



## Table of Contents

- 3 Abstract
- 4 What Can Nature Teach Us?
- 4 Should We Love or Hate Complexity?
- 5 Does Real Simplicity Lie on the Other Side of Complexity?
- 5 How Do We Understand the Power of Interconnections?
- 6 How Does Organizational Intelligence Differ from Organizational Consciousness?
- 8 What is the Role of Data in Our Quest to Understand the Purpose of Organizational Consciousness? Could Its Purpose be to Understand and Influence Organizational Culture?



## Abstract

Organizations, like all living species, must come to terms with their mortality. The question is, "Can we improve the existing years of an organization by accepting its eventual extinction?"

Businesses generally prefer simple answers that can be easily implemented. But are we making things too simplistic when we fail to acknowledge the inherent complexity of our systems? In doing so, do we hasten our extinction?

Acknowledging complexity requires us to consider the interconnections between various entities in the system; in other words, experience consciousness. At Mu Sigma, we believe that questions are more important than answers. This paper is my attempt at asking key questions related to organizational consciousness.

- » Just as we have human consciousness, can an organization have consciousness? If yes, what does that mean for organizations?
- » The difference between intelligence and consciousness has been comprehensively studied throughout this century. Is intelligence a pre-requisite for consciousness, or vice versa?
- » Does culture come from consciousness – how are the two intertwined? Is culture about who we are or is it about how we interact?
- » Can theory and eventual practice of organizational consciousness allow us to create a better culture?
- » Could adopting organizational consciousness allow organizations to thrive and ideally delay their extinction?

## What Can Nature Teach Us?

Learning from nature has been a longstanding tradition, and the scientific method certainly supports that idea. The acceptance of death or extinction is daunting for human beings both individually and as a species. However, that acceptance has been key to progress. Steve Jobs is known to have said, “Remembering that I’ll be dead soon is the most important tool I’ve ever encountered to help me make the big choices in life.” What if every business accepted the fact that they might cease to exist at some point? What can businesses learn from what nature has been trying to teach us through extinction?

So much of what we experience in business can be seen in the mirror of nature. Everybody, since the day they are born, begins their journey toward death. Every species is in its journey towards extinction. Death and extinction are only differentiated through a frame of reference. Is John Doe an individual or is he an organization of various cells. Many of these cells he is made up of are constantly dying in order to make him better. Similarly, John Doe will eventually die to improve the human race and so on.



**Only 12% of the Fortune 500 companies  
in 1955 were on the list in 2014**

Similarly, it is inevitable that organizations will journey towards death. For instance, only 12% of the Fortune 500 companies in 1955 were on the list in 2014. The extinction of individual organisms and organizations is a way for the entire gene pool to become better. Extinction of individual human beings leads to the human species becoming better just as the extinction of individual business organizations leads to the overall improvement of the business ecosystem.

Nature has taught us that every species fights extinction by initially scaling and then introducing diversity into its genetics. Things that easily scale cannot adopt diversity easily and vice versa. For example, asexual reproduction favors scale and sexual reproduction favors diversity. In order to have their cake and eat it too, the species will work towards creating interactions with all constituents in its habitat that allow for harmony between scale and diversity. Similarly, every organization in its quest to thrive is fighting the natural forces that could lead to its extinction.

## Should We Love or Hate Complexity?

***“The guiding motto of every natural philosopher  
should be, seek simplicity and distrust it.”***

— Alfred North Whitehead (1920/1990)



**“‘Complexity’ is not the same thing as ‘complicated’ just as ‘simplicity’ is not equal to ‘simplistic.’”**

Even Don Norman, a cognitive scientist, makes the case for complexity. “Complexity” is not the same thing as “complicated” just as “simplicity” is not equal to “simplistic.” Norman makes the point that when complexity is unavoidable and a mirror of the world in which we live in, then it’s excusable, understandable and learnable. He gives the example of an airplane cockpit, which is a manifestation of appropriate complexity for the task at hand.

Similar to nature, businesses fight extinction by finding harmony between scale and diversity. Scale manifests in the form of processes and modularity; diversity manifests in the form of innovation and creative thinking.

