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Language of Change

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ABSTRACT

Changing organizational culture is a challenging undertaking, especially when it is attempted through a global change in systems and processes, such as Enterprise Resource Planning (ERP) Implementations. During these transformations, organizations desire alignment between people at different levels and across various parts of the organization; and communication is considered a critical factor to developed shared meaning leading towards alignment.

This research redefines alignment as a dynamic push-pull communication model for change in which the traditional top-down "push" communication frames the overall purpose and objectives of a change while the deeper-level "pull" communication helps employees make sense of the change—what the change means to them and their departments. Research was conducted through semi-structured interviews of employees of a global entertainment and media company that is doing an ERP implementation to change the culture of their home-video division from creative high-margin mindset to process efficiency driven organization can reduce its costs to improve its eroding profit margins. Various aspects of communication, such as boundary objects and stories, are analyzed to understand how they lead to alignment and misalignment as the ERP-driven change unfolds.

Keywords

Alignment, change, resistance, communication, boundary objects, stories.

INTRODUCTION

Changing organizational culture is a challenging undertaking, especially when attempted through a global change in systems, processes, and people. One of the primary challenges is how to create and maintain effective alignment through the transformation process across different levels of functional and geographic groups within the organization. Alignment   can take many forms (please refer to figure 1): (a) vertical alignment between what management intends and what employees' desire, (b) horizontal alignment between various business and support groups, such as Information Technology (IT) and Human Resources, and (c) synergies between people, processes, and systems that help a company achieve its shared business objectives. In all cases, alignment is considered necessary for organizational action to take place in ways that make the change successful and sustainable.
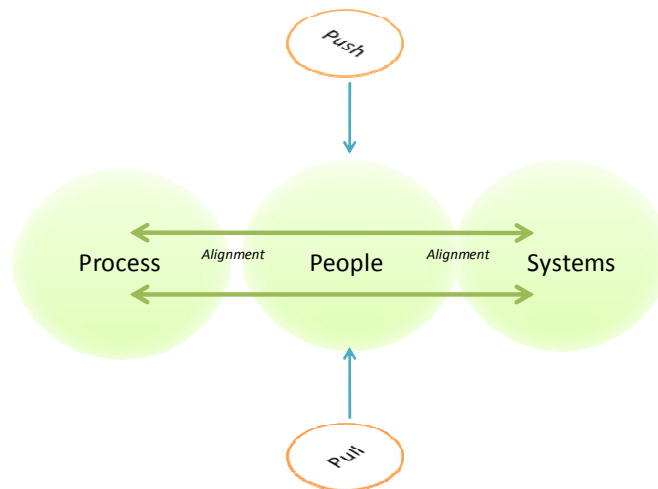

Figure 1. Horizontal and Verical Alignment

Despite the fact that alignment between IT and business relates strongly to business performance, the nature of the barriers to alignment, especially the effect of communication and its components, are not very clear in research and practice. (Sabherwal and Chan, 2001; Chan, et al., 1997). As Y. E. Chan (2002) and Luftman (2004) point out, the challenge of alignment continues to be a key issue facing IS executives in the twenty-first century. Breaking down communication barriers between different groups and silos is a key part of achieving alignment (Reich and Benbasat, March, 2000: 85). As one would expect, lack of alignment has been attributed to lower business value from IT investment (Tallon, Kraemer and Gurbaxani, 2000).

It is puzzling to see alignment occur naturally in some organizations while it requires an extensive amount of energy in other organizations that may still continue to experience high levels of misalignment. The problem of alignment will only get worse in the rapidly changing and connected global business environment. It is apparent, then, that companies need a better way to define what alignment means to them in order to execute their dynamic strategies.

Figure 2 below attempts to capture the dynamics of alignment as a push and pull communication that is underway during the cultural transformation of an organization. Push communication is the formal mechanisms—speeches, presentations, training, e-mails, memos, Web site, and portals—that a company uses to communicate typically through their human resources department and the corporate communications group. Push communication attempts to build shared meaning so that people and processes can get aligned in their understanding that would lead to organized action towards the change.
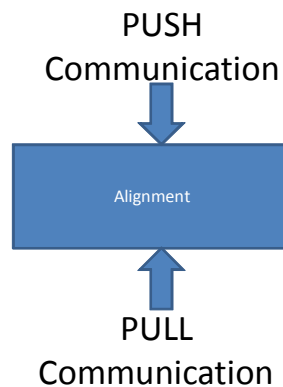

PUSH
Communication

Alignment

PULL
Communication

Figure 2. Push-Pull Dynamics of Alignment

On the other hand, pull is how these mechanisms are internalized and made sense of by people. Pull operates at a deeper level close to motivation and action. Pull draws on objects from other sources, such as outside-industry knowledge and stories from the past that may be part of the history and existing culture of the company. Pull recognizes that employees will have their own way of internalizing and making sense of a situation based on their backgrounds, belief systems, and professional aspirations. The ways in which individuals interpret information, make decisions, and take actions is what gives pull its strength as a lever for alignment. If the pull effect is ignored, it may lead to misalignment, regardless of how much effort is put into the push mechanisms. Chances of such misalignment are even greater when an organization is going through a cultural transformation.

The term "culture" means recognized and preferred ways of thinking, feeling, and acting that can be designated by and acted towards by those who are participants in a given culture. In this context, "culture is a set of objects: ideas, knowledge, beliefs, ways of acting, roles, institutions, norms, activities—all may be designated and acted toward as objects" (Stokes and Hewitt, 1976: 843). Culture is represented through various organizational objects (Strokes and Hewitt, 1976) and, when new objects are introduced as part of the change, the process of sense-making will progress in various individualized ways through the dynamics of push-pull.

One effective push-pull mechanism, both for alignment and misalignment, may be stories that are associated with the old and the new culture. When these stories are wrapped around the boundary objects that are being traded to develop understanding, they may become a strong driver for sense-making, behavior change, and alignment of actions. At the same time, if these stories and boundary objects are pulling against the cultural transformation, then there will be misalignment and resistance to change.

