

Articles from Integral Leadership Review

Featured Article: The Tensegrity Mandala: A Model for Organization Design

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Preamble



This article takes a close hard look at Organization Design. We asked ourselves, why should we write about Organization Design amidst times when managers all across the world, are facing unnerving dilemmas and painful transitions, as they struggle to respond to a global downturn, under a looming threat of a possible collapse of western capitalism.

We believe that many of these dilemmas that leadership confront today were seeded a long time ago in the way organizations have been designed over the years. And this thread of perspectives is often ignored as CXOs look at tough choices around managing the polarities of 'ethics versus expediency', 'invest versus harvest', 'local versus global', 'community welfare versus wealth maximization of investors' etc.

Some of the above mentioned challenges are mere consequences of unquestioned axioms and inherent assumptions of organization design and cultures laid down decades ago. These axioms have only perpetuated inefficiencies and reinforced greed; that lie beneath the tide of positive cash flows and profitability as organizations scale up in size and complexity.

When we dialogue with the practicing managers on how organization design is held in the mind, we often come across a simplistic yet dynamic image – that of pyramidal structures depicting complex hierarchies along with associated privileges, that of management control systems and a host of processes and procedures, and that of conformist cultures reinforcing compliant follower-ship, dependencies, and mediocrity.

In this article, we present a conceptual framework – the Tensegrity Mandala, evolved from our consulting experience that provides a new set of perspectives in visualizing, understanding, and designing the modern organization today. We discovered that our ideas, mental models, and constructs were getting restricted and impeded by our language. Our language was not allowing us to explicate the

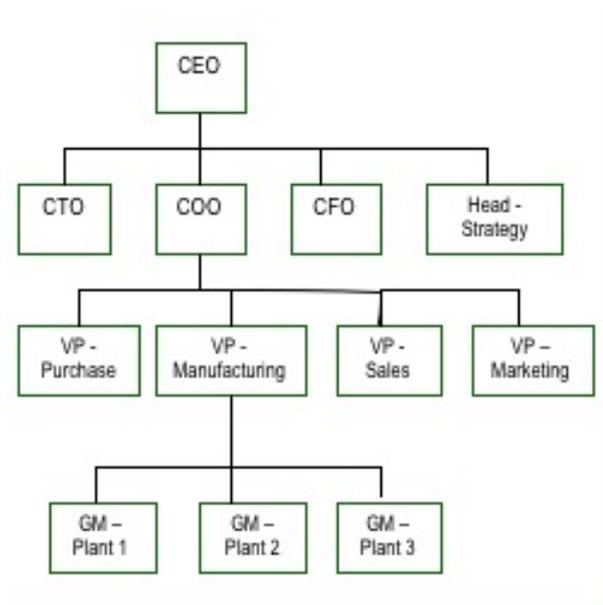
plurality, the diversity, and the multiple realities within Organization design.

In our search for new language and models, we serendipitously discovered many insights and pioneering ideas of Buckminster Fuller, Stafford Beer, Anthony Judge, Prasad Kaipa, and others. Their perspectives energized us further in our attempt to discover organizations and their manifold realities through a comprehensive model. This paper introduces an action-researched model that builds on the concept of Tensegrity. We have integrated Tensegrity with our understanding of organizational socio-psychology, and our underlying philosophy that has its roots in Indian thought. However we would like to emphasize that its application is not restricted to the Indian or Oriental geographies, but for any organization across the globe.

We wish to explore the following two questions:

1. How is the “Role based Tensegrity Mandala’ model different from other perspectives on design?
2. How do we link the ‘Role’ with individual identity as well as with organization effectiveness?

Introducing Tensegrity



Traditional Organization Structure

Traditionally organization structure has been depicted as inverted trees or pyramids, with boxes laid across multiple levels representing various job positions, based on the assumptions of horizontal and vertical differentiation that define functions, verticals, departments, and hierarchy.

Historically, as per Alfred Chandler, the first formalized organizational chart was created in 1854, when Daniel McCallum became general superintendent of the New York and Erie Railroad – one of the world’s longest railroads. According to McCallum, since the railroad was one of the longest, the operating costs per mile should have been less than those of shorter railroad lines. However, this was not the case. To remedy management inefficiencies, McCallum designed the first organizational chart in order to create a sense of structure.

The organizational chart was described as looking like a tree, with the roots

representing the president and the board of directors, while the branches symbolize the various departments and the leaves depict the staff workers. The result of the organizational chart was a clear line of authority showing where subordinates were accountable to their immediate supervisors

Over the last 150 years, this image has represented organization structure as a symbol, having withstood the test of time, new perspectives and emergent philosophies. The tree symbol, standing or inverted, standing for organization structure has been consistently deployed across different parts of the world, perpetuated by multinational organizations, business schools and consulting organizations.

In India, the symbol or the map gets further strengthened and imbued by a feudal context, often lending organization structure a tonality of rigidity, safety, non-negotiability, and social status. Many an employee ends up seeking a job position, with associated privileges and power. In our consulting especially in our focus on throughput alignment and customer centricity, we have grappled with legacy of the tree structure – severely impacting on how the throughput gets visualized, experienced, owned, and worked with by individuals and teams across the organization.

However, the most critical impact of this paradigm is on the role-taking processes within individuals and groups. The pyramidal or tree structures only exemplify or define the ‘job-position’ for the individual within the organization. What remains unarticulated is the set of requisite behaviors that are critical towards energizing the job position, and desired within the individual. The absence of specific role-behaviors desired often leaves the incumbent member of the organization perplexed and unaware of ways of engaging with and occupying the job-position. The underlying dilemmas, tensions, and leadership challenges seldom get identified and institutionalized.

Lastly the tree / pyramidal paradigm has never allowed us to understand the nature of culture and organizational values, as the mapping of the structure and design excludes any references to critical intangible dimensions of the organization.

All organizational pyramids look the same. And yet all organizations are experienced differently.

It was a painful discovery that hierarchy and its associations with status, feudalism, and power often led to relentless debates and arguments over the structure and the array of job positions that took the foci away from working with the process efficiencies, individual role effectiveness, and throughput orientation within the system.

The New Paradigm for Design: Parallels from Architecture – The Tensegrity Metaphor

It was the work of Buckminster Fuller, a revolutionary architect and philosopher, that left us in considerable intrigue and excitement(1). Fuller used the term *Tensegrity*, coining it for Kenneth Snelson, an artist who was producing sculptures such as the 18-meter high ‘Needle Tower’ in 1968 .

