



# **The Theory of Business, Complexity, and Getting Work Done**

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## **Abstract**

Dr. Deming used to say that ‘management is prediction,’ by which he meant that every decision is also a prediction about the future. One of the key factors that managers employ in making decisions is their ‘theory of business,’ a thinking framework that is at the same time a philosophy, an approach, and a mental model. Such a theory actually guides and informs all decision making. Leaders, and everyone else as well, employ a theory of business, whether they are aware of it or not.

The rate of change continues to increase, and as it does the business environment becomes ever more complex. With increasing complexity comes increasing uncertainty. Amidst this complex and uncertain environment, business still has to accomplish something – by getting work done.

There are many ways to get work done, and the theory of business that is employed during these times of uncertainty and rapid change has significant influence on every organization’s capacity. A new and potentially important way of working is emerging that is based on the practice of ‘collaborative co-creation.’ This approach is being

successfully applied by many organizations in their attempt to adapt to the ever-changing business climate.

In this paper we'll explore the intersection between the theory of business, complexity, collaborative co-creation, and the process of getting the important work done well.

**Highlights of this Paper Include:**

- The Theory of Business
- The Context has Changed
- Getting Work Done
- Contributions to New Theory
- People Own What they Create (or Co-Create)
- Collaborative Co-Creation
- Management's New Job

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## The Theory of Business

What is a theory? In the classical sense, a theory is a hypothesis. A hypothesis states that “If x, then y. So if we do this, then we will get that result.” If the theory of gravity is true, then when things go up, gravity will cause them to come down.

**Theory:** a theory is a logically self-consistent model or framework for describing the behavior of a related set of natural or social phenomena.

[source:

<http://en.wikipedia.org/wiki/Theory>  
– see the section on Science]

Another way of describing a theory is to say that it is a logically self-consistent model or framework for describing the behavior of a related set of natural or social phenomena.

In the business world, however, there’s sometimes a problem with theories. Michael Mauboussin explains:

“The word ‘theory’ makes most investors and corporate managers leery because they associate theory with *theoretical*, which implies *impractical*. But if you define theory as a contingent explanation of cause and effect, it is eminently practical. A sound theory helps predict how actions or events lead to specific outcomes across a broad range of circumstances.” –

Michael Mauboussin,  
*More than you Know: Finding Financial Wisdom in Unconventional Places.*

Cognitive scientists study thinking and decision making, and they tell us that whether leaders are consciously employing a theory or not, they all have at their core a theory or set of theories that drives how they think, how they make decisions, and thus how they work.

Hence, a theory of business is a framework that is at the same time a philosophy, an approach, and a mental model. It influences the definition of goals and objectives, the choice of structure, the choice of policies, the formation and development of organizational culture, and the processes a business employs in production, getting work done.

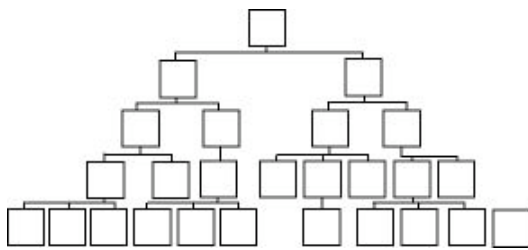
If a theory of business is purposeful and conscious, then leaders can articulate it. If the theory of business is not consciously stated, then we may be able to surmise the theory of business that is being employed by looking at the structure of the business and the processes employed in accomplishing work. Structure and process imply a



theory being used, and expose the theory which may be hidden in the black box of unconscious mental functioning.

Dr. Deming often used the expression ‘management is prediction,’ which also tells us that because a theory of business underlies all decision making, it is in and of itself the basis of prediction. Whatever theory of business is employed is a statement by action that the managers predict that particular structures, policies, culture and

processes are the best way to accomplish the aim and goals of the organization, the best way to get work done.



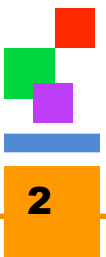
For example, today most businesses are visualized in the form of a hierarchy. Part of the theory embedded in this structure is that a few people have the vision and ability to make decisions, while a lot of people implement these decisions. This structure has been dominant in organizations for centuries.

A key challenge we face today is that the context in which this structure functions is not the same as when the model was first developed, and in fact as a model of organizational structure, it is increasingly dysfunctional. So the theory of business that relies on the hierarchy as the key model of organizational structure is, in effect, outdated. As a theory, it does not fit the realities of today; the context has changed but the theory has not changed.