A better understanding of pull mechanisms may reveal the causes of alignment and misalignment during cultural transformation in organizations. In fact, pull may indeed be the massive part of the iceberg below the surface that is much

more forceful than the relatively small push portion that is apparent above the water (as shown in figurer 3 below). For the purposes of this research, alignment will be considered the interaction between push and pull that leads to purposeful organized actions towards the change objectives without the necessity of shared meaning.
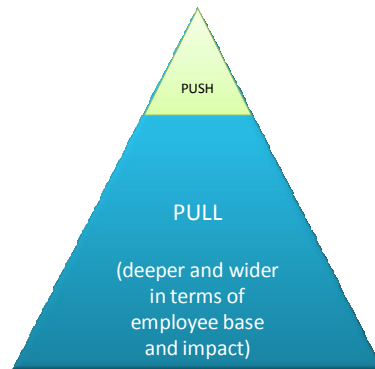

Figure 3. Broader Impact of Pull

RESEARCH QUESTION

My research was motivated by the fact that misalignment is pervasive, even in companies that execute near-perfect communication strategies, where leaders as well as employees are committed to the long-term success of the company, and where all have a deep passion for their profession and industry. There must be another way to explain misalignment in organizations such as these. **This research seeks to discover how communication contributes to alignment or misalignment during cultural change in an organization.**

Thus, we must explore several other questions in order to fully grasp the implications of cultural alignment. What aspects of communication are critical for alignment during an IT-enabled business transformation? How do stories and boundary objects make communication more effective and efficient during the cultural transformation of an organization? What is an effective level of alignment between people, processes, and systems when all three are changing in response to cultural change within an organization?

Communication is usually one of the critical factors that contribute to alignment (Reich and Benbasat, 2000; Broadbent and Weill, 1993: 176; Luftman and Brier, 1999: 118; Tallon, Kraemer and Gurbaxani, 2000: 167). Communication tactics used are group meetings, town-hall meetings, newsletters, electronic portals, executive e-mails, etc. All of these can be categorized as push communication because the messages get pushed to the employees with the objective of creating a shared meaning across all levels in the organization. A typical IT-enabled business transformation is successful when IT and business executives, process managers, and front-line workers across different functional and geographic territories get aligned for the overall transformation.

Since communication is often described as the main enabler of alignment, most companies end up overloading people with information, believing "you can never over-communicate." Research interviews and personal experiences have revealed that most of such one-way communication is largely ignored by the recipients, who are usually buried under the load of their day-to-day work activities.

LITERATURE REVIEW

Alignment has been studied from various perspectives over time, and the resulting, multiple definitions are often not in alignment with each other. This is appropriate since, by definition, alignment is between multiple things or objects and, depending on the context, may be between groups of people, sets of activities, various ideas, intentions and commitment, or several actions. We believe that these are all appropriate representations of alignment, but there is a common theme across all these definitions that can be captured through our push-pull dynamics of alignment.

For instance, Stokes and Hewitt (1976) have explored the concept of alignment in the context of cultural change as follows:

> Problematic situations often involve misalignment between the actual or intended acts of participants and the cultural ideas, expectations, beliefs, knowledge, and the like. "Alignment" in this sense has to do with

perceived discrepancies between what is actually taking place in a given situation and what is thought to be typical, normatively expected, probable, desirable or, in other respects, more in accord with what is culturally normal. (1976: 843)

The challenge of alignment becomes complex during organizational culture transformation when the new culture is creating new meanings and the existing culture's old meanings are fading away. This makes it difficult for people to draw on the past for meaning and guidance for their actions because they are being conditioned to think and feel the culture of the future, which may still be a distant reality.

Alignment plays an important role in maintaining a relationship between culture and action in the face of newly desired actions that depart from the previous cultural expectations or definitions of what is appropriate for each situation (Stokes and Hewitt, 1976: 838).

For the purpose of organizational change, culture can be conceptualized as a set of cognitive constraints (objects) to which people must relate as they form lines of conduct. Just as the person takes note of expectations of others and his own desires, so too does one consider the elements of culture that are applicable to his intended conduct (Stokes and Hewitt 1976: 847).

> Aligning actions then, on one hand, sustain the flow of joint actions by bringing individual acts in line with one another in problematic circumstances, and they sustain a relationship between ongoing conduct and culture in the face of recognized failure of conduct to live up to cultural definitions and requirements (Stokes and Hewitt, 1976: 844).

Objects take on meaning depending on how people are prepared to act towards them, but people also act towards objects on the basis of their meanings. A great many of the objects that constitute the human world have a pre-existing meaning and act in routine, familiar, and unquestioned ways. This makes the relationship between objects, acts, and meanings complex and dynamic, often leading to unintended consequences, especially during a change process. In some instances, "objects that are already present strongly influence conduct and its meaning; in others, intended conduct creates new objects or assigns new meanings to familiar ones" (Stokes and Hewitt, 1976: 841).

Furthermore, social interaction, or culture, is conceived as a process in which people orient their conduct towards one another and towards a common set of objects. In this mutual orientation of conduct, an effort is made by participants to align their individual acts, one to another, in the creation of joint or social acts. Typically, misalignment surfaces to threaten joint action; and the responses are usually to restore alignment among the acts involved, so that interaction may proceed towards a social object (Stokes and Hewitt, 1976: 842-843).

This work analyzes alignment in the context of business strategy; therefore, alignment will mean applying IT in business in an appropriate and timely way, in harmony with business strategies, goals, and needs. It will be synonymous with such terms as integration, cohesion, fusion, fit, match, and link (Luftman, June, 2004: 2). As Tallon, Kraemer and Gurbaxani (2000) point out,

> Persistent interest in strategic alignment is especially warranted as researchers argue that firms' inability to realize sufficient value from their IT investment is due in part to an absence of strategic alignment. If payoffs from IT investment are a function of strategic alignment, then any attempt to increase IT business value must consider the extent to which IT is aligned with the business strategy.

Due to the shifting nature of alignment, there are many theories about its conceptualization. Short-term alignment is defined as the state in which business and IT executives understand and are committed to each other's short-term (one- to two-year) plans and objectives. Long-term alignment is defined as the state in which business and IT executives share a common vision of the way(s) in which IT will contribute to the success of the business unit (Reich and Benbasat, 2000: 87). Alignment of business and information strategies refers to the extent to which business strategies are enabled, supported, and stimulated by information strategies.

Purposeful communication of the strategic directions of the firm throughout functional areas is considered an important factor to enable such alignment (Broadbent and Weill, 1993: 175). Broadbent and Weill (1993) further point out that alignment of business and information strategies requires planned and purposeful management processes since nonalignment is the natural state of organization and strategic alignment is temporal in nature. Their alignment model (Appendix A) is consistent with that of Henderson and Venkatraman (1999).

Shared domain knowledge between business and IT executives is a critical factor contributing to alignment (Reich and Benbasat, 2000: 85). This is especially true for short-term alignment, which they could trace to organizational stories and minutes from meetings. Long-term alignment, linked to IT vision, is more challenging since it may only exist through

sustained communication between a group of IT and business executives.

In fact, Reich and Benbasat (2000) point out, that the most important predictor of alignment is a high level of communication between IT and business executives. To develop this communication, IT people may need to acquire shared domain knowledge, be situated in the business units, and take part in other activities designed to change, first, the behaviors and, second, the attitudes of IT professionals towards the needs and the priorities of the business so they can earn the right to play a meaningful role in management forums (Reich and Benbasat, 2000: 107). Refer Appendix B for their conceptual model. In other words, IT professional may need to rely more on pull rather than blind adherence to push from the business executives – for example, negotiate requirements rather than "gather" requirements.