Out of the thousands of companies that are created, perhaps one becomes a large, Fortune 500 organization. Becoming a fortune-500 company is difficult and requires the harmony between scale and diversity. Therefore, complexity is unavoidable for the Fortune 500 company. Rather than disliking it, one should work to understand and learn from complexity, which cannot happen without loving it.

## Does Real Simplicity Lie on the Other Side of Complexity?

In large companies, we find that capital is not the constraint. Talent is also not the constraint. But time does become the constraint. Corporate citizens always feel that they are more in the business of getting aligned with each other through painful meetings than getting things done. Complexity eats time for breakfast and then for lunch and then for dinner twice over.

Real simplicity is about not being simplistic at all and lies on the other side of complexity. Complexity manifests itself as interconnections amongst problems. It is too simplistic to think of problems as independent issues. Whether we see it or not, complexity exists and can be felt. Moving from simplistic to simplicity requires us to see, navigate and understand complexity well.

## How Do We Understand the Power of Interconnections?

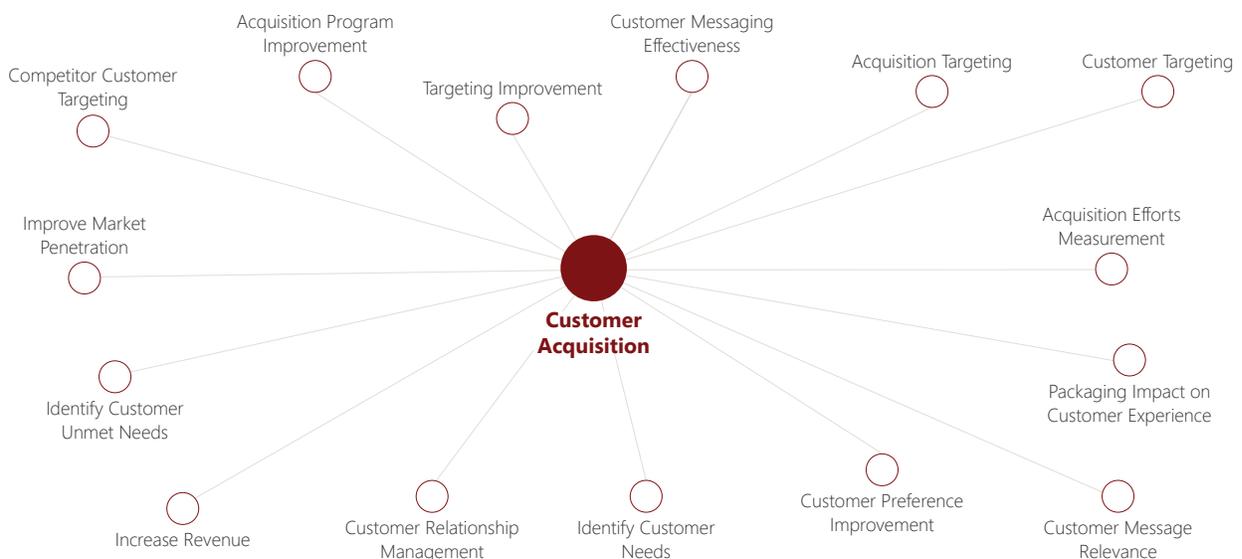
You likely read about what made Einstein’s brain remarkable. He had a large corpus callosum, a part of the brain that facilitates connections across the various lobes, as well as with the prefrontal cortex, the cognitive center of the brain. Neuroscientists believe that a healthy connection center is what leads to higher consciousness – our ability to observe and capitalize on all of those connections. Without a properly functioning corpus callosum to make those inter-brain connections, individual parts of the brain can still work incredibly well, but the brain in its entirety functions sub-optimally. And that’s where I see the parallel with our organizations.

Some functions within our companies, like those individual areas of the brain, may indeed function with high degrees of intelligence. But will isolated spots of brilliance help our companies perform at their best? Consider our organizations as brains with many different nodes. Some nodes are an area of the brain (a business function) and many more are clusters of neurons (business activities or problems). Intelligence can be associated with an individual node, but consciousness comes from the interactions between those nodes, which allows us to understand the implications of the various connections between the many parts of our business. Consciousness is that which observes the self and illuminates the mind.

