DETERMINANTS OF REALITY CONSTRUCTS:
TOWARDS A COMPREHENSIVE MODEL OF CORPORATE FUNCTIONING

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This paper addresses the issue of the formation of reality constructs and proposes a process whereby these constructs may be studied. It is a first step toward a comprehensive theory of organizational functioning.

Cet article aborde le sujet de la formation de “reality constructs” et propose un processus pour les étudier. Il s’agit de premiers jalons en vue d’une nouvelle théorie du fonctionnement organisationnel.

Introduction

This paper grew out of the authors’ dissatisfaction with current organizational research paradigms and methods. Further impetus was found in the profound changes occurring as a result of our transition to the post-industrial age. This transition is reflected in the increased pace and competitiveness of organizational life and the rapid growth of and access to information, and its creative management. One consequence will be a need for improved methods of organizational analysis, design and management. In short, it is time for a new approach which copes with the dynamic realities of the post-industrial age.

The idea presented here is essentially a simple one. We view organizations as dynamic, adaptive and evolving organisms. Each organization encompasses some elements of physical or objective reality (e.g., physical location, tangible assets) and some elements of constructed reality (e.g., the world-views and value systems of employees). By definition reality constructs have the potential to be dynamic. If one’s underlying world-views change, then the models one derives from them change in order to reflect this shift. Similarly, if organizations (or at least those who run them) develop new reality models or perceptions, the underlying framework for the organi-
zation will change. The process of organizational change is well researched—the process whereby reality constructs change, however, is not at all well understood.

In this paper a model of the reality construct formation process is presented and a number of testable hypotheses are derived. The fundamental assumption is that by studying the processes whereby organizations create, implement and discard reality constructs, we can obtain deeper insights into their functioning.

After defining constructed reality, the paper presents a discussion of the need for a new approach to organizational research. Subsequently a model of the construct formation process is developed. The model is discussed in terms of organizational routines, environmental scanning, and individual skills. These applications lead to the outlining of a new organizational paradigm based on explicit recognition of the role of reality construction in organizational life. The paper ends with implications for research and suggestions for possible research directions.

**Definition of Constructed Reality**

Constructed reality, unlike objective reality, is based on subjective models, consensus and group norms, rather than natural laws and objective facts. It can be inferred by observing behaviour, and is subject to dramatic change as underlying beliefs and norms change. Though reality constructs can be described, they can only be modeled for a given space and time. On the other hand, physical reality (or scientific truth) can be objectively described and useful models for its analysis and prediction can be developed. Physical reality may be relatively dynamic (e.g., the decay of atomic particles), however, the underlying principles are stable. Consequently, the major difference between constructed and physical realities lies in the relative volatility of the former and the relative stability of the latter. Reality constructs interact with physical reality by the two mechanisms; elaboration and configuration.

Elaboration consists of the addition of layers of meaning to a tangible physical object. For example, a pair of expensive designer jeans is a physical object to which elements of meaning have been added to the functional meaning of the clothing. Configuration is the logical consequence of a reality model, which determines the positioning and situation among various physical elements. For example, consider the difference between a production facility configured for Just-in-Time production versus one arranged for traditional line production.

In tackling this problem, we realize that we are crawling where angels fear to tread. Clearly our paper deals with the underlying nature of reality and potentially opens the discussion to include all philosophical and theological thought as well as the less ambitious domain of administrative research. We limit this problem by crawling only a short way into the unknown and by tethering our ideas to those which may be empirically tested. While acknowledging debts to philosophy and the sociology of knowledge, we limit our discussion to the relatively mundane world of organizations and the environments in which they operate.
The Need For a New Approach to Organizational Research

One problem with much of current organizational theory is that it gives lip service to the dynamic aspects of organizations but ultimately treats them from a static point of view. Two major areas of organizational thought (Functionalist/Post-Functionalist) will be discussed briefly in this paper. The concept of constructed reality is placed in the context of these two perspectives.