Majchrzak, Rice, and King (2000: 595), on the other hand, define alignment as the ability of the teams to resolve natural misalignment that is bound to occur in complex and dynamic implementations. This dynamic can be captured as push-pull alignment that starts off with a wider gap between the two or more teams and eventually iterates into an understanding between the teams that help them achieve a common objective in spite of the differences that may exist in perspectives.

> An "ideal" technology implementation should not be defined as one in which misalignments do not occur … instead an ideal technology implementation should be defined based on the ability of the team to resolve its own misalignments and the range of structures available to appropriate (Majchrzak, Rice and King, 2000: 596; refer to Appendix C for their conceptualization of alignment)

Successful IT-enabled change eventually requires employees to accept and adopt the new solution before the organization can realize any benefits from its investments. Gibson (2003: 108) argues that, besides leadership and project urgency, it is also critical that employees' perspectives are positive so that the likelihood of success for the business change can be increased. These three factors are conceptualized in Appendix D. We believe that employee perspective can be enhanced by leadership creating better conditions effective pull to occur.

Employee perspective is critical to bring about business change; and this perspective-making and perspective-taking process involves the Conduit Model and the Language Game Model of communication (Boland and Tenkasi, 1995: 361). As can be seen from the strengths and weaknesses of the two communication models (Appendix E), the Conduit Model associates more with the push model while the Language Game Model is more in line with the pull model. Considering that the push and pull models have strengths and weaknesses, it seems logical to explore how communication can be enhanced by exploiting the strengths of the two models while minimizing their weaknesses to reach an effective level of alignment.

Frame alignment can be an important element in the push-pull model, especially if the push communication is used to frame the boundaries within which effective pull communication can be nurtured "since it enables individuals to locate, perceive, identify, and 'label' occurrences within their life space and the world at large. By rendering events or occurrences meaningful, frames function to organize experience and guide action, whether individual or collective" (Snow, et al., 1986: 464). Framing the context of change may indeed be the most effective use of push communication.

In order to fully understand communication through the concepts of alignment, we must understand the role that boundary objects play. Boundary objects are an entity shared by several different communities but viewed or used differently by each of them. Boundary objects are not necessarily physical artifacts and can be a set of information, conversations, interests, rules, plans, systems and according to Star (1989) they are effective within organizations because they necessarily contain sufficient detail to be understandable by both parties, however, neither party is required to understand the full context of use by the other - boundary objects serve as point of mediation and negotiation around intent. Star (1989, 1993) discovered, that members of different communities of scientists cannot simply adopt the meanings of another community; but rather, they find a way to bring their distinct perspectives into the exchange of ideas around the boundary objects. Such boundary objects "do not convey unambiguous meaning, but have instead a kind of symbolic adequacy that enables conversation without enforcing commonly shared meanings" (Boland and Tenkasi, 1995: 362). This process has been further elaborated by Hatch (1993) in the cultural dynamic model (Appendix F) through which symbolization explains the surplus meaning between the literal meaning (push) and the full meaning (pull). The disconnect or gap between the two can be considered a form of misalignment.

Generally, boundary objects are considered to play a positive role because they allow communities to bridge the gaps and connect with each other. Boundary objects operationalize alignment by helping people make sense in their own way so they can decide what actions to take. Stories, for example, are an effective boundary object since they give people the flexibility to interpret in ways that connect with their emotions and yet help people to align their actions towards the organization's goals and objectives that may be embedded in the story.

In some instances, however, boundary objects may create negative pull, in which case they will not be aligned with the push

communication that the organization uses to support its business objectives. As Boland and Tenkasi (1995) point out, "Boundary objects can, of course, be a center of intense conflict as easily as one of cooperative effort. Creating and reshaping boundary objects is an exercise of power that can be collaborative or unilateral" (Boland and Tenkasi, 1995: 362). This process, when considered as a series of push-pull cycles that start with conflict and slowly move towards understanding each other rather than forcing a shared meaning.

Ideally Boundary objects can lead to effective pull when operating within a trading zone (Galison, 1997) which allows these boundary objects to share a common frame or context for the change. Within the organizational context, trading zones can be considered different business groups, IT groups, and geographically distributed business units which have to work together to achieve some joint action. Across these zones, communication is often one of the biggest challenges that organizations face. In this context, alignment can be correlated with the effectiveness of the boundary objects in the trading zone. Effective push communication can help create a trading zone through which different groups can pull local meaning and collaborate so that collective outcomes become possible.

Again, stories may be the most effective boundary objects within and across the trading zones because they allow people to easily draw multiple meanings, based on their frame and perspective. People will then be able to recall the stories and share them with other people in the department or territory in ways that would make most sense in the given cultural context, without losing the key ideas behind the stories (Brown, et al., 2005). Thus, individuals are able to communicate while also maintaining the personal meanings that they have developed.

Communication has been established as a link between meaning and action. As we have seen, however, this meaning does not need to be shared for organized action to occur. Equifinal meanings are interpretations that are dissimilar but have similar behavioral implications. These occur when organized action follows the expression of such dissimilar interpretations. (Donnellon, Gray and Bougon, 1986: 43-44). By looking at push as a framing device for point towards organized action and pull as a way for people to find local meaning and purpose, we can better appreciate the dynamics of equifinal and it role in alignment of action.

People interpret their own beliefs and actions as well as align their actions with those of others through several communication mechanisms. They tend to select communication that allows this alignment of personalized belief and organized action to occur (Stokes and Hewitt, 1976). Most of these mechanisms can be achieved through the pull communication process.

Just as pull allows for individual interpretation, push communication focuses on developing minimum shared understanding to frame the overall context and purpose. Even though sharing of beliefs is not essential for interlocking behavior, a minimal degree of shared understanding about the nature of the exchange, and the rules governing it, is needed for efficient communication (Weick, 1979: 98) so that corresponding pull across the various groups is aligned towards a shared outcome.

In fact, if shared meaning does develop, it may occur at a later date through organized action as people reflect as a group and make sense of what they did together (Weick, 1979: 91). These newly created, shared meanings can then be pushed back in the form of additional stories that serve to support future, individual sensemaking as the cultural transformation proceeds. Since groups in organizations take organized action, "It follows that there must be some forms of communication by which groups voluntarily forge agreements to coordinate or interlock their behavior, despite apparent differences in their interpretations of those behaviors" (Donnellon, Gray and Bougon, 1986: 44). Carlile (2004: 563) explains this iterative dynamics through the four-characteristic framework (Appendix G), which largely relies on pull capabilities as we have conceptualized. Meanings and actions are related in a complex iterative process in which meanings are continually constructed and destroyed as more sensemaking communication occurs and new actions are taken (Donnellon, Gray and Bougon, 1986: 53).