Michael Mauboussin has noticed a similar misfit between theory and reality among investors. In his book he also notes that:

“All investors use theory, either wittingly or unwittingly. The lesson from the process of theory building is that sound theories reflect context. Too many investors cling to attribute-based approaches and wring their hands when the market doesn’t conform to what *they* think it should do.”

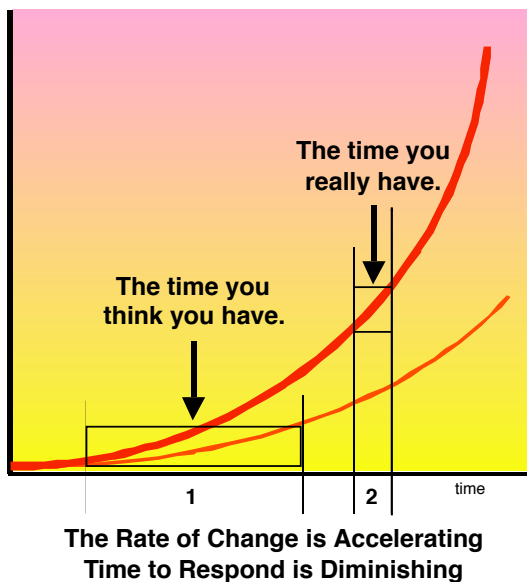
The challenge of bringing our thinking into alignment with new realities is one that we all face in these times of accelerating change.



## The Context Has Changed

The context that most organizations and individuals find themselves in today is quite different from how it was even 10 short years ago, and entirely different than it was 25, 50, or 100 years ago. It used to be that market conditions were thought to be pretty consistent. It was expected that decisions made today for today's market wouldn't have to be revisited for some time, and some decisions would remain valid for many years. That is certainly no longer true, which has a huge impact on decisions that have long term implications, such as capital investments in facilities like new factories.

There is a large body of research which shows how the rate of change is increasing exponentially, accelerating quickly beyond what we are familiar with.



Much of this change is being driven by innovation, and to compound the complexities, the rate of innovation has itself accelerated. The impact on the global economy is significant, and every industry in every sector has seen major adjustments in recent years. In some industries the rate of change has increased to such a degree that product life cycles are now thought of in terms of weeks or months instead of years.

Hence, with accelerating change, shrinking product life cycles, increasing competition, overwhelming amounts of information, and persistent demand for higher quality and productivity, there is significant pressure on organizations to find new ways to manage.

*The consequences of this kind of complexity on organizations and the people that make decisions can be severe. With this degree of complexity comes tremendous uncertainty, and with greater uncertainty there is simply less that managers can control. This leads to a critically important question, which is: How do you manage when the capacity for control is significantly reduced simply because of the nature of the external environment?*



The amount of time leaders have to respond to market conditions has been compressed to such a degree that it's nearly impossible for any one person, or even a small group, to see clearly through this maze of complexity. And these conditions will not get better any time soon, so finding a way through the maze will not get any easier.

This brings us back to our starting point, which is that this set of circumstances calls into question the theory of business according to which managers operate. In fact, conditions today are so much different than they were a few years ago that entirely new approaches to management and to getting work done are now called for, which is the topic we'll examine throughout the rest of this report.

## Getting Work Done

Much of what we know of as the Industrial Revolution is based on ideas and theories expressed by Adam Smith in his work *The Wealth of Nations*. One of the core principles he expressed was the idea of the division of labor. He gave us the concept of the division of labor, saying we need to "reduce involved and difficult tasks step by step to those that are simpler." Appropriate to those times and the complexity in that environment, the division of labor increased productivity in early industrial companies by nearly 200 times.

Taylor's strongest positive legacy was the concept of breaking a complex task down in to a number of small subtasks, and optimizing the performance of the subtasks. This positive legacy leads to the stop-watch measured time trials which in turn lead to Taylor's strongest negative legacy. Many critics, both historical and contemporary have pointed out that Taylor's theories tend to "dehumanize" the workers.

<http://www.kernsanalysis.com/sjsu/ise250/history.htm>

A theory of work that built upon these concepts was developed by Frederick Taylor in the early 1900's. He advocated the systematic training of workers in "the one best practice" rather than allowing them personal discretion in their tasks. Taylor's theory was based on the belief that only a few people - typically top managers - could understand the complexity of the whole organization as well as the markets in which the organization competes, and that the majority of people working in the business couldn't - or shouldn't - apply their thinking to such matters. Their job was simply to accomplish a specifically designated task.

Until recently, the predominant organizational model called for work to be completed through just such a process of dividing it up into small pieces. The assembly line was the compelling example of this approach, and it became a metaphor for how all kinds of businesses should be organized.