The Functionalist Perspective views offices as highly structured, task oriented and rule dominated. This perspective is based on a belief in the ‘scientific method’, and a belief that stable rules of organizational behaviour can be determined. It is, in brief, a mechanistic construct. Much of the dissatisfaction with Functionalist theory in organizational research lies in its reliance on theories or models developed solely to explain physical reality while ignoring the influence of subjective factors. Uneasiness with orthodox thinking surfaces in economics with, for example, the use and misuse of market analogies in corporate decision making (Thurow, 1983). In the behavioural sciences, there are doubts about the value of traditional approaches to explaining corporate performance and behaviour (Perloff & Nelson, 1983). In the field of management information systems there is general dissatisfaction with current methods for conceptualizing and managing information and with the process of system design (Huber, 1983; 1986).

The response to problems with the Functionalist perspective can be labelled a Post-Functionalist perspective. Though fragmented, this group shares a common dissatisfaction with the Functionalist belief in the ‘scientific method’ as the only paradigm guiding organizational research. The Post-Functionals share an interest in human values and norms and a belief that the world is far less ‘objective’ than the Functionalist perspective admits. They view the office as a social setting where human relations, power, myth and symbols are dominant characteristics.

Some writers such as Gergen (1973) and Astley (1985), among others, have suggested that much of social theory is a reflection of an evolving consensus rather than ‘objective’ fact. Others, such as Berger and Luckmann (1967), have argued that most of our everyday reality is a social construction. Other authors such as Morgan (1986) use the concept of organizational metaphors to provide insights into organizational functioning. An elaborate discussion of Post-Functionals is outside the scope of this paper, rather we use the preceding discussion to provide a context for the ideas presented here.

Our work bridges a gap between the Functionals and Post-Functionals. We accept the Post-Functional argument that much of organizational reality is synthetic and that myth, power and symbols have a significant role in organizational behaviour. We also accept the Functionalist assumption that much of organizational reality is tangible, structured and task oriented. Where this work departs is in the focus on the process whereby constructed reality undergoes dramatic change. It is our assumption that this process of altering reality constructs can be managed to some degree and that
observation of organizations which seem to have facility at doing this can lead to important insights. By focusing on this process we are explicitly acknowledging the dynamic nature of organizational reality. Finally, it is assumed that reality constructs are an important component of any theory which attempts to explain organizational behaviour. In order to ground the model of the construct formation process, some examples are in order.

**Examples of Reality Constructs**

While one can think of extreme and polar cases of largely physical realities (e.g., particular aspects of machining or assembly line operations) or largely constructed realities (the interpretation of a modern art painting) most corporate and economic life comes as a mixture of both physical and constructed reality. Furthermore the relative weight and importance of physical versus constructed reality appears to vary appreciably and dynamically across different sets of economic activities and decision problems both within and across various functional areas, departments and/or firms. In turn this suggests that a) there must be a multitude of factors accounting for the relative importance and variability of “reality construction and constructs” and hence b) no context-free rules regarding the generation and management of organizational reality (constructs) should be devised.

Generally speaking the following factors act to increase the role of constructed reality:

- the amount of human interaction involved in the production and/or distribution of goods and services;
- the nature of human interaction as represented by increasing degrees of group heterogeneity;
- the technological and social complexity in the use of goods and services;
- rapidity of change with respect to the potential use of resources (opportunity development and entrepreneurial perceptions/decisions);
- multidimensionality in the actual and potential use of resources.

**Degrees of Reality Construction: A Marketing Illustration**

In the restaurant industry a marketer can construct a number of different realities depending on the various dimensions and consumer behaviour of the “eating out experience”. The traditional approach to restaurant concept development has been quite simplistic. Operators would choose the most promising demographic segments as their target market, develop a menu traditionally favoured by this group and select a location where the concentration of these individuals was high. Such a concept ignores the fact that over the course of time the same individual (in terms of sex, status, age, etc.) may have different eating likes and/or seek different types of eating experiences depending on the varying motivating forces behind the eating out decision (e.g., convenience, casual, social, personal event, formal social, sexual, entertainment, business, etc.).
Clearly the consumer’s reality concerning the choice of restaurants is highly conditioned by these aforementioned forces. An entrepreneur or an astute marketer realizes the potential of constructing reality underlying the dining experience and markets it appropriately. The degree of constructed reality in a dining situation can vary widely. At the level of the “mom and pop” lunch counter, reality construction and its management play a minor role since one is closer to the physical reality of stilling hunger.