METHODOLOGY

The qualitative methodology used in this research is primarily based on the Grounded Theory developed by Glaser and Strauss (2006) and further refined through specific techniques by Strauss and Corbin (1998). The interview techniques leverage ideas presented by Kvale, with particular focus on hermeneutical interpretations:

> The research interview is a conversation about the human life world, with the oral discourse transformed into texts to be interpreted. Hermeneutics is then doubly relevant to interview research, first by elucidating the dialogue producing the interview texts to be interpreted, and then by clarifying the subsequent process of interpreting the interview texts produced, which may again be conceived as a dialogue or a conversation with the text. (Kvale, 1996: 46)

Interview notes and memos of writing practices from "Writing Ethnographic Fieldnotes" (Emerson, Fretz and Shaw, 1995)

were used during the research process, especially to capture informal encounters or follow-ups that were not recorded by the researchers. By listening repeatedly to interview audio and transcripts, the researchers attempted to understand the phenomenon as a whole and in its parts as characterized by a hermeneutical circle:

> The understanding of a text takes place through a process in which the meaning of the separate parts is determined by the global meaning of the text, as it is anticipated. The closer determination of the meaning of the separate parts may eventually change the originally anticipated meaning of the totality, which again influences the meaning of the separate parts, and so on. In principal, such a hermeneutical explication of the text is an infinite process, while it ends in practice when one has reached a sensible meaning, free of inner contradictions. (Kvale, 1996: 47)

Thus the Grounded Theory, along with utilization of the hermeneutic circle, allowed rich themes to emerge from the data. These themes further informed the research question, and newer understanding allowed me to circle back and analyze the data with an even finer lens. This process continued until it was clear that the data and the themes had reached a sensible understanding in relation to the broader research question.

SAMPLE

The company setting for this research is a large entertainment company, referred to as Giga to protect its identity. Giga is going through cultural transformation to become more of a fast-moving consumer goods (FMCG) business. The transformation is being led by the senior management team and involves changing global processes, systems, and people's roles and responsibilities. Because Giga is maneuvering through such an extensive cultural change that impacts many different levels of the hierarchy, it provides an ideal environment to study the concept of alignment.

Top management at Giga is attempting to change the culture of the organization through a system implementation. As the business matures and gets commoditized, it is transforming from a movie distribution industry to a FMCG industry. The characteristics of FMCG are low-margin and high volume that require detailed cost visibility at every stage of the product lifecycle and supply chain to ensure profitability at a granular level. Management is attempting to change the culture through a combination of industry best practices for FMCG and system best practices of SAP, a package which has been widely adopted by most of the Fortune 1000 companies to integrate their global business processes for increased efficiency and detailed transactional visibility. In short, the dimensions of the cultural change are (1) process best practices and (2) system best practices.

The company has also identified that people have to adapt to the new organizational culture through various mechanisms such as the following:

- Training in the new process and system
- Competency and skill development in their new roles
- Communication at the organizational, departmental, and individual level to help people understand and play their role in the new, global business processes.

Giga has a very strong culture due to several factors: its history as a company, its global brand associated with movies, and the general image of Hollywood. Thus, changing the culture has an added layer of friction due to the depth of Giga's existing culture.

The change is being driven by the profit-margin squeeze and the need to survive as a business. Vanguard is the change vehicle, and their theme is to move Giga to a process-based organization with the supply chain being the key process to drive operational efficiency and the PLM process ensuring control of the master budget process for the new product releases.

Potential participants were identified through discussions with senior management who are responsible for the area being studied. Based on the research topic, it was mutually agreed that participants from three levels of the organization—senior executives, managers, and front-line workers—would be interviewed. To get diverse input, participants from not only the corporate office but from one or more international subsidiaries were interviewed as well. Only participants who voluntarily accepted the invitation were interviewed. The interviews were conducted either face-to-face or over the phone and lasted approximately one hour each.

A total of fourteen participants were interviewed. Four were executives, five were managers, and five were front-line workers. Eight were from the United States, three from Canada, and three from the United Kingdom. Four were women, and ten were men, with ages ranging from thirty to fifty.

Overall, this sample gives a holistic picture from multiple perspectives of the transformation that the company is going

through. Coordination of the interview scheduling was done by the group responsible for change management and project communication at Giga; they made a request to various senior executives and managers for research participation. Some of the executives interviewed recommended additional names of department members for interviews.

This approach followed the purposeful sampling technique called theoretical sampling, as defined in the Grounded Theory (Glaser and Strauss, 2006: 45), which has no predetermined guidelines for selecting sample type or size prior to the commencement of the study. According to Grounded Theory, data collection and analysis involves principles of appropriateness and adequacy. Appropriateness was addressed by making sure that the participants were actively involved and knowledgeable about the transformation. To address adequacy, the interview process continued with new participants until the data provided a thick description of the study phenomenon and no new themes or patterns emerged (Glaser and Strauss, 2006: 61).

This was not a random sample. Names were selected by heads of communication (supervisors), but participation was optional. Executives who were interviewed suggested additional names for interview. In the figure below, the functional roles included are a cross section of the participants who were interviewed. The diagram also shows the relationship between the roles and the important transformational elements associated with the roles.
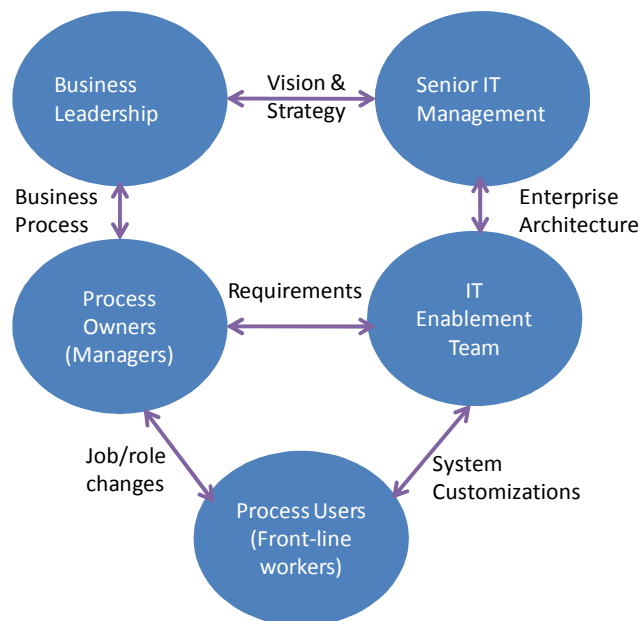

Figure 4. Role Interfaces between Interviewee Groups

The arrows among the five groups give a good perspective on the challenges of communication and alignment during a large organizational change. As a result, the sample included several people from each of these groups to provide a perspective from all the critical angles.