Fuller defined Tensegrity as '*tension plus integrity*'. The idea was adopted into architecture in the 1980s with David Geiger designing the first significant structure—a competition hall for the Summer Olympics of 1988.

Imagine that you are driving a car with a trailer at the back, going up a hill. When you are driving up the slope, the car and the trailer are pulling against gravity. The trailer converges behind the car as the car pulls it up the slope. Every time the trailer sways behind you from left to right, what you need to do is to accelerate the vehicle, and this acceleration dampens the swaying motion.

When you are going downhill, however, the trailer may begin to push the car. This produces a strong side to side force—'*divergence*'. The trailer will begin to sway from side to side again. Push again, is divergent. When the trailer begins to push, you are advised to accelerate slightly in order to re-establish pull. **Pull is convergent**, and the trailer will straighten course.

Tensegrity is the pattern that results when push and pull have a win-win relationship with each other. The pull is **continuous** and the push is **discontinuous**. The continuous pull is balanced by the discontinuous push producing integrity of tension and compression. Fuller explained that these fundamental phenomena were not opposites, but complements that could always be found together. He further explained that push is divergent while pull is convergent.

In architectural terms, Fuller held 'compression structures' as inadequate to the modern times, terming them as cumbersome and ineffective in many ways. We, at TAO, realized that the concept of Tensegrity had plenty to offer in terms of applications, philosophy, design and development of organizations.

We, first used the term "Tensegrity" to explore psychological and sociological dimensions of an organization including role taking, conflict, individual and group processes within the organization, where we sought to define the continuous pulls and the divergent pushes that lend a design and structure to the organization, apart from defining the nature of extant culture within.

However, before, we go deep into applying principles of Tensegrity for organizations, we would like to introduce another key term—**Mandala**, that enabled us to depict the systemic as well as institutional & human energy properties.

Defining Mandala



A Mandala

The term “Mandala ”, amongst other streams, has been used extensively in Indian socio-political systems, and is best defined as a system that emerges out of the rhythm, harmony, and interplay of opposing forces(2). What makes the term ‘Mandala’ unique is its resonance in defining and illustrating both explicit and tangible systems (the solar system for example, in Sanskrit is termed as a ‘surya – mandala’), as well as tacit, institutional and political systems. For example, in India, we use the terms ‘Gram Mandala’ for political and administration structures and systems.

In terms of institutional energy and systems, a Mandala represents the universe itself; a Mandala is both the microcosm and the macrocosm, and we are all part of its intricate design. We firmly believe that the Mandala captures and mirrors the nature of energy within the organization, as the Mandala is more than an image seen with our eyes; it is an actual moment in time. It is here that we need to emphasize on the complexity of voices that exist in an organization, and how these voices create multiple realities.

The Four Voices – A Historical Context:



On of the most powerful imageries of the pre-industrialization era often romantically alluded to in the shape of an argument against today’s complex times is that of the craftsman owning and controlling the production of goods. It was believed that the both the modes of production and the psychological ownership of the product belonged to the craftsman in these idyllic agrarian times, a phenomenon that contributed to individual well-being and social order.

For example, Thomas Hardy in his literary works uses the transition from the sylvan, agrarian times into an industrialized society as a backdrop for his tragedies.

Marxists proclaimed that industrialization only augmented the strength of a new emergent class that controlled the means of material production, and subsequently controlled the means of mental production. Alienation was used to describe the splitting of the product from the process of production at the individual level.

In terms of social structure, the era of industrialization witnessed the first step towards a complex tension that lay between the ‘voice’ of the craftsman, who owned the craft and the means of production (the Voice of Technology), and that of the voice of the emergent investors, who mobilized capital to reinforce the pace of industrialization (Voice of Wealth).



Voice of Technology



Voice of Wealth



For example, in America, *'The Putting-Out System'* existed in the United States from 1790 to 1840 as one complex mechanism created as a response to expanding markets and geographies. In this business system, merchants or the trader class, who represented the voice of wealth, purchased materials, delivered these materials to the workers in their homes and arranged for the sale of the completed articles. The second experiment in the USA, was around *'The Inside Contracting System'* – another method of coordinating activities where the system of inside contracting was widely used by New England and Middle Atlantic manufacturers, especially among the metal fabricators and machine-tool builders.

However all this changed with F.W. Taylor establishing the school of 'Scientific Management' in 1911; this paved the way for large financially strong capitalists and entrepreneurs amalgamate and scale up production operations that were erstwhile owned by the craftsman. The Inside Contracting system was steadily replaced by the hegemony of modern scientific management, with the 'manager' as the designated apostle of market capitalism. The organization was indeed evolving into a complex system, which no longer resembled its avatar in the 18th century of the diligent craftsman catering to the local community.

Limited Liability Legislation in Britain (1856) and subsequent similar laws that emerged in most countries, laid the foundation for the concept of the modern organization, the world over, limiting the exposure of the investors and entrepreneurs. This gave a further impetus to the rising strength of the Investor, and in many ways also led to the de-skilling of the craftsman as a process within the larger phenomena.

Introducing The Four Voices: What is a Voice?

If we were to revert back to the context today we would find that all organizations exist in a complex and turbulent environment. This turbulence is not just out there external to the organization but is also mirrored within the internal processes and systemic realities. In our attempt to decode this complex environ, we take the first step—that of viewing the organization as a dynamic inter-play of four key and distinct universes, which co-exist and often compete for the attention of the organizational leadership.

This cluster of four universes is continually morphing and changing. Each universe in its dynamics with the others has its convergent pulls that create a sense of continuity and stability. However this interplay also exhibits a series of discontinuous

pushes that create divergences within the system.

As stated earlier, each of the “Four Voices” is a “vector of challenge” from the environment both outside the organization or the macrocosm, and within the organization. This vector is “dynamic and inscrutable”. The extent to which the members in the organization actively listen to these vectors & decode the underlying patterns accurately becomes a starting point. The person / or persons who then communicate this “decoding’ end up anchoring the voice of each universe for that moment i.e., they voice the reality of that universe to the organization.