As a general rule the more intangible the attributes of a product or service the more important the construction of its reality. This carries over into the domain of production, management and control of products and services.

In addition to being influenced by a variety of environmental and organization specific factors, we assume that the proportion of constructed reality increases as one ascends the organizational hierarchy. Furthermore, as a consequence of the higher proportion of nonroutine problems and decisions at senior levels, it is likely that there will also be a wider variety of competing constructs than at lower levels and that their useful life will be shorter.

Hierarchy Effects in Reality Construction: An MIS Example

The problem of designing decision support systems for senior management illustrates hierarchy effects in reality construction. When applying technology to higher level functions, systems designers typically complain that individual managers and executives either don’t know what they want or that they continually change their minds. This is striking since Information Systems have worked well at lower organizational levels. The observation, in fact, reflects the high degree of volatility associated with reality constructs.

One possible interpretation suggests that there are increasing proportions of constructed reality as one ascends the organizational hierarchy. A number of authors (eg., Markus, 1983) have commented on the political nature of information systems when applied to higher level functions. One explanation is that a number of competing constructs exist at higher levels, hence the introduction of a new information system simply moves the competition into a new arena.

Thus one could characterize the jobs of senior managers as the identification of situations which require new or modified reality constructs, the development of those constructs, and the securing of acceptance of the finished constructs. This view of managerial activity explains Kotter’s (1982) results. He found that effective general managers spend much of their day forming personal contacts (networking) and seeking information.

Viewing management as responsible for the process of formulating, testing and implementing reality constructs, leads us to conclude that it is more important to provide senior managers with information to support the process of construct devel-
opment than it is to provide information to support the application of developed constructs.

This may explain why information systems have been more successful at lower levels of organizations. Early information systems were applied to models that contained a large proportion of physical reality, for example: transaction processing, inventory control and accounting. Such systems were inherently less variable than managerial systems need to be. Moving up the organizational hierarchy, there is less need for information per se, but rather a need for the support of construct formulation processes. Therefore, traditional systems are not useful and new ones must be developed to provide information relevant to the managerial tasks of construct development, validation, and consensus formation.

A Simple Model of the Construct Formation Process

In order to illuminate the process of formation, use, and replacement of reality constructs; a conceptual model is presented in Figure 1.

Figure 1:
Conceptual Model of The Process of Reality Construct Formation

- Programmed Change
- Internal Change
- External Change

Trigger

Organizational Routines
[State 1]

Environmental Scanning (Internal/External)
[State 2]

Development of Organizational Consensus on Reality Constructs
[State 4]

Formulation of New or Modified Reality Constructs
[State 3]
The model begins with existing organizational routines (State 1). These routines provide a means by which the underlying reality constructs can be inferred. At some point a trigger activates the search for new constructs. Three triggers are shown in Figure 1. A programmed trigger is one which the organization activates itself. Examples include periodic program reviews, sunset clauses and zero-based budgeting. Internal triggers are activated by internal behavioural anomalies such as high turnover, low productivity, etc. External triggers are activated by events in the external environment. These can include increased competition, technological innovation, and/or changes in international markets.

Once the search for new constructs is activated, environmental scanning (State 2) occurs (internal and/or external). This process, provides the organization with an opportunity to clarify problems and to identify new or revised courses of action. In some cases, there may be minor modifications to existing routines. In other cases the organizational models which generate those routines may be changed. In some cases new reality constructs are formed. The process of formulating reality constructs (State 3) and having them adopted by the organization (State 4) completes the model.

The model presented here is a “thought” model and provides a focus for the remainder of our discussion. It is assumed that there can be iterations between any two states.

