prerequisites have been created, for a far-sighted orientation to gain a foothold in that company. By now, the simulation model has become a trustworthy support for the managers, as its validity has been tested and corroborated in the context of three very different regional markets served by *Parts*.

The insights from this contribution can be summarized in the following imperatives:

1. Understand control variables and pre-control.

For an effective leadership, more comprehensive management models than the customary ones are necessary. It is imperative to consider the orientation fundamentals in a wide factual and temporal horizon. The control variables of all logical levels with the pre-control relationships which connect them must be ascertained and understood.

2. Consider the precedence of the long-term.

The insight, that short- and long term cannot simply exist in parallel, but that they are in a causal relationship, is elementary. As a matter of principle, this results in a precedence of the long range (and beyond that, of the timeless). Prerequisites of success must be built with a long breath. Only this way spaces for action can be opened. Non-observance of this matter of fact can lead very fast to a shrinkage of potential and therewith to a destruction of scope for development.

3. Use better models.

This addresses the conceptual, mental models in the first place. The quality of these models is decisive, because the results of a management cannot be better than the underlying models (Conant & Ashby 1981), except by chance. But it is also necessary to develop better models as instruments of leadership. Dynamic simulation models can entail enormous progress in that respect. They can even be combined with optimization heuristics, for the refinement of the calibration of decisions.

4. Capture the dynamics.

The dynamics inherent in a complex system can be captured intuitively. To understand it better and to derive sensible decisions, the addressed simulation models are necessary. This way the attention is shifted from the analysis of discrete single events to a deeper understanding of the dynamic patterns in which these events are embedded and to the underlying structures, which give rise to these patterns.

5. Ensure an integral system design.

In a permanently changing environment, the importance of point-precisely prescribed goals recedes. Much more important becomes the question, which kind of development is desirable for an organization. The issue is to ascertain a corridor, in the frame of which such a development is possible. Spaces of action have to be fathomed carefully and vulnerabilities have to be identified. With *integral design* we also call attention to the fact that it is not sufficient to define *policies* in the sense of sequences of activities. What is equally necessary is the design of an adequate structural and cultural context.

Our concern with this contribution was making available conceptual fundamentals for long-term orientation in organizations of all kinds, furthering systemic, integrative modes of thinking. Cultivating and putting into practice such systemic thinking not only enhances the intelligence and viability of the respective organizations. Such a practice also tends to entail a higher quality of life for the managers and everyone active in these organizations.

REFERENCES

1. Ackoff, R. L. (1981). *Creating the Corporate Future: Plan of Be Planned for*. New York, NY, Wiley.
2. Barney, J. (1991). "Firm Resources and Sustained Competitive Advantage." *Journal of Management* 17(1): 99-120.
3. Berger, S., M. L. Dertouzos, et al. (1989). *Toward a New Industrial America*. Scientific American(260): 21-29.
4. Brown, P. U. (2007). *Shortsighted Management*. New York Times. November 24, 2007: C 5.
5. Conant, R. C. and W. R. Ashby (1981). Every Good Regulator of a System Must Be a Model of that System. *Mechanisms of Intelligence: Ross Ashby's Writings on Cybernetics*. R. C. Conant. Seaside, California, Intersystems Publications: 205-214.
6. Forrester, J. W. (1961). *Industrial Dynamics*. Cambridge, MA, MIT Press.
7. Gaelweiler, A. (2005). *Strategische Unternehmensführung*. 3. Auflage (1. Auflage 1987). Frankfurt a.M. und New York, NY, Campus.
8. Kim, W. C. and R. Mauborgne (2005). *Blue Ocean Strategy: How to Create Uncontested Market Space and Make the Competition Irrelevant*. Boston, MA, Harvard Business School Press.
9. Krugman, P. (2001). *The New Reality Is Old Economy Shortages*. International Herald Tribune. January 3, 2001: 1.
10. Mintzberg, H. (2007). "Opinion. Productivity Is Killing American Enterprise." *Harvard Business Review* 85(7/8 July/August): 25
11. Mitroff, I.I. (2005). *Why Some Companies Emerge Stronger and Better from a Crisis: 7 Essential Lessons for Surviving Disaster*. New York, NY, AMACOM
12. Mizic, N. J., Robert (2007). *Performance: The Cost of Myopic Management*." *Harvard Business Review* 85(7/8 July/August): 22/24.
13. Pacioli, L. (1494). *Abhandlung über die Buchhaltung*. New edition of 1933. Stuttgart, Poeschel.
14. Schwaninger, M. (1989). *Integrale Unternehmensplanung*. Frankfurt/Main, Campus Verlag.
15. Schwaninger, M. (2009). *Intelligent Organizations. Powerful Models for Systemic Management*. Second edition. Berlin, Springer.
16. Sterman, J. D. (2000). *Business Dynamics. Systems Thinking and Modeling for a Complex World*. Boston, MA, Irwing/Mc Graw-Hill.