Silos: The "Real" Explanation

As part of its ongoing research into the impacts of change inertia in the hospital industry, this document has been prepared to provide insight into organizational "silos." Anyone intimately familiar with the dynamics of hospitals and health systems will readily recognize the consequences of failing to mitigate silos. That being said, not only are the industry's leaders aware of the seriousness of the problem, they also recognize the lack of skilled personnel to function, per se, as a Chief Collaboration Officer; an individual who can facilitate the formation and management of an organization-wide culture of change acceptability.

The model for optimal expense management mechanisms in the hospital industry developed by The Center for Modeling Optimal Outcomes® for Strategic Initiatives In Healthcare®, LLC encompasses all aspects of the identification and training of the personnel necessary to execute the strategies for mitigating the serious fiscal consequences that result from today's silo-ridden infrastructures.

Often referred to intra-organizationally as politics between departments, infighting or favoritism resulting from reporting relationships, organizational silos are easily identified as one of the primary impediments for creativity, innovation and the ability to create a culture of change acceptability.

As quasi-cultures, silos exist within nearly all organizations; including academia, banking, scientific research, manufacturing, retail sales, etc. Technically, an individual's thought patterns create a configuration of neural architecture through a process known in neuroscience as neuroplasticity. It is this phenomenon that governs subconscious decision making that includes how and why silos are formed and resist change.

Rather than delve into the scientific foundation that creates organizational silos at this point, we will leave that explanation until later in the document after explaining the process from a lay (practical) perspective.

To fully understand the dynamics associated with silos required our interdisciplinary think tank to answer each of the following questions:
  ➢ How and why do silos emerge?
  ➢ Which group dynamics hold them together?
  ➢ What, if any, are the benefits derived from silos?
  ➢ How can they be replaced or enhanced (if they have some value)?
  ➢ What aspects of the structures of silos are consistent throughout organizations?
  ➢ Is their existence planned and, if so, by whom?

During the investigative process, it became obvious that the behavioral characteristics within silos (cultures) are somewhat tribal and influenced by herd mentality (driven by a combination of neurobiological factors). This insight "opened the door" for us to examine group dynamics as

they impact management structures, organizational development, and leadership. As we progressed from research in traditional business dynamics and into the biology (neuroscience) that drives decision-making, we were able to convert the sources of tacit thought processes into explicit methodologies based on a solid foundation in science that is provided in the summary comments.

Researching the analogies between tribal behavior and management practices led us to a 2005 book, Deep Smarts.[1] The authors, Dorothy Leonard and Walter Swap, outlined the three primary social change influencers as being group think, herd mentality and tribal behavior. The latter, upon close examination, showed some similarities with silo behavior; i.e., driven to some degree by thoughts relative to the need for survival.

As a point of clarification for the differences between two of the survival driven thought processes, herd mentality and tribal behaviors, we offer the following:

a. Herd Mentality – people react to the "take advantage of it while you can" belief. Usually the action is prompted by scarce resources including, but not limited to a time window. Care must be exercised to neutralize negative reactions from a group of individuals within a larger group. Failure to react swiftly can result in having a larger number of people agree with the dissenting view until the number hits the "tipping point" and the group thinks like a herd/mob and "stampedes."

One example of herd mentality dominant in medical research is "informational cascade;" i.e. accepting an assumption that was promoted as a fact merely because, based on then current technology and theory, it offered a logical explanation for a medical mystery. As one example of such information cascade, only recently has medical science started to learn that synthetic vitamins and nutritional supplements may not be nearly as helpful as originally thought and may, in fact, be harmful to some individuals.

b. Tribal Behavior – action based on a common discipline of people is often influenced by the leader or perceived role model. An example would be a professional society and a change of mind could be prompted by "it's the thing to do in order to support the group" philosophy put forth by the leader or oversight group (e.g. board).

Often, individuals see the outcomes of sub-groups within the organization or of other groups within a particular industry and decide to change their belief or opinions in order to replicate the results. An example of such behavior is the common problem of having sales personnel band together to react to operations personnel; regardless of whether or not the salespersons are friendly or agree on other issues. An analysis of the hospital industry indicated such tribal behavior is often visible when administrators attempt to sway the opinions of the medical staff en masse - resulting in defensive (survival driven) reactions.