The discussion which follows focuses on States 1, 2 and 3. State 4 represents the management of organizational change and consequently is well represented in the literature already.

Organizational Routines: State 1

A number of authors (Nelson & Winter 1982; Leibenstein, 1976; 1984; 1987; March & Simon, 1958; Doeringer & Piore, 1971) share the notion that organizational functioning and behaviour ought to be viewed as “a correlate of organizational routines”. Their ideas serve as a useful point of departure for the analytic treatment of reality constructs in corporate environments.

By observing an organization’s routines we can derive the underlying corporate models upon which the routines are based and from the models we can infer the underlying physical reality and reality constructs (mixed reality). From this viewpoint, reality constructs form the basis for the development of models of corporate functioning which in turn lead to the development of specific organizational routines. Once in place, these routines may assume a life of their own. Eventually, outdated routines lead to inferior performance and, in turn, a review and reformulation of both the models and the reality constructs from which the routines are derived in the first place.

Inferring reality constructs from organizational routines. Analysis of the commonalities of routines in an organization should provide insight into the underlying reality constructs. For example, in one manufacturing firm, the operator of an aluminum
extrusion machine is given a detailed chart indicating the temperature of the metal and
the corresponding extrusion speeds. By comparing the measured temperature to the
chart, even an inexperienced operator can set the extrusion speed. In a similar firm, no
chart is provided. The operator is expected to use training, judgement and experience
to choose an optimal temperature. These two approaches reflect differences in the
underlying constructs defining employee behaviour. In the first firm, the machine
operator is viewed as a mechanism to be regulated; in the second firm the operator is
viewed as an intelligent human being who will apply skill and judgement to his job. We
do not pass judgement on these constructs. Each may be valid in its own domain. Our
point is that by examining the routines used by an organization one can infer the
underlying constructs.

So far we have used the term ‘routines’ generally. However it is important that a
distinction be made between different levels of routines and their relation to underlying
reality constructs. Routines produce highly structured organizational processes; Macro-
Routines produce organizational models. Similarly, Mega-Routines produce reality
constructs. As mentioned earlier, reality constructs define the underlying ‘world-view’
or paradigm of the organization. Figure 1 presented a generalized Mega-Routine for
generating reality constructs. Each organization may have several mega-routines in
operation.

Organizational routines are a starting point in our examination of reality constructs.
As we discussed earlier, a number of events can trigger the process of environmental
scanning, the next step in our process.

*Environmental Scanning and Constructed Reality: State 2*

Since organizations function within an external environment; ultimately, information
flows must originate or terminate there. Consequently, the reality construction process
is deeply rooted in how organizations perceive and react to the environment and to
changes in it. Lately, there has been substantial discussion, particularly in the strategic
management literature, regarding the value and proper role of environmental analyses
and scanning (Callan, 1986). The scanning process varies depending on the relative
stability or turbulence found externally.

*Reality constructs in a stable environment*. In a stable environment, an organization
typically finds itself in a stationary equilibrium of organizational control and information
flow. There is little incentive for the organization to go beyond its existing level of
performance. It is agreed that this level of performance has been achieved by a
continuation of previous routines, which in turn were dictated by explicit or implicit
organizational strategies of innovation, imitation, duplication or replication, and
control (Nelson & Winter, 1982). Little need or incentive for environmental scanning
exists. Both competitive and noncompetitive (monopoly) market structure could
provide such a stable and routine-driven organizational functioning.
In a stable environment, the existing reality constructs continue to apply, thus managers do not need to engage in construct formation, but rather act to maintain consensus regarding the current constructs. That is, to nurture the corporate culture which has produced their current level of success.