It is in understanding and explicating these voices, that we take the first step of creating the Tensegrity Mandala. These four universes and their respective Voices are:

Voice of Wealth (VoW):

Wealth, and wealth creation, has been the subject of many a debates, arguments, ideologies, and philosophy. It is necessary perhaps to spend some time in exploring and defining the Voice of Wealth. Wealth and wealth creation is considered a significant and legitimate duty of the householder in the Indian culture. The trading community or the caste holds wealth creation as key and significant social / community process, and upholds this process with all humility and sacrifice.

This universe comprises and stands for the expectations, demands, decisions, processes, and the voice of owners, shareholders, investors, bankers, analysts, and all those who are concerned with the wealth creation capabilities of the organization. Investment, divestment, funding, financing, risk management, and rewarding are key processes that are associated with the Voice of Wealth (VoW).

We have already made a brief comment on how this voice became extremely prominent during industrialization, and separated from the voice of technology, brought in a tension between the investor and the producer. Some of the key dilemmas that belong to this universe, have to do with ‘risk versus reward’, ‘long term wealth creation versus short term gains’, ‘growth versus consolidation’, and ‘control versus empower’ etc. The microcosm of this universe as experienced within the organizational space, is associated with symbols such as bean counters, auditors, and accountants.

Voice of the Customer (VoC):

In the last fifty years, the voice of the customer has been written and spoken about in all forums and spaces that are to do with organizations. This universe comprises the concerns, demands, expectations, and opinions of the markets, competitors, new entrants, existing customers, prospects, and potential customers, latent and undiscovered needs of the customer. The VoC universe is often cited as the reason for existence of the organization.

Voice of Technology (VoT):

The universe comprises the energy and structures of throughputs, value streams, innovation, research & development, emergent technology etc. The Voice of technology (VoT) expresses the concerns around delivery, delivery capability, and delivery quality of the organization in meeting the demands of the market and

customers.

Some of the fashionable language deployed to represent the VoT would include throughput quality, cost, delivery, time to market, take time, down time, SLAs, scaling up, waste, and Value Stream. Some of the underlying dilemmas that get experienced in this universe include 'quality versus cost versus delivery time', 'technology for technology sake', 'make or buy' etc.

Voice of the Employee (VoE):

This universe comprises the concerns, wishes, fantasies, expectations, demands, and grievances of the professional employee, the worker, the manager, and the human being within the organization. Often erroneously labeled as Human Relations problems or challenges, many aspects of the Voice of Employee phenomena are around disappointments, non-negotiated expectations, behavioral propensities, role-taking, and multiple cultures that co-exist within the organization.

This voice also represents the energy within the organization, the nature of levers and blocks that restrain the energy and the human spirit. Some of the terms and language used in this universe include culture, transformation, empowerment, career planning, aspirations, leadership etc. Many of the dilemmas that imbue this universe include 'attract versus retain', 'grow versus buy', 'instrumentality versus institution building', 'loyalty versus expertise', 'individual versus team' etc.

Summarizing the Four Voices

In any organization, the leadership continually formulates a response to these "vectors of challenge" as voiced by the persons who experience and decode them. Often the nature of this response to each vector or Voice creates a continuous Pull (or tension) that is aligned across the strategic intent of the organization. The Pull evokes a sense of convergence within the organization.

It is also the case that the leadership within the organization experiences itself as reactive and myopic, often provoking a discontinuous Push (or a compression) from the organization. This often happens when the leadership is unable to "decode" the dynamic Voice, giving rise to politics that make the organization 'push' oriented. Very often this renders the organization inflexible, stuck, inefficient and sick amongst other things

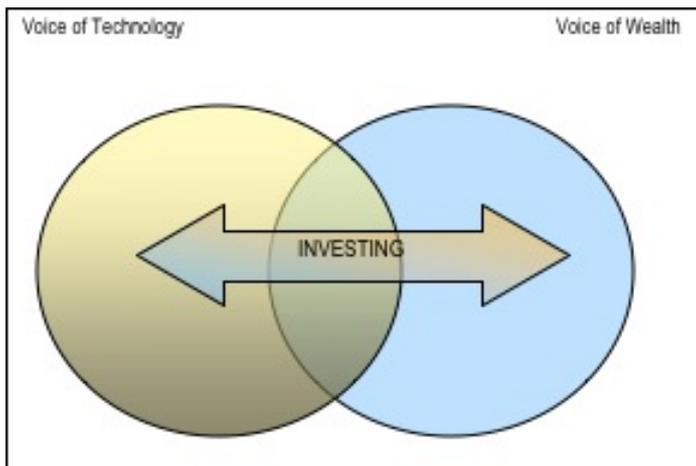
This decoding of a particular Voice or the set of Voices, is ideally done through a process of dialogue and continual pull or a tension as represented in Tensegrity structures. However when organizations choose to eliminate or ignore dialogue, the inherent structures, processes, and systems get characterized by discontinuous push or control as evident in compression structure. The stress on the leadership is immense where a designated leader or a leadership team, claim to completely understand and visualize the nature of unfolding and movement within a voice. This stance of the leadership also creates waste within the organization.

It is necessary at this juncture to walk through a historical anecdote that helps us understand the evolution of all four voices in India in the past sixty years. Revisiting this narrative would hopefully create an illustrative foundation on which the Tensegrity Mandala rests.

Phase 1: The Era of Production Centric Organizations

In the industrial era, the transition saw small craftsperson's businesses morph into a reasonably simple and predictable two-universe cluster that of the investing capitalist and the technologist or the craft owner. The emergent experience of the organization was a series of dramas / narratives between pulls and pushes between the two voices – Voice of wealth (VoW) as represented of the investor and the Voice of Technology (VoT). In India, industrialization on the lines of what happened in the West, sped up after independence. It was also controlled and protected by government policies including the process of licensing industry in India.

Tension 1: INVESTING:



Investing

The emergent business model till the 1960s and 1970s was fairly simple—these were the times were of the sellers' market, and if one was granted protection through a license, the business was built around a cost-plus model.

The two voices—Voice of Wealth and Voice of Technology—gave rise to a simple tension of '*Investing*'.

All businesses were viable as long as the 'Pull' between the two Voices was "decoded" correctly, and organizations evolved. As long as an entrepreneur could garner the right license that protected him from competition, business was quite simple to sustain.

It must also be noted that a significant part of industrialization was routed through public sector undertakings (PSUs) in key areas including energy, banking, insurance, mining etc. Many of the PSUs were known for bringing in technology and knowledge to India.