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[1] Dorothy Leonard and Walter Swap, Deep Smarts, Harvard Business School Publishing, Boston, MA, 2005

Whether the challenge for an organization is transforming, creating, cultivating or maintaining a results oriented culture, the critical factor for success is building intra-organizational cohesion and collaboration. Unfortunately, this challenge is far more difficult to achieve than it may seem. Even superficial research into organizational dynamics of nearly every industry clearly indicates a distinct lack of cohesion and collaboration between all organizational levels but especially between middle managers and between middle management as a whole and the executive level. As a result of these deficiencies, the full potential of maximizing existing internal resources and organizational intelligence is wasted.

Note: The chasm of communication is a critical factor because, aside from fostering silos created and maintained because of dysfunctional communication between executives and middle management, this same factor can create silos between executives and/or middle managers and employees. At the employee level, these silos can result in the formation of unions.

In essence, unions become another set of sub-cultures. Viewed through this lens, the dynamics of the relationship between management and labor becomes somewhat easier to understand. As part of the study of that dynamic, the analogy of comparing silos to cultures is meaningful when one realizes that no one can change a culture but the "members" of the culture.

Using Hospitals as an Example
Upon close scrutiny, observers of the hospital industry soon realize departments such as a pharmacy, laboratory, radiology, surgery, etc. compete for fiscal resources (i.e. survival driven thought processes). In addition, the managers of these departments have different regulatory criteria and standards set by their respective "professional" organizations, separate clinical and quality metrics, budgetary restrictions, and each is held accountable for patient care outcomes related to their sphere of influence. In essence, these "silos" think and act as if they were independent businesses. This mentality is compounded by the many separate sub-silos that exist within departments such as radiology, laboratory or the nursing department. The medical staff is even more complex because, not only is each specialty a silo, the separate and competing groups of practitioners within each silo adds to the dilemma. (Note: From the aspect of neurobiology, habitual thought patterns relative to decisions that support intra-silo cohesion form neural wiring (neuroplasticity). It is such "hard wired" thought processes that make change acceptability nearly impossible. At the same time, "wiring" within organizational silos also prevents the creation of organizational camaraderie and inter-departmental esprit des corps; essential ingredients to reduce stress, minimize errors, and decrease turnover in nearly all industries.

Such silos exist within most industries in this country. This fact is unnerving because, as corporate complexity and the number of sub-specialties grow at an astounding pace, essential organization-wide cohesion and collaboration deteriorates in synch with this debilitating and rapidly expanding phenomenon. An example of the seriousness of this dilemma is the lack of true interdisciplinary cohesion in researching many of the debilitating and deadly disease entities; i.e. each sub-specialty is incapable of appreciating the potential for cross-pollination of state-of-the-art knowledge between disciplines. Only recently have two fledgling disciplines emerged that are attempting to reverse this trend; i.e. complexity science and integrative medicine. Each of these two concepts will be explained later in this document.

Underlying psychological factors behind the existence of silos

As part of our research into the creation of processes to eliminate or minimize the negative impact of silos, we devoted considerable time to investigating the evolution of group dynamics driven by neurobiology.

Using our unique process for root cause analysis, our research identified the following psychological factors driven by neurobiological factors that impact groups, teams, work units or entire corporations. It should be noted that, the following are merely examples and they are not intended to be all-inclusive for all industries:

➢ As predominantly detail oriented individuals, middle managers typically think in a manner that places a high value on control. Due to their status in hierarchal structures, most middle managers feel unable to control their own destiny due to environmental and organizational factors beyond those they can influence directly. As a result of their somewhat instinctual need for control (survival), they tend to focus on what they can influence – their department and its contribution to the organization as a whole.
➢ Human nature leads us to prefer living and working in groups (i.e. tribes)
➢ As part of their need to protect their "tribe," middle managers often tend to think in terms of gaining an advantage over "competing" departments or business units when exposed to factors such as sharing a budget, recognition of accomplishments in comparison to others, isolation from potential reductions in workforce (i.e., extinction), etc. As a result, often unknowingly, they tend to minimize cross-functional (cultural) collaboration.
➢ Tribes/silos/departments in technically or clinically based industries frequently develop their own terminologies or "language." This phenomenon has several impacts. First, it necessitates that only individuals "expert" in the respective "language" are employed to work in that unit. Second, individuals with expertise in any given subject or sub-topic think within the confines of the respective mental model. As such, much of what these individuals hear or see is interpreted to be within their "mental river" from "their" perspective. Often, the interpreting individual "is lost" in the rest of any dialogue outside of that perspective. Accordingly, almost instinctively they tend to prefer to associate and communicate with others of their "same species." (While many business professionals would vehemently disagree, this phenomenon is frequently behind the preference to hire personnel with the same educational background as the manager/superior; i.e. MBAs prefer MBAs. Third, as a result of hiring people who think like or in the same mental model as the remainder of the unit, department or team; organizations enabled Group Think to be created – not from the aspect of "what" is being thought as the concept is traditionally perceived but from "how" the group perceives an issue or problem. The outcomes of this operational weakness include but are not limited to the inability to innovate outside the sphere of the group's "mental river," self-isolation of a group into a silo because inter-disciplinary communication is frequently sub-optimal (often confusing and can lead to errors resulting from miscommunication), or restricting the degree of collaboration and cohesion to inter-disciplinary initiatives which are "dumbed down" into a lower common denominator of "language." Regardless of which of the aforementioned dynamics drive the formation of silos, the resulting impact on organizational effectiveness becomes "good enough" solutions rather than optimal outcomes.

➢ In order to maintain the importance and stature of their silo/culture/tribe, departments promote the use of their own language, levels of certification required by its professional organization, and terms which are specific to its base of expertise; e.g., legal, engineering, medical research, etc. This phenomenon compounds operational problems as complexity grows and each sub-specialty establishes its own sub-culture.

➢ In the United States, our society, unlike many foreign countries, does not have a unified culture. For the most part, cultural traditions, even those associated with the religions of many of our ancestors have faded from generation to generation since our ancestors immigrated to this country. Basic to the thought processes that have evolved as being the norm within our society (our "human nature"), we have a need to belong to groups (tribes/silos) due to our survival instincts. Unknowingly, in our efforts to secure income (work endeavors) most of us act and react within our environment to protect and perpetuate the prosperity of our silo.

As part of our research regarding the application of neuroscience in business, education and psychology, we came upon the book, *The One Thing You Need to Know*[2], where author Marcus Buckingham describes the work of anthropologist Donald Brown in compiling a compendium of 372 universal human traits[3]. From that list, Buckingham trimmed the list to outline five universal fears and identified corresponding needs all people share. While admitting that his list was not exhaustive, he attempted to highlight the primary fears that should command the attention of individuals who are attempting to lead people. These five "universals" of fear and needs (actually thought processes that release survival neurohormones) are[4]:

1. Fear of Death (our own and our family's) – The Need for Security
2. Fear of the Outsider – The Need for Community
3. Fear of the Future – The Need for Clarity
4. Fear of Chaos – The Need for Authority
5. Fear of Insignificance – The Need for Respect

We agree with Buckingham's advice that effective leaders should "…identify which of the five should command your greatest attention as a leader"[5]. However, organizationally speaking, these pairings of fears and needs should be carefully evaluated because they tie directly to the previously mentioned factors that contribute to the formation and continuation of silos (i.e. the formation of neural architecture through neural plasticity that will be addressed later in this document). In fact, close scrutiny provides a management epiphany – operational mechanisms must be created to meet all of the needs of the employees with regard to these "universals." Failure to do so will drive their need to form and maintain operational silos.

While subject to varying interpretations by psychologists, anthropologists and sociologists, Abraham Maslow's Hierarchy of Needs also provides the evidence for people's reactions and actions when faced with challenges (fears). Maslow's Hierarchy of Needs is typically expressed

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[2] Marcus Buckingham, The One Thing You Need to Know, FREE PRESS, New York, NY, 2005
[3] Donald Brown, Human Universals, McGraw-Hill, New York, NY, 1991
[4] Marcus Buckingham, The One Thing You Need to Know, FREE PRESS, New York, NY, 2005, p.137-141
[5] Ibid, p.137

in a five level pyramid, which, as its base, has physiological (neurobiological needs) followed in ascending order by 2. Safety and security, 3. Love - belonging and friendship, 4. Status - self-respect and respect of others, and 5. Actualization/self-actualization (i.e., striving to be the best that we can be as well as making use of our unique abilities).