**Reality constructs in a turbulent environment.** The internal functioning of the organization and its external environment, are dominated by ever-changing innovation and product cycles. This is the Schumpeterian world of economics in which entrepreneurs and intrapreneurs are constantly searching to redefine products and processes through the close scrutiny of markets and market gap-filling activities. Given the dynamics of change both inside and outside the organization and the novel character surrounding new products and new production processes, little reliance can be placed on organizational memory and existing routines. If anything, they merely form a general framework or guideline for either finding new routines or for establishing rules of search to new organizational routines. A similar reasoning or model of search behaviour can be found in some of the literature dealing with research and development, technological advance and the product cycle (Dasgupta & Stiglitz, 1980; Roberts & Weizman, 1981).

In a turbulent environment, managers must develop reality constructs which will lead to models and routines useful for coping with the changing environment. Subsequently, they must test the constructs and reach consensus among all members of the organization. Senior management will bear the burden of leadership in developing new constructs and in generating organizational consensus. Since turbulent environments are by nature very uncertain, senior decision makers will have the difficult job of developing constructs whose viability can only be tested *ex post*.

**Reality constructs and environmental scanning.** Environmental scanning is influenced by several factors. One major factor is the contingent character of the external environment. Consequently, the scan will be dependent on what is “out there in the environment” and the topography over which the search will proceed. Furthermore, the scanning process is dependent on the development of decision rules to guide the intensity and direction of search. These rules are based on reality constructs which reflect the organization’s view of internal and external environments. Various authors have employed differing terminologies to describe the organizational process of advancing technology in the context of environmental scanning such as Hirsch’s “learning curves” (Hirsch, 1952), Rosenberg’s technological imperatives (Rosenberg 1969) or Nelson and Winter’s “natural trajectories” (Nelson & Winter, 1982). However, they implicitly share the same abstract concept of interdependence between product cycles, innovation and environmental feedback. In our own terminology they are describing or modelling the process of reality construction under the imperative of and in an environment characterized by technologically driven competition.

Reality construction through various forms of environmental scanning clearly takes on a much greater importance in a dynamic and turbulent environment than in a
benign and unchanging one. It likely will also require different types of individual skills and organizational processes.

**Formulation of Reality Constructs: State 3**

Reality constructs are the foundation for the development and execution of organizational routines. Clearly, individuals like organizations have differing levels of ability to perform both routine and nonroutine functions. Since one nonroutine skill is the formulation of reality constructs, a brief digression is in order.

Differing categories of skill must be recognized. At the lowest level are those simple manual skills (e.g., tying a shoelace) which can be taught directly; at the highest level are complex cognitive skills related to strategic thinking and problem solving which are difficult to teach.

Skills are defined here as "programs" which facilitate the smooth sequence of coordinated behaviour relative to specific objectives (Miller, Galanter & Pribram, 1960). Handling the puck in ice hockey, driving a car, producing high quality photographs or solving mathematical problems all involve skills, irrespective of whether these are expressed as capabilities or choice behaviour.

Problem identification and strategic thinking are two "skills" that seem particularly relevant to the development of reality constructs. Little work has been done on problem identification since the classic study by Pounds (1969). In addition to identifying four models against which reality is measured, Pounds stresses the importance of the problem finder's models to the outcome of the process. He notes that if the model of the situation is changed, problem finding also changes. This conclusion is consistent with the concept of reality constructs. If the underlying reality construct changes, the models derived from it are also likely to change. As a result, the problems identified in the new reality will be somewhat different from those identified under the old reality.

The process of problem formulation is closely tied to the process of problem finding. Volkema (1983) discusses the importance of problem formulation and suggests that a problem expansion heuristic may have a positive effect on idea generation. Others have approached the issue from a different perspective. Easterby-Smith and Davies (1983) address the problem of teaching strategic thinking. They conclude that the best method is to work on real problems with a mentor who is experienced in strategic thinking. These writers address issues related to the formulation of reality constructs. Problem identification and formulation, and the development of strategic thinking are skills which are difficult to observe and hard to teach, but which are key to the development of appropriate reality constructs.