Within this **Investing tension**, some of the key pulls relevant to the initial forays by private investment as well as PSUs were and still are:

- Capacity creation: How much capacity do I create? The dilemmas were around 'over capacity versus under capacity', and financial implications thereof. The concerns were around – how do I measure capacity?
- *Technology focus*: Do I focus on technology and explore what its implications are for me in terms of profitability and returns? Do I make a choice between

current traditional capabilities versus futuristic capability?

- *Added to these concerns of that era, the Investing tension also comprises of dilemmas, challenges, and concerns around these today:*
- *Research and Development Initiatives:* What is my perspective towards R&D? How do I look at financial returns? What is an appropriate investment into R &D?
- *Knowledge Management:* How do I create explicit knowledge and not be rendered dependent on tacit knowledge or subjective knowledge? What are the barriers to knowledge sharing and how do I break this down? How do I scale up the apprentice model of learning?
- *What is my underlying philosophy towards investing and running the business? Am I in the business for a certain period and do I have an exit strategy?*

Most organizations in this simplified environment were able to make supernormal profits and spectacular wealth while deploying a simple business and revenue model.

Business Model 1: Cost Price + Desired Profit = Selling Price

These organizations were quick to identify their cost structures, and then to determine the selling price by adding a desired profit margin. Most of what got produced was sold. The main concern was to do with production. Viable businesses only had to focus on the right technology model, and source it.

Even in this environ, there were many large business groups who chose to build organizations without enlivening a healthy “Investing” tension. Greed and manipulation rendered the required dialogue between the two voices as redundant. The Investing tension collapsed into dysfunctional pushes of sub-optimal investments, and reactive disinvestments as the owners turned into fly by night operators and myopic controllers. Labor was exploited to compensate for poor investment infrastructure. Most of these units did not live beyond a few years.

However this simplified environ did not last long, as a third Voice emerged and became steadily critical to the functioning of the business. This was the Voice of the Customer that like in the western economies, which led the business environment to morph into the next phase.

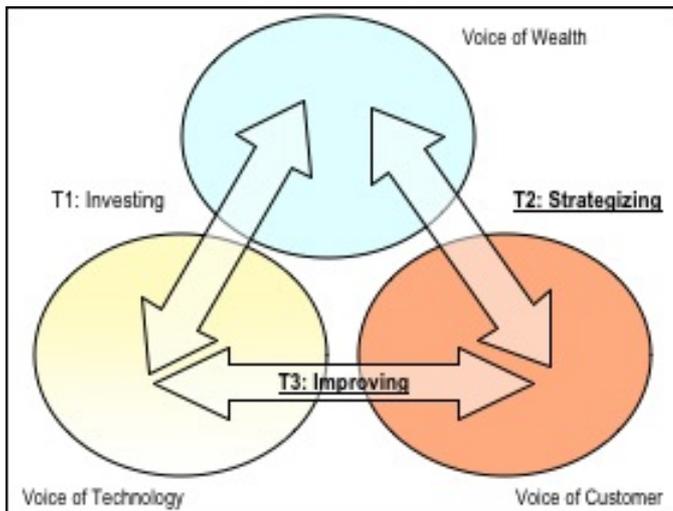
Phase 2: Managing The Market-Driven Organization

This particular phase revolutionized the way business was to run within India. This phase was triggered by the Voice of the Customer, and the emergence of the VoC implied many new and significant rules. The world of business, erstwhile a simple tension between two voices, experienced a new paradigm – leading to a complex interplay of two new tensions in addition to the first tension of Investing.

The Voice of the Customer (VoC) emerged as an aspiring and ambitious middle class in India grew in terms of size and in its philosophical shift from Gandhism and Socialism towards consumption. Americanization of the Indian culture that made a humble beginning in the late 1960s and 1970s, was intense during the 1980s. Birth of business schools such as the Indian Institutes of Management and the consequent generation of professional managers only heralded the onset of

supremacy of markets.

In terms of organization design, and modeling, the two new tensions changed the nature of inherent politics and conversations within the organization.



Strategizing

The two new tensions that now emerged were:

- The **Strategizing Tension** between the Voice of Customer and the Voice of Wealth
- The **Improving Tension** between the Voice of the Customer and the Voice of Technology

Tension 2

The Strategizing Tension (VoW – VoC)

Ironically, most production centric organizations were never ready to engage with Voice of Customer. There were assumptions made on the size and buyers made of course—very often these assumptions were built around trends once every year, but there was no real continual dialogue between the two Voices. From an owner's perspective, the customer ought to be ready to buy for whatever gets produced.

The other aspect that is important to note, during the production-centric era, were the stories around the power of the factory manager. Voice of Technology was anchored largely in the production facilities, and the factory manager was the King. He determined production scheduling, and distribution tactics. The Production head and his team defined the notion of Quality and what it meant to the customer. All this changed for most organizations during the 1980s.

Defining Strategizing as a Tension

To define and symbolize the nature of tension between the two key Voices – Voice of Wealth and Voice of Customer, we have used the word 'Strategizing'. By the Strategizing tension, we are referring to the **patterns, choices, dilemmas**, and **perspectives** evolve and get deployed on a daily basis as opposed to the content approach – **a strategic plan or ploy** .

The key challenges and dilemmas that underlie within Strategizing Tension are:

- *Designing and aligning the Business Model, the Revenue Model, with the Strategic Intent:*
While the production centric organizations grappled with the delivery model and its linkage with the investment model; the strategizing tension brought in newer dilemmas and challenges. What emerged was the need to align the Delivery Model to the Business and Revenue Model. This meant that critical decisions around pricing, distribution, promotion, and positioning became important questions.
- *What are the market place dynamics? What does the customer really want?*
This phase witnessed most leadership teams reflecting and seeking to understand the mind of the customer. Terms such as buyer-behavior and segmentation became a part of the emergent language. Companies had to become curious and vigilant of the markets, the customer segments and most importantly the competition.