## How Does Organizational Intelligence Differ from Organizational Consciousness?

- » Intelligence focuses on answers, while consciousness focuses on connecting questions.
- » Intelligence makes us feel more precise, but it can limit our possibilities, while consciousness expands our possibilities.
- » Intelligence makes us comfortable, while consciousness helps us discover our ignorance and thus creates some anxiety. The losers will be quick to avoid this anxiety while winners will persevere through a period of productive anxiety.
- » Intelligence will want us to solve specific problems, while consciousness will push us toward a better art of problem solving.

The world of business is not one or two big problems, but rather a multitude of small, interconnected problems.





For instance, to improve customer acquisition, you will need to think of a set of interconnected problems – understanding unmet needs of the customer, improving targeting, improving relevance of customer messaging, putting together a measurement program, etc.

Let's put consciousness in a business context: One of Mu Sigma's clients is a large retailer known for both operational excellence and an ability to reach enormous scale quickly. You can find its stores across the globe and in almost every major suburban market in the United States. To reach even more consumers, the company wanted to expand into urban U.S. markets, but their playbooks for everything from supply chain to store operations and merchandising were designed for a different model. For one, their typical store footprint simply could not fit into an urban setting. Based on space constraints alone, the retailer would need to dramatically reduce the number of products placed in urban stores.

We were asked to help with that particular problem, and initially it seemed like a straightforward matter of SKU rationalization. However, it wasn't that straightforward, and in fact, the concept of consciousness helped us determine that it also wasn't a simple tradeoff of floor space versus SKUs.

***“Shoppers derive value in a store not just from what they purchase, but also from the choices that they are presented with.”***

Shoppers derive value in a store not just from what they purchase, but also from the choices that they are presented with. Their minds enter a store with a purchase decision hierarchy that can be influenced by the choices presented. For instance, when I wish to purchase shampoo I put price and promotions at the top of my decision hierarchy, while my wife places more emphasis on a shampoo's clinical details and its adjoining conditioner. Choice modeling is an area of marketing sciences that attempts to model the decision process of an individual or segment in a particular context. It's a great example of an interdisciplinary perspective in action and was developed in parallel by economists and cognitive psychologists.

Without consciousness, we might have approached this as a single, well-bounded problem, recommending that the client stock only the highest performing SKUs that align with the demographics of a particular urban market. But thanks to consciousness, we knew to consider the choice architecture of customers and realized that suboptimal SKU rationalization could lead to unwanted demand substitution or cannibalization in these new store formats. Furthermore, seeing the problem space as interconnected led us to discover how supply chain issues in urban markets could influence demand for certain SKUs. We used industrial engineering methods on the supply chain side, choice modeling on the demand chain side, and operations research to optimize the entire value chain. We worked with teams across multiple groups – store operations, logistics, merchandising, consumer insights, marketing and

IT. More importantly, we helped them work together, not on one big problem, but on many smaller, interconnected problems. Creativity in an organization is about connecting the dots across multiple groups.

The move from intelligence to consciousness is a move from entities (single problem) to interactions between entities (interconnected problem space). Think of this as moving from an understanding of the biology of problems to the chemistry between problems. Following that progression, what constitutes the physics of an organization? Is it culture? What does it take to have a creative culture?

## What is the Role of Data in Our Quest to Understand the Purpose of Organizational Consciousness? Could Its Purpose be to Understand and Influence Organizational Culture?

Culture is, in the words of E.B. Tylor, “that complex whole which includes knowledge, belief, art, morals, law, custom and any other capabilities and habits acquired by man as a member of society.” Some say, “Culture eats strategy for lunch”. But in businesses, we still value intelligence (in other words ‘strategy’) more than culture on a day-to-day basis. We talk about IQ and EQ; but I rarely hear CQ (Culture Quotient). Why is that the case?

There is a tremendous transformation in the nature of data. Our ability to measure with more granularity now is changing our perception of many things including time. My father was far more willing to sit quietly in a place for half an hour, while I am less generous with my time and look at the same period as 30 minutes. And my son will probably look at it as 1800 seconds. Life was first recorded in years, then months and days and now in minutes and seconds. The more real-time our data capture is, the smaller our perception of time becomes. This changes how we value other facets of life, too. Before, we valued entities, but today with real-time data we can see interactions between these entities, resulting in very different perspectives.