Managers who subscribe to this theory of business apply the following methods to accomplish work:

Individuals work alone according to specific job descriptions	Small groups work on projects	Groups of groups work on projects	Departments have defined tasks with defined boundaries
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The challenges presented by accelerating change and increasing complexity in today’s business world have made this approach ineffective, and in many cases entirely counterproductive, and the reasons why are quite interesting and worth discussing.

As stated above, the context in which business takes place has changed, and there have also been significant contributions to the theory and body of knowledge specific to management, organizations, and systems.

### Contributions to New Theory

Over the last 100 years new knowledge has been developed around business, management, systems and complexity, and much of it has made its way into the mainstream of business practices.

Frederick Taylor’s beliefs began to be challenged in the 1920’s by new research. The Hawthorne Studies started in the early 1920's as an attempt to determine the effects of lighting on worker productivity. When these experiments showed no clear correlation between light level and productivity, the researchers then started looking at other factors. The results introduced the concept of team work and showed that the social dynamics of a team were a stronger force on productivity than doing things "the one best way." These experiments also showed productivity increases by giving workers a great deal of



freedom, and ultimately led to the call for greater participation for workers, greater trust and openness in the working environment, and greater attention to teams and groups in the work place.

Dr. Walter Shewhart and his student Dr. W Edwards Deming began developing new management theories based on their understanding of variation and statistics in the 1930s. Dr. Deming followed later with his 14 Points for Management and his System of Profound Knowledge, which consists of four interconnected parts: Appreciation for a system, Knowledge about variation, Theory of knowledge, and Psychology.

*“The effectiveness of organizations could be at least doubled if managers could discover how to tap into the unrealized potential present in their workforces.”*

The Human Side of Enterprise by Douglas McGregor - 1960.

In the 1960s Douglas McGregor asked the question “What are your assumptions (implicit as well as explicit) about the most effective way to manage people?” He coined the concepts of Theory Y management, which proposes that individuals are self-motivated and self-directed, and the contrasting Theory X, which suggests employees must be commanded and controlled. These theories have been

widely taught in business schools, industrial relations, psychology departments, and professional development seminars for more than four decades. Other leading thinkers such as Peter Drucker and Warren Bennis followed, bringing new thinking to the field of business and organizational productivity.

The following list is a sample of concepts that have been introduced in recent decades.

Author/Thinker	Theory
Stafford Beer	Viable System Model
Warren Bennis	Revisionist Theory of Leadership
Dr. W Edwards Deming	Theory of Profound Knowledge
John Holland, Murray Gell-Mann	Complexity Adaptive Systems



Author/Thinker	Theory
Malcolm Knowles	Adult Learning Theory
Elton Mayo	Hawthorne Works Experiments Human Relations Movement
Abraham Maslow	Hierarchy of Needs
Douglas McGregor	The Human Side of Business: Theories X and Y
Michael Rothschild	Bionomics
Peter Senge	The Learning Organization
Dr. Walter Shewart	Statistical Methods from the Viewpoint of Quality Control
	Chaos Theory
	Contingency Theory
	Systems Theory
	Triple Bottom Line Economics

Each of these models offers insights that may help us to understand the complex relationships between our own theory of business and how to attain the best possible results.

### **People Own What They Create (or co-create)**

In today's rapidly-changing business climate, people at all levels of the organization are of necessity in decision-making roles, simply because it's not possible for managers to anticipate all the possibilities that the people in their organizations might face. Hence, in order for work to get done, everyone needs to think about the work they do, and not 'just do it.'

But even if it were possible for managers to operate with a high level of control, it's probably not desirable, because of the importance of the psychological dimension of work. People who are simply responding



to instructions and completing their work in a rote fashion inevitably invest less of their attention, commitment, and care to it. In contrast, people who are engaged in work as a creative process bring their insights, ideas, and innovations to everything they do. The difference shows up as a much higher quality of experience for those who invest creative thought, and much more value creation for their organizations and its customers.

Further, we now recognize that people feel much more responsibility for what they create or co-create; in today's jargon, they 'own it.' If everyone has a hand in creating the work they do, they're much more likely to understand why it's important, and they're also more likely to consider how whatever they're doing fits in with the other work that's being accomplished throughout the rest of the organization.

In the words of Jack Welch, "Give up control to get something better." In his book, *The Enthusiastic Employee*, David Sirota suggests that, "Enthusiastic employees far out-produce and outperform the average workforce: they step up to do the hard, even 'impossible' jobs. They'll rally each others' spirits in even the toughest times." He also suggests that enthusiastic employees with high morale constitute a competitive advantage for their organizations.