Some of the other dilemmas and questions were around the following:

- *What will evoke a long-term relationship with the customer? Who are our potential customers?*
- *Which Markets? What is the Value Offering(s)? Product Portfolio?*
- *Product Positioning? Branding? Distribution? Pricing? Managing Competition?*

To us, the action and decisions around dilemmas and perspectives, as demonstrated by the organization help understand how this 'Tension' is co-held within the leadership team. As posited by Mintzberg, *Strategizing is a perspective – its content consisting not just of a chosen position, but also of an ingrained way of perceiving the world. Strategy in this respect is to the organization what personality is to the individual.*

The old formula as per the earlier equation during the production centric era, gave rise to a new formula, almost instantly recognizing the third tension:

Business Model 2: Selling Price (Market determined) = Cost Price (Reduce) + Profits

This meant that organizations today could not longer sustain a cost-plus model as the markets determined the selling price. All that was within the control of the leadership was the levers of cost. In the 1990s, there was frenzy within most organizations around optimization, and cutting costs, as organizations lived up to their intents to be leaner and more efficient.

This meant that the STRATEGIZING Tension was co-held and given as much importance as the third tension – The IMPROVING Tension.

Tension 3: The Improving Tension

The Improving tension links a dynamic universe of the Customer / Market (VoC) to a fairly stable medium term commitment to a particular throughput technology or a technology model within the Voice of Technology (VoT).

Most organizations invest into capability and capacity, only to discover that a large proportion of their investment plans did not anticipate changing needs and demands

within the market place. This would create a tremendous strain on any organization, as investment into production assets is a fairly medium to long-term decision.

Coinciding with the emergence of the Improving tension was the focus on Systems Theory in academic institutions and research in India. Soft systems theory, and the works of Beer, Checkland, Senge, etc. became critical to understanding primarily this tension within the organizations.

This meant that there was a new tension that emerged – that between the production capability and capacity constraints and the emergent new needs of the customer. Managing this tension became a key differentiator for most organizations to survive, as these organizations continually grapples with new needs as well as focus on minimizing the cost, improving quality, and reduce cycle times.

For most organizations, the tension of **Improving** meant focusing on the following dilemmas and choices:

- *What is the effectiveness and efficiency of the delivery system? Can we bring in process measures along with existing content measures?*
- *What are the areas within the throughput, where the improvements will be most rewarding to our customer?*
- *What can we learn from the work place? How do we deploy our learning in the place?*

In Phase 2, most organizations in India chose to invest into and deploy Japanese management techniques such as Kaizen, Quality Circles, Lean Thinking, Total Quality Management, TPM etc. to focus on the third tension in a strategy to improve Quality, Cost, and Delivery of the throughput.

In terms of culture, this meant cutting across the departmental hierarchies and silos within the organization, and to bring in the concept of the “end to end throughput”. There are many organizations that still struggle to define “Improving” in a holistic sense, and at best deploy certain optimization efforts that at best sub-optimize the throughput.

A large majority of these interventions have been “Implementation Ploys” and “Change Plans”, and not really re-defining the “Perspective” in terms of the employee mindset or in terms of shared organization culture.

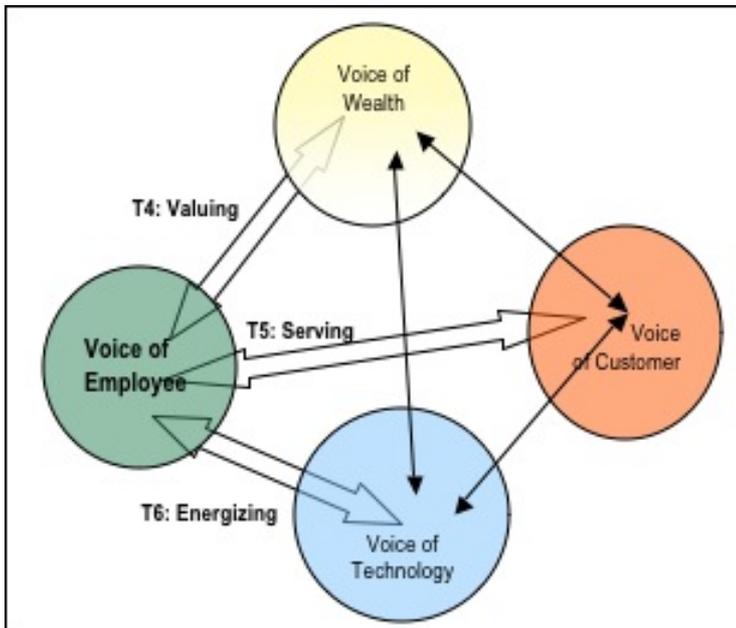
Phase 3: Institutionalizing the Tacit Tensions in addition to the Explicit Tensions

So far, the second phase from the production centric organizations to market-driven organizations, implied that managing the entire business was around managing key processes or tensions of “Strategizing”, “Investing”, and “Improving”.

All the three tensions are fairly easy to understand, map, and measure. Thus most leadership efforts were concentrated around aligning these tensions through process design, adherence to process measures, and a throughput orientation.

Historically, it was in the rise of the Information Technology Industry in India that heralded and legitimized this new Voice – the ‘Voice of the Employee’. Some organizations in this particular industry vertical were quick to realize that despite

huge investments into technology and knowledge systems, successful delivery of projects was dependent upon the internal employees. Retention of the capable and committed employee was as important as the other three processes. Decoding this Voice meant moving beyond the customary appeasement of the Employee and responding merely to hygiene factors within the organization.



The Invisible Tensions

Most organizations were till now grappling with the mechanistic orientation of 'control and command', 'hierarchies', silos etc.

This meant that many organizations had to learn to respond to the **three Tacit/Invisible** new tensions (*T4 – Valuing, T5 – Serving, and T6 – Energizing*).

In industries such as Banking, Insurance, IT, and manufacturing, the Voice of Employee was now resurgent, and this meant that the organizations to be viable and growth centered had to examine the three tacit / invisible tensions of Valuing, Serving, and Energizing.

Tension 4: The Valuing Tension (Between the Voice of Wealth and the Voice of Employee)

As mentioned earlier, the Valuing Tension has been legitimized only very recently. Most brick and mortar organizations in the past decades have held the employee as an instrument at best, and as source of nuisance at worst. Unions representing the Voice of the Workers were to be managed and controlled. Most middle management had no real Voice, as these sections of the organizations responded to the demands and whims of the owners and senior managers.

It was in the 1990s that witnessed the real engagement with this voice and co-holding the tension. This meant that organizations had to create a space or an institution where each and every individual or team creates value and feels valued. This was far more difficult to define, measure, or to deploy as opposed to the tensions of strategizing, investing, or improving, as it meant engaging with an energy field and an invisible or subjectively held tension.