DATA COLLECTION

Participants were identified using existing contacts of the researchers. Participants were then recruited by first creating a sample pool based on the discussion outlined in the samples section and then, via e-mail, requesting if they would volunteer for an interview.

The interviews were semi-structured and lasted approximately one hour. Each interview was recorded and then professionally transcribed. Additionally, the highlights and key results from the interviews were also captured in paper notes that were later translated into an electronic memo for future analysis.

Of the fourteen interviews, ten were done face to face in an office setting, while four were done via a conference call during the office hours of the interviewee. Each interview was based on a set of questions that covered a broad range of subjects to settle the interviewee into the topic and help them recall rich moments from their past experience that could provide deeper

insights. I went down the list of questions, using a conversational approach to gather information so that the interviewees could choose what they wanted to tell me about their perceptions and feelings about the topic. My prompts were simply to guide us through the discovery process. As the discussion progressed, I tailored subsequent questions to what they had already said and the related topics which they seemed passionate about, which provided important insights about how they made sense of the research topic.

Despite their obvious political sensitivity and hesitation, which is common in large organizations, the participants were very forthcoming in expressing their views and sharing personal experiences and insights that could potentially help the organization. This theme ran throughout the interviews because most of the participants seemed to have a bond to the company as well as the industry and had a sense of belonging to the profession.

Interviews were scheduled through appointments during office hours. About half the interviews were done at the corporate office in Burbank and the remaining were done over the phone with people in the company's Canadian and U.K. territories. Interviews were done over a period of about ten weeks. Each interview was recorded using a digital recorder, and the file was later sent to a professional service for transcription. Each interview led to about thirty pages of transcription text. Both the voice file and the transcribed text constituted the data that were repeatedly analyzed for coding.

DATA ANALYSIS

Data were collected and analyzed using an iterative approach, going back and forth between the interview text and the conceptual model. Interview transcripts and memos were reviewed in detail to find codable moments that were categorized based on a well-defined process suggested by Boyatzis (1998). They include the following five steps:

1. A label

2. The characteristic of the theme

3. A coding rule for knowing when to code for the theme

4. Qualifications or exclusions for that coding

5. Examples

Situation maps were also constructed (Clarke, 2005: 87) to understand these questions: "Who and what are in the broader situation? Who and what matters in the situation? What elements make a difference in this situation?" Overall, situation maps are "strategies for articulating the elements in the situation and examining relations among them." (Clarke, 2005: 86).

The coding and situational maps were managed through the NVIVO software that is specifically designed for social sciences research and provides the flexibility to iteratively build codes and situation maps in the spirit and philosophy of hermeneutic circles. These coding and situation maps further informed the analysis and led to additional memos to capture increasing levels of understanding of the overall phenomenon as well as the various elements and details that are part of it. This process of reflection and discussion among the researchers was a key to the theory-building process. This process is captured well by Klein and Myers (1999):

> IS research can be classified as interpretive if it is assumed that our knowledge of reality is gained only through social constructions such as language, consciousness, shared meanings, documents, tools and other artifacts…; it attempts to understand phenomena through the meanings that people assign to them. Interpretive methods of research in IS are aimed at producing an understanding of the context of an information system, and the process whereby the information system influences and is influenced by the context.

An open-coding technique was employed using the Grounded Theory method. Overall, about 192 codes emerged from the interpretive process. These codes were then categorized into nine higher-level codes. This process involved coding the text in the transcripts using the NVIVO tool as well as repeatedly listening to the interview voice-recording and making notes of codable moments. It was the interplay between voice and text that helped the themes to emerge. The following are the high-level categories that captured most of the ideas from the interviews:

- Boundary Objects/Labels

- Change Management

- Communications

- Culture

- Requirements
- Sensemaking
- Stories
- Vanguard
- Willingness

Based on these high-level categories and the key-unit items within those categories, a list of keywords was constructed that was used to do a targeted search across all the interview text to determine the context and frequency of the keyword that has emerged through the grounded method.

Following are the words that were further analyzed through text search across all the interviewees, sorted by number of references. Words with over one hundred references are Change, Vanguard, Communication, Process, Cost, Supply Chain, and Creative.

Name	Sources	References
Change	18	340
Vanguard	18	280
Communication	18	252
Process	18	211
Cost	18	180
Supply Chain	16	138
Creative	18	112
SAP	13	97
Date	12	86
Alignment	16	63
Global	13	57
Retail	12	56
PLM	11	53
Requirement	14	52
Culture	9	42
Map	11	41
Accountability	12	39
Transformation	13	34
Story	12	34
Blueprint	9	26
Content	5	23
Go Live	9	22
Consumer	8	22
Flexibility	10	15
ERP	7	14
Push	8	10
Mandate	3	5
Scorecard	1	3

Figure 5. Sorted Frequency List of Keywords Used During Interviews

FINDINGS

While studying Giga's process of alignment as it underwent a vast cultural change, three key findings occurred. First, despite Giga's continued attempts to incorporate push strategies, I found that aggressive push strategies led to information overload and alienation rather than alignment. Secondly, I discovered that stories are very powerful boundary objects that can lead to either alignment towards a collective outcome or further misalignment if stories are negatively framed and trigger pull effect that moves groups away from purpose and objectives of the change. Thirdly, from an understanding of the first two findings,

it became clear that during organizational change, deeper pull communication is more important and effective than shallow push communication. In order to understand and elucidate the key findings above, it is important that the reader have a clear understanding of the extent of the culture change that Giga is experiencing. Giga's culture is very family oriented; people want to come to work to stay connected and associate with the industry they are deeply passionate about. Generally, the industry is maturing and needs to innovate and become more efficient. Many employees at Giga have been in the same or related industry all their lives, so they have a good sense of what is happening and what others are doing to deal with the changing business environment. In fact many interviewees even had their family members associated with entertainment field, they themselves studied music, film and entertainment while in college, and all through teen years, had worked in various entertainment related odd job so they could absorb the industry as much as possible – this deeper sense of the industry had a critical impact on the communication break-down as the messages of process efficiency where being pushed on an audience that thrives on creative flexibility.

Culture consists of legends, stories, myths, and ceremonies and is not easy to change, especially when moving from the metaphor of theatre (performance or roles, dramas, scripts) to a machine (well-oiled efficient machinery) (Smircich, 1983). Cultural change at Giga is happening in three ways:

- moving from movie distribution to Fast Moving Consumer Good (FMCG)
- moving from local processes to global processes
- moving from disparate local systems to a single global system

Thus, the cultural change can be summarized as change in the people, processes, and systems of the organization.