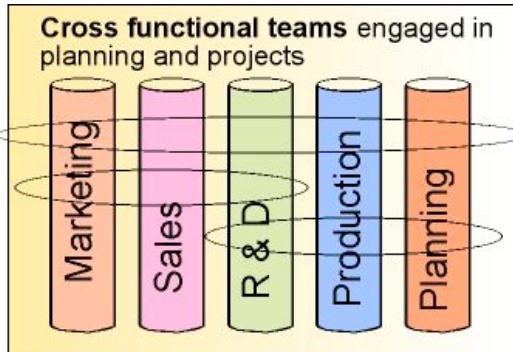
## Collaborative Co-Creation

So the obvious questions are:

- How can organizations nurture, or even create enthusiastic employees who invest their own creative energy in everything that do?
- And what better options do organizations have for getting work done in this new context and with new theory?

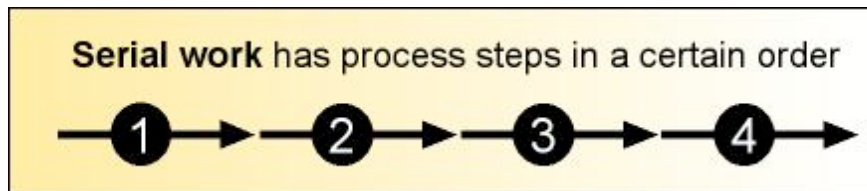
Leaders and managers who want their organizations to keep up with a rapidly changing marketplace – or better, to become a leader of change – have to consider alternative ways of defining what the work is, and how it's going to be accomplished.





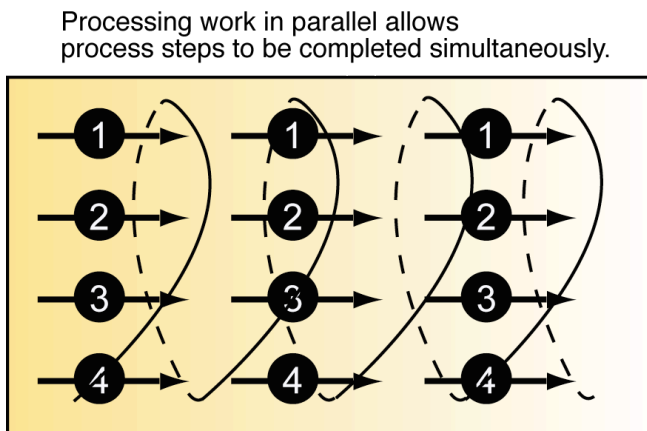
One of the ways large firms help their people learn about the work of the organization is by shifting jobs and job sharing, through which workers learn other people’s jobs as well as their own. Encouraging the development of cross-functional and cross-disciplinary teams for project design and implementation can also create a foundation for collaboration. This approach can be leveraged to realize the benefits of collaborative co-creation.

Building on the foundation created by cross-functional, cross-disciplinary teaming, we can start to think about different approaches to getting work done such as an approach derived from computer science, the concept of parallel processing.



In the factory model, work is thought of in serial steps – each step coming after the previous one in a rigid sequence. An alternative to serial work is to organize parallel streams, where many related activities are happening simultaneously. This has the potential to

improve the capacity for groups to learn – and to learn faster - and therefore to shrink cycle times.



Feedback loops between process steps supports iteration, learning, and improvement.

Organizing work in this way requires that those engaged in parallel activities have open and active communication channels to share information with each other, and it works best when people are organized in cross-functional project teams who apply collaborative planning processes.



In this model, work is understood to be completed through several ‘iterations,’ with each iteration resulting in greater completeness, and not coincidentally, higher levels of quality and robustness. We have found that any work which involves planning, design, creating, strategizing, or organizing can be substantially enhanced this way.

Certainly the processes of strategy development, product and service design, and innovation are systemic and cut across all departmental boundaries. But this approach can also be applied more broadly, to nearly everything that must be accomplished in an organization.

Seen this way, the process of co-creation engages not just managers, but workers across the organization.

### **Examples of Collaborative Co-Creation**

There are potential benefits to be realized in every sector of the economy. OpenSource software development approaches are a good example of collaborative co-creation that cuts across geographic and organizational boundaries. Some companies have also begun Open Innovation activities engaging customer groups as well as groups of researchers from other parts of the world.