Engaging with the **Valuing** Tension/Dialogue means exploring, dialoguing, and identifying the following dilemmas, choices, and constraints amongst others:

What does it mean to value Employees?

Many of the content motivation theories including Maslow's hierarchy of needs or Alderfer's theory of Motivation have not really been insightful to respond to this question. The question demands an inquiry into the socio-cultural context, individual aspirations and codings, and the emerging culture. The dilemmas and constraints are felt because of the immense constraints that stem from the VoW. The question is perpetually alive and dynamic, and cannot be responded to only in terms of a remuneration policy or a diversity management charter.

It requires the manager and the leader to stay in touch with emergent realities.

Socialization & Indoctrination—What kind of people do we attract and retain? How do we define the Values and the Membership Criteria?

The last two decades have seen a greater focus on organizational values, as organizations have grown larger and beyond personalized control. This has meant a new challenge in defining the right culture, and taking it across all parts of the organization.

How do we invest in people? How do we evoke commitment to the organization, customer and from each individual?

Structures, systems, and processes are inadequate when it comes to creating commitment and sustaining it over the years. Individual leaders may bring in a personalized emotional contract with their reports. The key challenge is to work with the human energy within the system.

Organization Culture – How do we define Leadership

Distinguishing a leadership process from the leader is critical to defining this tension. A leader can at best bring in a discontinuous push; a culture can bring in a continual pull, and create a Tensegrity.

The key differentiator across organizations is how this intangible and yet so critical a tension (or a process) are worked within the system. The rise of Employee Satisfaction surveys in the 1980s and 1990s was another sign of the times. The employee satisfaction scores and survey dimensions have evolved over the years, and yet are still critical to the understanding the flow of employee energy within the organization.

*Tension 5: The Serving Tension
(Between the Voice of Customer / Markets and the Voice of Employee)*

The Serving Tension refers to the deployment of human energy towards delighting the internal and external customers of the organization, and in ushering in a culture of developing capabilities and resources for the customer.

The Serving tension is often seen as that intense and yet invisible effort to ensure that the customer remains loyal to the organization, and to move from creating value

towards partnering value. The Serving Tension / Dialogue within the organization helps it to anchor the following themes:

Who is my Customer(s)? What are my customer expectations?

Clarifying this question and negotiating the consequent expectations set the foundation for each employee. An employee cannot exist without having a real internal or external customer, and this becomes a basic premise. Many of the traditional pyramidal organizations were notorious for creating departments and teams that had no customers.

The next set of questions essentially map the nature of the investment and rigor that the employee invests into understanding and empathizing with the customer / markets.

1. *Where do my products/services fit into the customer's operation?*
2. *How do I maintain an effective dialogue with him/her /them?*
3. *How do I build and sustain a meaningful relationship with my customer(s)?*
4. *How do we identify areas of improvement in our service?*
5. *How do I serve my customer better? What data do I look at while I enhance customer satisfaction?*

*Tension 6: The Energizing Tension
(Between the Voice of Technology and the Voice of Employee)*

Monday Blues and Frantic Fridays are a part of many such phrases coined by employees to refer to their work context. It is quite common to hear of lethargy and feeling de-energized from employees as they struggle with work monotony, routines, adherence, and deliverables. It is these days quite rare to hear narratives around breakthrough creativity and innovation that energize the team member.

Senior management refers to leveraging offsite retreats and outbound workshops that replenish, renew, and re-energize their teams. The key themes that get focused upon include exploring trust, conflicts, link responsibilities, and transparency. Many a times, there is a legitimate space offered for expression of fatigue, anger, sadness, disappointments that gets accumulated over time as the employee works within a given delivery model.

The Energizing Tension examines how each employee is energized and involved in his / her interface with a given technology or throughput design. The Energizing Tension explores and co-holds these themes:

- *What does work mean to each one?*
- *How can we make it more meaningful?*
- *What can I do to improve the teamwork?*
- *How can we inspire each one to bring his/her best?*
- *How conducive is the environment to learning and performing?*

Summarizing the Tensions

The Organization can be now depicted as a three dimensional Mandala, where the Tensegrity offered balances and interrelationships on dualistic perspectives and dilemmas within each two voices comprising a tension.

Tensegrity helps us restate some of the problem of organizational conflicts – technology demands versus wealth creation, employee needs versus investor concerns, employee needs versus technology constraints etc. By the handling the dualistic compression relationships in a holistic structure, it is no longer a question of what one is “for” or “against”, of what one considers “right” or “wrong”, or “correct” or “incorrect”, etc.

TENSEGRITY MANDALA

The challenge of constructing these tensions together is to present a model that is able to represent the emergent multiple realities within the organization that co-exist.

Many writers have debated over which Tensegrity polyhedron should be used to represent or construct an organization. For example Prasad Kaipa uses the pyramid or the tetrahedron but not as a basis for Tensegrity systems. We find that the tetrahedron as the most apt polyhedron for representing the Tensegrity Mandala. Not only does it allow the depiction of the four universes or voices as the four nodes of the organization.

Defining Tensegrity Equilibrium

The Tensegrity Mandala of any Organization, Division, or an SBU is in equilibrium(3) if the six tensions, linking the Four Nodes have been optimized in relation to each other. A sub-optimized Tension either in terms of excessive tautness or slackness, would render the organization in stress. There have been many instances, where we have encountered organizations in severe stress for not having recognized or invested in a particular tension.

For example, most organizations work on optimizing the Visible Tensions of Strategizing, Investing, and Improving. These organizations invest in forums, processes, systems, and people who become a part of these tensions. However the Tacit tensions that are a source of energy for the Visible tensions are never worked with. Thus Energizing, Valuing, and Serving become under-optimized, leading to a great deal of stress for the Organization.

Corporate history worldwide has demonstrated rise and fall of organizations that have failed to address all the six tensions together, and create equilibrium for sustainable growth and development. The Dysfunctional Tensions render the organization ineffective, and inflict almost irreversible damage to both the Tacit and Explicit aspects of the Organization. Most organizations do not survive, in case the equilibrium is not restored quickly enough. We also believe that the Tenacity of the organization is a function of the how the Tacit Tensions are kept alive. The Tacit tensions of Valuing, Energizing, and Serving and the 6 nodal roles are critical to the long term health of the organization.