At this time, the identity of the company is that of creative-entertainment-content distribution rather than a well-oiled, efficient machine. The Vanguard project is attempting to move people from a creative mindset to a fast-moving consumer goods mindset. The whole process does not seem to hit the gut instinct of the people who will be impacted by the change. Even though there is effective push communication, there is negative pull being generated due to the unacknowledged failure stories from the past. With this background, we can see the challenges that the executives are encountering when they try to instill new values in the various levels and territories of their business.

To share the specific quotes from the interview, I will use the following codes to demonstrate the perspectives from different groups.

- BL: Business Leadership
- ITL: Senior IT Management
- BM: Business Managers (Sub-Process Owners)
- ITM: IT Project Team
- UR: Users (Front-line Workers)

Despite Giga's continued attempts to use various techniques within the push communication model to bring about cultural change, I discovered that aggressive push mechanisms often left employees confused. It became increasingly clear during the interviews that the corporate team felt push mechanisms were the most effective or sometimes the only method through which the implementation of Vanguard could occur. Some of the most common methods of push used were conference calls, departmental meetings, executive town-hall meetings, the online portal, e-mails, newsletters, and training briefings.

The following quotes highlight the corporate team's feelings about the methods of push they use:

> I know that they have an e-room which is meant to be the source of communication, but I don't think anyone uses it, so all this great information is published… I see that the average person within the department does not utilize this as a tool. (BM)

> We have multiple forms of communication. And that seems to be the only thing that works. Because people are busy doing lots of other things. And you have to hit them over and over and over again in lots of different ways for them to gain understanding.... (BL)

In this last quote, it is especially important to note this business leader's insistence that management must repeatedly drive the information into the employees' minds. Yet throughout my interviews, there was an awareness that this method was not effective in implementing cultural change.

Although management continued to use these aggressive push methods, multiple managers acknowledged that these techniques were ineffective.

> And so I think, a lot of times, people go to these workshops and they go to these presentations; but then they go back and they have their day-to-day job to do and I don't know how much time they have to chat, to think about, and to assess what they've been told. Because, once again, if you're not going back and putting things to practical application, they get filed away in your brain to another area; and you go back to doing your day-to-day job, which currently does not reflect the Vanguard initiative whatsoever. (BM)

> And quite frankly, this is the response I hear from a lot of employees within the company: there just is not enough hours in the day, a lot of the time, for them to do their own job…The time just is not there unless they do it in their own time, and that's probably asking too much. (BM)

As these business managers explain, information overload in an environment where people are time-starved to begin with will explain why push communication alone will not be successful. Thus, despite the feelings that the employees must be aggressively inundated with all of the new material about Vanguard, the reality is that many employees are not absorbing the information to the degree necessary for alignment.

After talking to employees, it was apparent that many of the aggressive push techniques did little to clear up confusion about Vanguard or increase alignment with the overall cultural change. The following quotes sum up the opinions that many of the employees expressed:

> But they are constantly giving us the newsletters and, you know, this is what's going on with Vanguard. It's just not implemented in our day-to-day business at this point, so it really isn't affecting us. You know, we are constantly between the customers and orders and new releases, and it's kinda hard to let new things in. It's pretty busy. *(Laughter)* So the Vanguard is – I'm not as – I wouldn't say I'm as up-to-date as I need to be. (UR)

> We have periodic meetings with the Vanguard implementation staff, and they'll call us in for an all-hands meeting and they'll give us the latest updates and what to expect and things like that. But as far as actual hands-on, we haven't seen very much of it yet, other than just the information that's being sent to us via the newsletter or the meetings and things. (BM)

> I haven't really submerged myself into the business yet because it's so new… they've given us some bullet points on it and they've given us letters and they're updating us; but on my day-to-day basis, I'm not going in there and reading what the new advancement [is]... But the overall picture of Vanguard I'm not too familiar [with]. (UR)

Thus, it became clear that aggressive push strategies were often used by those trying to bring about cultural change even though these executives were aware that these methods were ineffective. In their view, more aggressive push communication would generate deeper change and a new shared meaning. In most cases, this strategy led to information overload, leaving staff overwhelmed and alienated—anything but aligned.

In the case of Giga, however, I found that stories (as boundary objects) have the potential to be very effective in creating alignment. I also discovered that stories can be purposefully created or may already exist as part of the organizational history and can contribute to alignment or misalignment depending on how they get pulled by individuals in context of the push framing. Throughout my research, there were extensive examples where storytelling occurred and illustrated the ways in which these stories contribute to or detract from alignment.

Giga's management had stories of how they came to personal alignment with the cultural shift, but they were unable to convey this personal understanding to other levels of the company.

> In other words, it all goes back to survival of the business [that] requires us to introduce this new functionality. That is a priority… So, you know, you've got this overarching business driver that you build into the story. That, to me, is how we've kept this ship alive. (ITL)

> Vanguard is our way of improving the cost effectiveness and the reliability and predictability of our supply chain. That's one aspect of it. The other aspect is, through the implementation of SAP, we have a far greater understanding of the profitability of our business at a granular level. (ITL)

The same executive mentioned that, after all the push communication and storytelling, people have to have faith and belief in the change strategy, which itself (belief and faith) is an aspect of storytelling:

> But then it becomes kind of a faith thing. You know, there are a couple, I think, who understand where we're going. Certainly at a high level. The rest of them—I think it's faith. I think it's a belief that if the systems are twenty years old and other consumer goods companies have done this, then, yeah, you're probably right...So how do you tell the story below that? (ITL)

Even though this executive has created a story that those in upper management can grasp, he expressed confusion about how to bring the story down to the other levels. The power of storytelling was captured, however, by the executive who has responsibility for informing the executive management team to make the decision to invest millions into the IT-driven business transformation called Vanguard. He states:

> You have to win the executives first. But to do so, you need to connect them to the part of the business that is feeling the pain. And generally, at their level, they're not seeing it...So you've got to build a story, right? A compelling one. That shows them the promise of what can be. And then you need, I mean, you've got to communicate to every level at different times… keeping the story consistent. (ITL)

There were instances in which the idea of storytelling was understood, but when it came down to the actual application, push mechanisms were still being used to convey meaning. The following quotes illustrate the desire upper level management had to use analogy (story) to create an understanding, but then push techniques (in this case, email) were utilized, resulting in employee misalignment with the purpose and objective of change. The first quote comes from management and the second comes from an employee:

> ...people in supply chain will become, or are becoming familiar, not only with what supply chain is but what it means when we talk about the components of supply chain. What's a chain, right? A chain is a bunch of links together; and there are pieces of the chain in the creative process, in pre-production, and then everybody knows what that means. And then, in order, management; and everyone knows what that means. (BL)

> I got an e-mail yesterday from one person, saying, "I'm going to be your contact now for supply chain, you know, Europe HD," and I wrote back, and I said, "Well, what does that mean, supply chain?" and she said, "Oh, well, let me copy blah, blah, blah," and I still haven't heard back, so I still don't know the supply chain. (BM)