In our own work, we have seen and demonstrated the benefits of collaborative co-creation in some of the largest organizations in the world, as well as small organizations, start-ups, not-for-profits and NGOs, and educational institutions. The following are a few examples:

A large European bank has grown significantly over the last few years through mergers and acquisitions. The bank uses a structured collaborative co-creation process to help integrate the new companies into their operations and realize potential synergies in a shorter time frame than what could be accomplished using more traditional methods.

A large Telecommunications company used a collaborative co-creation process to bring eleven different technology groups together to



develop an integrated response to a large Request for Proposal. After winning the bid, the company is implementing their solutions using a collaborative process engaging hundreds of people throughout the company.

A large health care provider in a Mid-Western city has brought hundreds of doctors, nurses, administrators and patients together for collaborative co-creative projects to improve the products and services they deliver to their community. Many projects have been born from this approach, and in several situations these projects have defined as their goal to provide world class services to their patients.

A not-for-profit, social benefit organization has brought together hundreds of people from throughout many communities to design and implement a new service for low-income families. They engaged many organizations in the planning and design process, and then brought in potential customers to help finalize the implementation of the first prototypes.

Four small communities in the Mid-West have brought together hundreds of educators, parents, business leaders, and administrators to craft the evolution of their school system to help prepare students for the 21st century.

A large, French-based multi-national corporation engaged more than 200 of its Human Resources executives from around the world in a collaborative process to define the key initiatives that would enable the company to recruit, train, support, and retain the level of talent required to enable the company to maintain leadership in three highly competitive world markets.

The timing of the shift to collaborative co-creation is as fortuitous as it is necessary. In addition to the significant productivity benefits that can be attained, research has also shown that fragmented and control-oriented means of accomplishing work do not sit well with the new generation of managers coming into the workplace from the millennial generation. In his Harvard Business Review article, Jim Heskett



"Today, in the innovation-driven organization, the resource of knowledge is required in the work of nearly everyone. The results of each individual's work are not brought together at the end of a linear process, but are communicated throughout the process."

Thomas J. Allen and Gunter W. Henn. *The Organization and Architecture of Innovation*. 2007. p. 13

posits, "Are we approaching a "millennial watershed" in management? The next generation of managers, comprising many 'millennials,' will be more adept at managing in a changing, global, and networked environment. They will do it with a greater emphasis on teamwork, facility for the use of technology, and sensitivity to needs for work/life balance." And in large measure, they will have little patience with control-oriented, backwards-looking approaches, or slow-moving decision making processes. Conversely, they will thrive amidst the complexity and dynamism of fast-moving, collaborative, and highly creative modes of work.

(Jim Heskett, *Harvard Business Review*, August 2, 2007  
<http://hbswk.hbs.edu/item/5736.html>.)

### Conclusion: Management's New Job

The theory of business employed in every organization defines its approach to getting work done and accomplishing its goals.

In the 'old system' of management, as promoted by Frederick Taylor and many others, management was responsible for 'supervision,' defined as overseeing the performance or operation of a person or group, and it was also responsible for 'knowledge' about the why and the what related to that work. Workers were responsible only for the doing.

In reference to this approach, Dr. Deming used to say that "Management does not know what its job is." In his view, "*The responsibility of managers and supervisors must be changed from sheer numbers to quality,*" and he went on to advocate that management's job is also to remove barriers between people, between people and machines, and between departments.

In today's markets, we would also add that we must remove barriers between an organization and its customers, suppliers, and all members of its community.



Dr. Deming’s views are an important example of the new theory that is required for organizations to thrive in times of increasing complexity and change. Adopting a new theory requires that people change how they think, and become more fully aware of the theories they employ to accomplish work.

A key element in this new theory recognizes the importance of collaboration as a different way of working. Embracing new ways of collaboration in business operations increases learning, flexibility, and adaptability.

In a recent Booz, Allen, Hamilton white paper on Strategic Leadership the authors note that, *“To build an organization in which executives will flourish, the best leaders pay close attention to the design of the elements around them. They articulate a lucid purpose, create effective leadership teams, prioritize their initiatives carefully, redesign organizational structures, and, most importantly, integrate all these tactics into one coherent strategy.”*

We are suggesting here that successful leaders must also learn to remove barriers that inhibit workers from realizing their full potential to add significant value to their organizations. Building on the gains from cross-functional and cross-disciplinary teams, collaborative co-creation is an excellent way to accomplish this, because it enables people from across the organization to work together, to learn from each other, and to enhance the value they create.

Collaborative co-creation is a better way of working that reflects a new theory of business, one that is much better suited to the challenging demands of the 21<sup>st</sup> century economy.



Your feedback and comments on this white paper are encouraged and welcome. Please contact Michael Kaufman at:

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