We began asking ourselves—*Who or what determines the nature of tension/s within the organization?*

The first step in this direction is to begin by defining the concept of a “Role”, and explain how the Role is the critical building block to the modeling of the organization, and its transformation agenda. We define the *Role as a set of behaviors*, an individual chooses to play is based on her process of making meaning out of any

situation (or the gap) and her basis for making choices

It is this Role, where the employee “decodes” the vectors or the Voices of the four universes, and renders alive her own effectiveness as well as the Organizational effectiveness. In Tensegrity Mandala, it is this crystallization of an Organizational Role (Behavior) within each tension for that particular node that determines the enlivening of the Tension.

The Role becomes a ‘Lens’, as well as an ‘Action Choice’, that anchors the Tension from each side.

The axioms under the Tensegrity Mandala are:

- a) Two roles, each anchored in a Voice, determine the tautness of a particular tension (4).
- b) These two roles, which are anchored in different Voices, comprise key behaviors as appropriate to the “decoding” of each Voice.

Tension 1: The Investing Tension

The Investing Tension seeks to integrate and co-hold the interests and foci of the two universes – Wealth Creation (Voice of Wealth) and Technology (VoT). There are two roles within each universe that anchor the tension.

*Role 1: **The Technology Architect** (anchored in Voice of Wealth)*

This role demands owning Voice of Wealth, and anchoring dialogue concerning technology in terms of wealth creation and knowledge creation. The Technology Architect role requires designing delivery capabilities, but would also anchor the whole process from a business context that demands appropriate capacities, optimized investments, pragmatic capital budgeting and resource allocation, R&D initiatives etc. The Technology Architect owns the design of the Delivery Model, as well as the Investing Model.

*Role 2: **The Throughput Developer** (anchored in Voice of Technology)*

The role requires a significant understanding of the designed throughput or delivery systems. It requires translating all technology or knowledge endeavors of the organization into sustainable throughput capability building, and an ownership of delivery. The Throughput Developer role requires a systems thinking perspective, and would have to create infrastructure and processes that guarantee quality, cost, and delivery commitments to the customer.

How these roles engage and dialogue with each other defined the nature of tension of the Investing process. *The Critical question is – ‘When does the Tension become dysfunctional? And what are its consequences?’*

*Tension 2: **The Strategizing Tension***

The strategizing dialogue is rendered functional by two key anchors or roles within the Tension.

*Role 3: **The Business Architect** (anchoring the Voice of Wealth)*

The Business Architect's role requires a continual review (decoding of the market universe) and evolving appropriate business models and revenue models for the organization. Anchoring the Voice of Wealth, this role requires challenging and translating market / customer realities into a wealth creation context.

This role anchors the Strategizing process from the wealth perspective where the role-holder has to manage, negotiate, and examine the expectations of the investing stakeholders. The role-holder then builds a connect with emergent market realities and participate in the process of creating a cogent and convergent strategy spanning positioning, pricing, branding, penetrating, and designing a business model.

*Role 4: The **Business Developer** (anchoring the Voice of the Customer)*

The Business Developer role co-holds the Strategizing Tension by bringing in critical insights of the evolving and dynamic market realities. The role behavior of the Business Developer includes investing into processes such as market scanning, market intelligence gathering, selling approaches, and importantly competition analysis.

Scanning the markets for example requires the role-holder to engage with critical stakeholders including competition, alliances, prospects, and customers. The Business Developer role demands explicating and communicating back to the Wealth stakeholders – all emerging trends, challenges, and dilemmas confronted at the customer inter-face.

*Tension 3: **The Improving Tension***

The Improving tension links a dynamic universe of the Customer (VoC) to a fairly rigid and stable commitment to a throughput technology (VoT) in the medium term. Managing this tension becomes a key differentiator for the organization, as it continually grapples with an ever-changing fluid universe of the customer. This tension is enlivened by two roles anchored at each universe.

*Role 5: The **Solution Designer** (Voice of the Customer / Market)*

The role-holder is key to understand the customer's needs. The Solution Designer articulates the latent customer needs, designs solutions that deliver the requisite value proposition to the customer, but within the existing technology constraints. This role-holder is critical to aligning existing delivery capabilities to the evolving customer's needs. The Solution Designer's focus is to help the organization continually improve through an understanding of the Customer's reality, needs, and context.

*Role 6: **The Innovator** (Voice of Technology)*

At the other end of the tension, anchored in the Voice of Technology is the role of the Innovator who enables the organization to meet non-negotiable customer specifications in terms of Quality Cost and Delivery. Within the constraints of existing technology and or throughput models, the Innovator role is crucial towards institutionalizing a culture of continual improvement.

*Tension 4: **The Valuing Tension***

The Valuing Tension links the universes the Shareholders (Voice of Wealth) with the Voice of the Employees. This tension seeks to integrate two different universes, and to negotiate contrasting perspectives. The ideal intent would be to create an institution where each individual or team creates value and feels valued. The tension is co-held by the following roles:

*Role 7: The **Organization Architect** (Voice of Wealth)*

The Organization Architect role explores and anchors key processes such as Organization Design and culture building. Anchored in the Voice of Wealth, the Role examines the sustainability of generating wealth from empowered and valued employees.

If the Business Modeling, Revenue Modeling, and Delivery Modeling were owned by the other two roles of Business and Technology Architect, this role anchors the modeling of design and transformation. It reinforces a Socialization and Values orientation as defined by the Wealth stakeholders, and seeks to articulate the nature of Policies and systems that support the Organization Mission and Leadership. The Organization Architect is continually grappling with the pivotal query of “what is the nature of organization that we would like to create?”

*Role 8: **The Team Developer** (Voice of Employee)*

The Team Developer is a role that demands an understanding of human behavior at a delivery level along with an intent to invest and guide the individual / team towards superior performance. The Team Developer role comes close to that of being a Mentor, and being a role model—generating a drive and creating an ambiance/infrastructure for people to grow and develop. The Team Developer apart from being in touch with operational realities of today, is the crucial link to the aspired realities of tomorrow for his reports.

*Tension 5: **The Serving Tension***

The Serving Tension is the tension linking the Voice of the Customer (internal and external) and the Voice of the Employee. While the Improving tension links Technology to the Customer, this tension brings in the human touch and the interface between the supplier and the customer; it becomes integral to the organizational capability of delighting its customers. The two roles that anchor the Serving Tension are:

*Role 9: **The Self-Developer** (anchoring the Voice of the Employee)*

Every employee within the organization serves an internal or an external customer. The Self Developer role is focused on the employee’s need to create and sustain a relationship with the customer by a committed effort on developing self, and skills, knowledge, and capabilities. The Self Developer tracks and scans the emerging customer needs and demands, and invests energy and time to bring his or her abilities to match these trends.