Let’s take insurance as a business, for example. We were initially insuring people or things based on their perceived value. E.g., a life insurance policy was based on a person’s age, health and habits. But today we are insuring interactions people are having with objects. E.g., the two of us may have the same car but the insurance company may value our risk of accidents differently based on how we interact with the car. Now we have more sophisticated insurance products like trade credit insurance that protects vendors from non-payment risk from customers. Here, the insurance company values the nature of interaction between parties and facilitates international trade that might otherwise be difficult.

As data enables us to see more interactions, I believe we can start valuing them more than the entities that are interacting. An organizational culture, or a business culture, is the net effect of all interactions. Why is Switzerland a



safer place to do business than Afghanistan? Is it because of who the people are or because of how they interact? With more real-time data, we might find certain interactions in Afghanistan less risky than in Switzerland. Two organizations with exactly the same people but different interactions will result in very different cultures.

Fortune 500 corporations enjoy and want to take advantage of their success as incumbents, but they can get overwhelmed by the complexity that comes with it. In the complex world of successful companies, corporate data is often disparate and balkanized. We seek clean, connected data that represents "one source of truth," but that's a utopian concept. What is also utopian is the acceptance that every entity in this complexity is well-rounded, pre-defined and complete in itself. How differently would we approach complexity if we also understood that when one entity interconnects with another, by the very nature of interconnections, the entity itself undergoes change, i.e. it absolves itself of its former self in the making of the (inter)connection. This aspect deepens complexity as entities themselves are neither fixed nor definite by way of a well-rounded definition. Inherent to every entity is its ability to assemble anew with every interconnection.

The reality is that each part of a company must live with its own distinct, subjective reality, which isn't necessarily always complete or always in the making. At the same time, they must learn to collaborate across functions toward objective decision-making, which can reconcile these various subjective realities that defy the utopian and are constantly reassembling themselves.

<b>Paradigm Science</b>	<b>Nature</b>	<b>Brain</b>	<b>Business</b>	<b>Problem Solving</b>
<b>Biology</b>	Scale	Intelligence	Entities	Analysis Thinking
<b>Chemistry</b>	Diversity	Consciousness	Interactions	Systems Thinking
<b>Physics</b>	Habitat of Harmony between the above resulting in a Culture of Innovation and Creativity that allows one to Thrive in Change			

The nature of interactions between entities – the people, the problems they solve, the rules they create, etc. is organizational consciousness. Consciousness is felt through the presence of interactions, which is a connection between entities. Similarly, culture is felt through the collection of interactions and the connections between them. The more we are allowed to see through the changing nature of data, the more we will be oriented to move from intelligence to consciousness and eventually culture. Understanding organizational consciousness holds the key to understanding and eventually influencing organizational culture.

I acknowledge the abstract nature of my approach. I have tried to tap into the child in me while writing this and hope that you will tap into the child in you while reading this. My intent was to be provocative. It was to make you think about a new theory and its applicability to your business and ask a few questions.

- » What does organizational consciousness mean to you?
- » Have you mapped the interconnected nature of problems in your company?
- » Has the futility of connecting all the data kept you away from connecting all the questions?
- » Are you tapping into your organization's consciousness?

[LEARN MORE](#)



#### ABOUT OUR FOUNDER

Dhiraj Rajaram is founder and chairman of Mu Sigma. He is responsible for the company's vision, strategic direction, and ongoing alignment of all resources and activities with the belief system on which the company was founded in 2004 – a belief that all living things thrive when in a state of flow, a harmony between order and chaos. There are three fundamental principles underpinning this belief system:

- |                      |                                      |
|----------------------|--------------------------------------|
| <b>L = d/dt (K)</b>  | <b>Learning Over Knowing</b>         |
| <b>X<sup>2</sup></b> | <b>Extreme Experimentation</b>       |
| <b>The New IP</b>    | <b>Interdisciplinary Perspective</b> |

An entrepreneur at heart, Dhiraj has helped Mu Sigma secure top investor backing from the likes of Sequoia Capital and General Atlantic, as well as industry recognition, including being named to Fortune's 40 under 40, an Ernst & Young Entrepreneur of the Year award, and most recently as 2014 Entrepreneur of the Year by the Economic Times of India.