One reason these skills are difficult to measure and transmit is the degree of tacitness inherent in them. The picture is further complicated by the fact that, although much behaviour which underlies the execution of skills is automatic, there are nevertheless many performance activities which are chosen behaviour. Circumstances
affecting the performer's goals and allocation of attention furthermore determine in varying degrees the respective levels of "automatic" and chosen behaviour. For example, car drivers may under normal conditions rely entirely on the efficiency of the braking system, but worry about brake failure under certain circumstances such as having a "baby on board". This change in circumstance may cause conscious attention which in turn leads to a choice between normal reliance and activities aimed at correcting a possible problem. March and Simon described this situation as "Choices embedded within a skill capability" (1958: 141–142).

Given the aforementioned operational and semantic ambiguity in describing skills, much depends on underlying reality constructs. Furthermore, the quality of the reality constructs individuals and organizations formulate are a result of their skill in the formulation process. This poses a Gordian knot of substantial proportions. In the following section we suggest some methods for unravelling it.

**Toward a New Research Paradigm**

It is not sufficient to be critical of existing research, nor is it sufficient to offer another approach without developing hypotheses and suggesting how they could be tested. Based on our previous discussion of the construct formation process, we propose the following set of hypotheses and suggest a preliminary program of research to test them. The list of proposed hypotheses appears in Table 1; each is discussed in turn.

**TABLE 1: PROPOSED HYPOTHESES**

**H1:** FOR ORGANIZATIONS IN STABLE ENVIRONMENTS, THE PRIMARY ROLE OF SENIOR MANAGERS WILL BE THE FORMATION AND MAINTENANCE OF CONSENSUS REGARDING THEIR PREFERRED REALITY CONSTRUCTS (ELABORATION).

**H2:** FOR ORGANIZATIONS IN TURBULENT ENVIRONMENTS, THE ROLE OF SENIOR MANAGEMENT WILL BE THE GENERATION OF NEW REALITY CONSTRUCTS AND THE FORMATION OF CONSENSUS REGARDING THEM (CONFIGURATION).

**H3:** ACROSS INDUSTRIES THE IMPORTANCE OF ELABORATION AND CONFIGURATION ACTIVITIES IN THE CONSTRUCT FORMATION PROCESS AS WELL AS THE RATE OF CONSTRUCT FORMATION WILL VARY WITH THE MATURITY OF THE INDUSTRY AND THE NATURE OF THE PRODUCT OR SERVICE.

**H4:** IN ORGANIZATIONS WHERE SENIOR MANAGEMENT HAS PRIMARILY AN INTERNAL FOCUS, THE RATE OF CONSTRUCT EVOLUTION WILL LAG BEHIND THOSE ORGANIZATIONS WHERE SENIOR MANAGEMENT HAS PRIMARILY AN EXTERNAL FOCUS.
H5: ORGANIZATIONS WHICH ARE BETTER AT CONSTRUCT FORMATION WILL SURVIVE ENVIRONMENTAL TURBULENCE MORE EASILY THAN ORGANIZATIONS WITH LESS ABILITY.

H6: IN A TURBULENT ENVIRONMENT, THE DEGREE TO WHICH FACTUAL INFORMATION IS AVAILABLE WILL BE UNRELATED TO THE RATE OF FORMATION OF REALITY CONSTRUCTS BUT WILL BE RELATED TO THE LONG-TERM VIABILITY OF THE GENERATED CONSTRUCTS.

H7: AS THE ENVIRONMENT CHANGES, SUCCESSFUL ORGANIZATIONS WILL ADAPT THEIR ORGANIZATIONAL STRUCTURE TO MATCH THE REQUIRED RATE OF CONSTRUCT FORMATION.

In stable environments (see section 3.1), senior management will have little need to change basic reality constructs. Consequently, they will play the role of “Lore Keepers”, or “High Priests” in that their main functions will involve ensuring adherence to existing reality constructs (dogma). Consequently, there will be a strong focus on training new recruits in “our way of doing things” and active suppression of potentially threatening constructs (an inquisition). As a corollary, we propose that managerial focus will be on the development and refinement of routines.