We see, then, that not only must stories exist, but they must be effectively used to create alignment. When the pull mechanism was used, people created meaning for themselves—stories—which led to individual alignment, as exemplified by the following quote:

> PLM, to me, means exactly what it sounds like—Product Lifecycle System; it's just the lifecycle of that product from beginning to end. I will know, from marketing's end, the very beginning of it all the way to operations, the very end of it, and it gets on the street. I think what they're trying to do is just unify everyone, unify the entire company into one place. (BM)

The following stories were created by the users themselves as they interpreted the actions of their managers. In the first quote, meaning has been found in the commitment and investment of management into the change; and in the second quote, meaning comes from the company's global purpose that would lead to organizational benefits:

> I think if they're putting this much time and money into it, they definitely believe in this business…they know that there's stability in there, so knowing that they're mainstreaming this to work for everybody, that this is stability, that this job has some stability to it…which creates a better sense of security. (UR)

> …you just picture different countries coming together; and then, hopefully, it creates a harmony, which would be a successful system. (UR)

It seems, then, that some employees were pulling a meaning out of the cultural change that allowed for alignment. Unfortunately, Giga failed to address negative stories and, in one major situation, even used new terminology to gloss over some of these negative stories. In such cases, storytelling worked against alignment in a very powerful way.

The following quote describes the origin of the name Vanguard. Originally named SAP, it was renamed Vanguard to avoid negative associations with the implementation of the system. Yet, changing the name did nothing towards solving the problem of the negative stories circulating about SAP (Vanguard).

> I think one of the things that is a potential hot button, and I'm not sure what we can do to diminish it, there are a lot of companies that have implemented…You know, we don't call it SAP; we call it Vanguard. And I understand why we don't call it SAP; but you will find that, within this company, most people either know someone or have been in contact with someone who's had an experience with a SAP implementation—and usually it's not been a good story. (BM)

Many quotes described negative stories that are floating around in Giga's community, and little effort is being made to stop them. Some of the themes include job loss, Vanguard's negative history, and disappointment that the main corporation is using its territories as experiments. The following quotes are just a small sample of these concerns:

> Our company has a very, very bad history of rolling out systems which don't do what they say they're going to do, isn't going to achieve what they say [it's] going to do… So territories are so used to a lot of bad systems that they don't think this one's going to be any different.   (ITM)

> We hear over and over about how last year there was so much money, so many millions of dollars unaccounted for, because SAP just—or, you know, everyone did things so differently. Everything just wasn't accounted for, so they talk a lot about that and SAP. (BM)

> I mean, the project is perceived as a U.S. project from up here. I must have been out when they said that Canada has been picked because they're a guinea pig for the U.S. Yeah, it's the usual thing: big brother telling us what to do. (BM)

> The advancement of the technology is a little scary because I feel like there's not as much security in our jobs, because everything's so much more downloadable that we're not gonna be as necessary. (UR)

The Vanguard team is aware of the past negative stories, but may not be fully aware of the power of these stories. Thus, these stories continue to circulate, grow, and shape the experiences of many of the employees that are resisting cultural change. As long as these stories go unaddressed, alignment will remain elusive.

One business manager in the international division pointed out his challenge of containing the damage from negative stories, recalling a story that happened during a routine customer visit with some of his key employees:

> The SAP implementation has a—whether it's deserving or it's not—it has a bit of a rough reputation. When I say that, I can put that into perspective by saying, I was sitting with Wal-Mart [senior executives]probably eight to ten months ago and I mentioned at that time, "We're going to be moving towards an implementation of SAP." One of the key executives said "Oh, you're going to be sorry. You're not going to ship product for six months."

> Of course, I'm sitting there, and I'm gonna do everything I can possibly do to dispel that and certainly to try and take the edge off of that for the rest of my team that were sitting there listening to that. But there is certainly a bit of a doom and gloom cloud that hangs around SAP implementation that I think a lot of people internally have heard, whether it's deserving or it's not; but people are expecting the worst. (BM)

The history of IT implementations from the corporate office has not been very good, and people recall multiple failures of past implementations that were either not completed, did not meet the requirements, or failed to deliver any value to the business.

The following are a few stories of past IT major-system failures of a that corporate tried to implement, but they did not go as intended, leaving a bad taste with the international subsidiaries:

> Oh, but we've got a classic example on the VMI side. We spent nearly a million dollars last year developing a new solution for figuring out how to split how much stock to send to each store. And we have a real issue in the U.S. with trying to get a proper implementation. Now, those guys were directly involved in the scoping of the project, in the design of the project, in the analysis of the project. But when it came to delivery, there's been all sorts of reasons why that application can't be used. And none of those things were foreseen because we didn't do any proper organizational analysis. We didn't properly explain the intentions of the project. (ITM)

One business manager recalled how the past failures have made their local senior management wary of any new implementation that will take time away from running the day-to-day business at the subsidiaries and will most likely end up with a similar fate:

> We've had a number or different systems "going live" in different parts of the world where proper impact assessments haven't taken place. And certainly from a senior level, there's a relatively clear amount of cynicism, particularly in the territory P&L owners that we are able to do these implementations effectively, and actually deliver the added value that they're supposed to. (BM)

A good example of how push communication has little chance when pull is not present was given by a business manager in an international subsidiary who noted how independent thinking employees are when deciding where to invest their time and effort. This highlights the illusion which the corporate may have over the real control and influence they may have in mandating a change through a push strategy:

> Our company has a very, very bad history of rolling out systems which don't do what they say they're going to do, isn't going to achieve what they say they're going to do…what we then do is—because we've never had proper systems before, we don't have a system which is designed to do, say, manage intellectual property rights—we start using it to manage release dates. So territories are so used to a lot of bad systems that they don't think this one's going to be any different. (ITM)

> I know these people really well. They're not obedient…They are the best people in their industry in their country, and if they think something isn't right for their business, they won't adopt it. They'll push back and push back and push back. And it's always going to be difficult to get them to start doing something which they see to be just another system. (BM)

The Vanguard team is aware of the past negative stories, but they may not be fully aware of the power of these stories. As one manager who is part of Vanguard recalled,

> …unfortunately, I think the bar was set…I think it was 2004 when the financial area of the business— Warner Home Video—brought in SAP. I don't think it was Warner Home Video. I think it was Warner Bros. corporate. So, the entertainment side across the street. And subsequent WHV had to implement SAP financials. It was not a well-run project. Training was not executed very well. There were problems with "go live." There was finger pointing afterwards. There wasn't a collaborative between the technical and the functional and the ownership. I mean all this is probably 20/20 hindsight, but it kind of left a bad taste in everybody's mouth… on the positive side…, the Vanguard team says, "We're not gonna do it that way. We're gonna show them how it's done right." (BM)

Various people related stories of Vanguard as a way to address the last year's situation when millions were unaccounted for during times when profit margins are eroding as the industry matures:

> …we lost several million dollars last year. The figures were unaccounted for in the right place. We also have a division who will charge us for work that they've done on our behalf, which we may not be expecting to be charged for…I think the number that one senior executive quotes is $68 million or something, which is… a lot of money to go missing. So a really important part of Vanguard is tracking all of our costs.