Regardless of the exact sequence of "drivers" which contribute to the formation of silos or the name of the individual who initially put forth the theory, our fears and our needs are part of our subconscious thought processes and the science of neurobiology dramatically impacts the group dynamics within our work environment.

During The Center's extensive R&D process, it became obvious that organizations must empower their middle managers and key staff members to establish processes to address these needs. To be effective, these processes, in essence, have to create an overarching culture within the organization to neutralize or minimize "fears" by providing solutions to meet the needs of all members of the organization.

Group or team based neural architecture
While the book Primal Leadership (HBS Press 2002) authored by Daniel Goleman, Richard Boyatzis and Annie McKee was not intended to serve as a reference for neurobiological aspects in business applications, it offers a good explanation of the process whereby business professionals are swayed by the moods and comments of others. They referenced the scientific explanation of the concept as being one of an "open-loop" process when they wrote, "Scientists describe the open-loop as 'interpersonal limbic regulation,' whereby one person transmits signals that can alter hormone levels, cardiovascular function, sleep rhythms and even immune function inside the body of another."[6] They then differentiated between open and closed loop systems by offering, "…scientists have begun to call the open-loop nature of the limbic system, our emotional centers. A closed loop system such as the circulatory system is self-regulating; what's happening in the circulatory system of others around us does not impact our own system. An open-loop system depends largely on external sources to manage itself."[7]

Unbeknownst to the authors of the book, they were describing the processes associated with the dynamics of sub-sets of neurobiological activities that occur through group or team thought processes.

Additional information contained in Primal Leadership that provided insight into how vulnerable our minds are to the moods and actions of others included the following: "Researchers have seen again and again how emotions spread irresistibly in this way whenever people are near one another, even when the contact is completely non-verbal. For example, when three strangers sit facing each other in silence for a minute or two, the one who is most emotionally expressive transmits his or her mood to the other two - without speaking a single word.[8] The same effect

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[6] Limbic regulation: Thomas Lewis, Fari Amini, and Richard Lannon, *A General Theory of Love* (New York: Random House, 2000)
[7] Daniel Goleman, Richard Boyatzis, and Annie McKee, Primal Leadership, Harvard Business School Press, Boston, MA, 2002, p 6-7
[8] Expressiveness transmits moods: Howard Friedman and Ronald Riggio, "Effect of Individual Differences in Nonverbal Expressiveness on Transmission of Emotion," *Journal of Nonverbal Behavior* 6 (1981):

holds in the office, boardroom, or shop floor; people in groups at work inevitably 'catch' feelings from one another, sharing everything from jealousy and envy to angst and euphoria. The more cohesive the group, the stronger the sharing of moods, emotional history, and even hot buttons."[9] (Note: For reference purposes, we have footnoted the sources listed by Goleman, Boyatzis and McKee).

What makes the concept of the aforementioned group dynamics particularly noteworthy for corporate America is the critical impact that negativism, including but not limited to the inappropriate use of devil's advocacy as a manifestation of cynicism, can have on our moods. In essence, the open loop process serves as one of the many idiosyncrasies of our mind; i.e. being unconsciously swayed or influenced by the comments or moods of others that release the corresponding negative neurohormones and open the possibility that negative habitual thoughts can become "wired" through neuroplasticity.

Summary

The dynamics behind the formation of silos (cultures) within organizations are a direct byproduct of the aspects of neurobiology associated with neurohormones and neuroplasticity. Unfortunately, current state-of-the-art business processes do not encompass the application of neuroscience. While this document is not intended to provide a comprehensive explanation of the principles of the sub-sets of neurobiology that drive decision making and subconscious thought processes, it will hopefully introduce these concepts as a means of gaining insight into the reasons for change inertia and the lack of organizational cohesion.

It should be noted, in the same manner as other cultures, the extinction of silos is nearly impossible unless the principles associated with remediation of neural architecture are utilized. Failure to use the aforementioned concepts may disrupt existing organizational cultures and further inhibit cohesion and collaboration throughout the organization by further strengthening the disruptive and dysfunctional aspects of silos. It is also essential to understand that competition over resources (survival based), breeds silos and the intensification of such competition strengthens them.

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[9] Groups have moods: Janice R. Kelly and Sigal Barsade, "Moods and Emotions in Small Groups and Work Teams," working paper, Yale School of Management, New Haven, Connecticut, 2001