In these environments, senior management will be actively searching for new constructs and will have the responsibility for developing a consensus on those chosen (see section 3.2). This will involve wide consultation and active personal support for new ideas (eg., the commercials by Lee Iacocca). In this case senior management will emphasize new models and constructs (configuration) and will place relatively little emphasis on the development and refinement of routines (elaboration) until an organizational consensus has been developed.

Earlier we argued that the degree of stability in an environment could affect the rate of formation of reality constructs and the type of activities engaged in (elaboration or configuration). Here we relate that idea to the concept of industry maturity. Essentially we argue that the rate of construct formation will follow a U-shaped curve with relatively high rates of construct formation early in the industry as development and innovation take place; low rates of construct formation during the consolidation phase; and high rates of construct formation during the saturation phase as competitors seek to differentiate their products to gain an edge. Furthermore, we expect that configuration activities will dominate early in the process and that elaboration activities will dominate late in the process. Presumably the nature of the product or service offered by the industry will also affect the rate of construct formation.

When senior management has an external focus, they are more exposed to outside influences and to changes in the external environment. Consequently, they will be more likely to perceive the need for changes to existing reality constructs and will be in a
position to introduce them to the organization. Executives with an internal focus will be less exposed to both environmental changes and to new constructs and thus will tend to support the status quo. We assume that the degree of internal versus external focus will be reflected in the degree and type of environmental scanning undertaken.

If an organization has a superior ability to formulate, test and adopt reality constructs, presumably it will be better able to survive turbulent environments than will organizations which have this ability to a lesser degree. Presumably this ability will be reflected in the organization’s track record in the development of successful macro- and mega-routines for the development of models and constructs.

Hypothesis six is based on the assumption that individuals are model builders and will continue to form models even if factual, or unambiguous information is unavailable. Presumably, models based on reliable empirical evidence will be more robust and hence perform better than others.

This hypothesis is derived from arguments presented by Miller and Mintzberg (1983). They argue that “the economics of adaptation, as well as recent empirical evidence, argues for a ‘quantum’ approach to organizational change—long periods of the maintenance of a given configuration punctuated by brief periods of multifaceted transition to a new one” (1983: 70). This implies that the best time to observe the process of construct formation is during rather brief transition periods.

Implications For Research

How does one apply the concept of reality constructs to a research program? Two approaches seem viable. One could take a series of static snapshots of a number of organizations operating in stable environments in an attempt to derive existing constructs from stable organizational routines. Another approach is to study organizations operating in turbulent environments and observe the emergence of new reality constructs.

Having selected a general approach, one must address problems of measure and measurement. Unlike physical phenomenon which can be observed directly, reality constructs can only be inferred. In this respect they are similar to psychological constructs. Unlike psychological constructs, they may not reflect stable human psychological traits or predispositions, but are reflections of an imperfect ability to model the environment.

Given the possible difficulty of collecting data on reality constructs it is appropriate to examine some potential measurement methodologies. Two approaches seem to offer promise; Critical Success Factors (Rockhart, 1979) and Cognitive Mapping (Klein & Cooper, 1982). Montazemi and Conrath (1986) use these concepts to develop a model of an “ill-structured” decision process (monitoring of performance of claims representatives in an insurance company). This represents a potential starting point for investigation of reality constructs. A recently published work by Isabella (1990) using an interpretive approach to study the unfolding of organizational change also holds
promise.

The issue of why a model exists constitutes the central question and strikes to the heart of construct formation. Over time one should be able to identify changes in underlying reality constructs as they are reflected in organizational models (worldviews) and thereby develop deeper insights into the process of construct formation. We leave this effort to subsequent research.

ENDNOTES

1. We use the term stable here in the sense that the underlying relationships for a particular state are invariant for that state. In constructed reality, the relationships for a particular state are subject to potentially rapid change with alterations to the underlying reality constructs.

2. According to Webster’s New Collegiate Dictionary (7th ed.) a mixture is “a portion of matter consisting of two or more components that do not bear a fixed proportion to one another and however thoroughly commingled are regarded as retaining a separate existence”.

REFERENCES