*Role 10: **The Customer Delighter** (anchoring Voice of Customer)*

The Customer Delighter is a role where the prime objective is to transform every moment of truth into a moment of delight for the internal / external customer. The role demands sensitivity to the needs of the customer universe and in examining where and how improvements can be made when it comes to serving the customer.

Tension 6: The Energizing Tension

The Energizing Tension or Dialogue gets anchored by linking the universe of the Employee (Voice of the Employee) to the universe of Technology (Voice of Technology). This tension examines how each employee is energized and involved in his / her interface with given technology or throughput structure. This tension is co-held by the two roles:

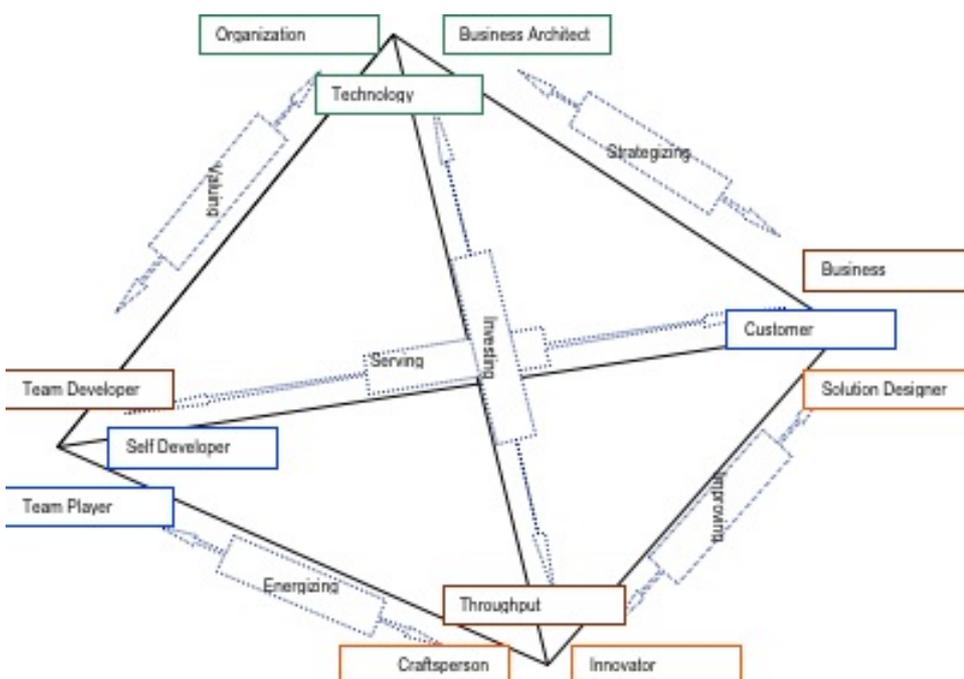
Role 11: The Craftsperson (anchoring the Voice of Technology)

The Craftsperson is a role that demands dedication to a given technology or throughput expertise. The quest of the Craftsperson role is to become a master or a “guru” on a specific technology and to evangelize the craft with the purpose of energizing others. The Craftsperson role encompasses behaviors such as teaching, coaching, documenting, researching, and motivating others to a given technology or a throughput model.

Role 12: The Team Player (anchoring the Voice of Employee)

The Team Player is a role that each individual gets to play in the process of energizing teams. It pertains to one’s behaviors in creating teamwork and openness within the system. Very often the team player role enables individuals to check bureaucratic rules & regulations and disable silos. The role is legitimate in bringing in empowerment, evocation, and a learning ambiance within the system.

The figure below illustrates the twelve Nodal Roles and the Role-based Tensegrity Mandala:



Summary

In this article, we have evolved the Tensegrity Mandala as a systemic framework that allows the reader to examine and explore organizational realities from a non-traditional perspective, and to understand that Organization Design is not about just the inverted tree structure. Organization Design, as per the Tensegrity Mandala, is a process that entails a shared understanding of multiple realities within the organization, and how role-taking propensities within the organization leads to a transformational agenda.

We hope that you have joined us in reflecting over the nature of health and functionality within each tension, and how role taking within the organization around the 12 key roles is crucial to the organizational equilibrium.

Notes

1. As per Wikipedia, Russian artist Viatcheslav Koleichuk claimed that the idea of Tensegrity was invented first by Karl Ioganson, Russian artist of Latvian descent, who contributed some works to the main exhibition of Russian constructivism in 1921.
2. Mandala : man·da·la n. A geometric or pictorial design usually enclosed in a circle, representing the entire universe. It is used in meditation and ritual in Buddhism and Hinduism. Jungian psychology, a symbol representing the self and harmony within the individual, experienced through the interplay of opposing forces.
3. Equilibrium: In sociology this is known as the equilibrium problem noted by R. Bales (1955). The group solidarity acts in opposition to differentiation and division of labor necessary in adapting to its environment; all groups are caught in transient equilibrium resulting from these forces. A structure most effective for the ends of the group may not be most satisfying interpersonally.
4. There is then a tendency for each role-function to act as though it was at a central point on a “flat-earth”, rather than appreciating that it has to deal with “functional roundness”—and that even the most distant and apparently “irrelevant” are in no danger of “falling off” an edge.

This paper is an extract from a forthcoming book by the author.

About the Author

Gagandeep Singh is the founding member and ex-Director of TAO Knoware. An Alumnus of Indian Institute of Management (IIM) – Ahmedabad, and a Fellow with Sumedhas Academy of Human Context, Gagan works with global and Indian organizations on Alignment, Strategy, and Organizational Transformation. He has consulted within the Information Technology industry and the Pharmaceutical industry where organizations are consolidating their global leadership. He is a visiting faculty to IIM Ahmedabad, FLAME, and IMDR Pune, and is a Consultant to National Institute of Design (NID). He also brings in expertise in the areas of marketing, sales, and sales systems. He has been a trainer in the area of management development for many blue-chip companies. Gagan focuses on the processes of organization alignment and culture. Gagan specializes in the areas of Strategy, and Marketing. He can be contacted at gagan@totallyalignedorganization.com

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