A feeling widely shared by territories is that they are constantly forced to doing things just because Burbank wants it for their benefit without any regard for the local needs of the territories. The perception of ethnocentricity makes it very difficult for any push communication to make its way to the hearts and minds of the territories. Following are few examples that came out from the international interviews:

> When I've been out in the territories, the U.S. requires a lot of information. And, from my perspective, a lot of systems have been written to fulfill the needs of Burbank, basically. (ITM)

> I think there's a degree of feeling that there is a fair amount of dominance with how the domestic office wants to operate. (ITM)

> What I heard from people when I first started was that they really resented feeling that everything was a mandate from Burbank. (ITM)

Canada openly uses the term "guinea pig" to describe why they were selected as the first site to go live with SAP before it gets implemented in the US:

> But this company's a very American-centric company…It's a shame that there weren't more local territories involved at the start…I think we definitely need to focus on getting them involved as soon as

possible. This is really an American-centric company. All the American companies are asking now. It's just way of life.

And, certainly, it leads to a feeling of loss of control by the territories to be able to actually impact their local issues. Which can be quite undermining. Now, I think that, certainly recently, there have been very strong attempts to deal with the situation, particularly on the Vanguard sides….But certainly from the perspective of mandates and people not feeling that their cultures are being well understood by the domestic office. I think it's pretty pervasive in the culture. (BM)

International territories frequently talk about change initiatives driven from corporate offices as being more of a mandate than a joint effort to help them improve business performance. They recall stories of people in corporate not being sensitive to the unique business practices and needs of territories; they recall past situations which give them convincing evidence:

I mean, the project is perceived as a U.S. project from up here. I must have been out when they said that Canada has been picked because they're a guinea pig for the U.S… So I think there's a few people who think the change has been forced on them just to benefit the U.S., and it's not actually going to benefit Canada. So that's the way end of the spectrum. (ITM)

The same manager was baffled that corporate executives in the U.S. thought it was good idea to use Canada as a guinea pig – demonstrating push that was totally misaligned with the pull:

Then you've got your other side thinking this is great. We're moving forward. It's quite a mismatch of feelings out there. (BM)

Yeah, it's the usual thing, big brother telling us what to do. (ITM)

A U.S. business manager echoed this story through her own planning process for the U.S. implementation after Canada (the guinea pig) went live and had resolved all the system failure issues:

Well, luckily we're not the guinea pigs. Canada's the guinea pig. So we are going to be heavily involved in supporting and watching Canada and what happens to them. Because that's gonna be a barometer of how we do. (BM)

Stories are critical to sell an idea and this is a constant challenge for IT leadership to convince business leadership to approve the investment for large projects such as global ERP implementations. In these situations, over selling can lead to painting a picture that may later lead to misalignment. Below are some examples of how the story was packaged and framed to make it compelling for cost justification of the project:

The story is not how we got the number. The story is the result. So I turned it around. I said, "What we're gonna do is, we're gonna tell them—you say, 'six weeks, maybe eight.' We say eight days. It's 66 percent. You make this much. Here's what it would look like. Here's how your business would operate." So it was all about telling the story. So I started working on that and I think I've got more traction now. Because I went away from the technical piece, and I painted a picture that was much simpler to understand. I was just telling the story wrong. (ITL)

Measurement is another important aspect of the storytelling that makes the stories believable and impactful.

And that's the part we have to work on. Then that allows IT to tell its story, I mean, more broadly.

Not about a single project but about, you know, investing in IT in such a way that it yields phenomenal returns. Not you got your money back, you know? That it's three, four, and ten times the investment. That the IT spending is not considered overhead. (ITL)

Measurement is a strong cultural change at Giga. Traditionally Giga has been very poor in all aspects of measurements, largely because the margin was so high that the inefficiencies were not causing any pain to the business. According to one executive a big part his job was to introduce the culture of measurement into the organization:

You talk about whether or not you're getting your benefit out of IT, investment in IT. The only way to really know that is to measure it.

I think you start showing people measurements. And it's very attractive. It's like when you hear a story and someone says, "Well, it works better this way." Or the person tells you, "You know, the ____ improved by 35 percent, and this is how we measured it." Which one is more compelling?

It's the second one. You thirst for the numbers. There's a thirst. At least, I have it. I have a thirst for it. I can't act on better, worse. How much worse? How much better? Because then that tells me how much I can afford to invest or how much time I want to put into this.

So I think numbers help tell the story more compellingly. Yeah. (ITL)

Few front-line users expressed concerns about the long-term prospects of the industry. This concern, and survival response from management, has a negative effect on the morale of the employees since there are no alternative positive stories of vision that show them the path towards growth and success.

Vanguard is not one of the things that anybody really talks about. They're mostly talking about, "Where do we stand in the next ten years with this downloadable merchandise when you can download our job." (UR)

Music's a different business. I wouldn't want to be involved in that at all because there are layoffs left and right. Here's a little bit harder; but, you know, it only gets better. (UR)

…just the day-to-day grind of it is wearing. A lot of these people… have been here for many years. So you have the stability. People are starting to quit now. People are starting to leave the company. Actually not move. Leave the company. (UR)

I think the morale has gone down, and so I don't see it as being the gold standard. (UR)

Job loss is one story that is taking hold inside the company. Some of the stories are based on how people are internalizing the word "process efficiency" to mean that fewer people will be needed to do the work.

I think for some people it's scary and [they're] afraid that they may lose their job. How do you calm those fears and make people realize that things may change, but this isn't about reducing head count. It isn't about cutting jobs. It's about doing things more efficiently and updating your processes and business model. (UR)

The advancement of the technology is a little scary because I feel like there's not as much security in our jobs, because everything's so much more downloadable that we're not gonna be as necessary. (UR)

The entire process—the conception of when the title comes out to a movie—it used to be four to six months before it went out to the video stores. Now we're looking at four to six weeks. So, the process is so mainstream that…they don't need us as much as they used to. (UR)

So the fear of not having this job in ten years is definitely making me keep my eyes open. I want to get into an area where I know they're gonna—that this is gonna be stable. (UR)

Management of course is trying to address these fears by giving people a story of higher-value jobs and career paths.

And I'm not trying to have people lose their jobs. I'm just trying to say [that] I know from all my productivity training and, you know, resource management and all that, you know, consultancy stuff that there's opportunity; and we can utilize those head counts other places in the business that will benefit our business. (BL)
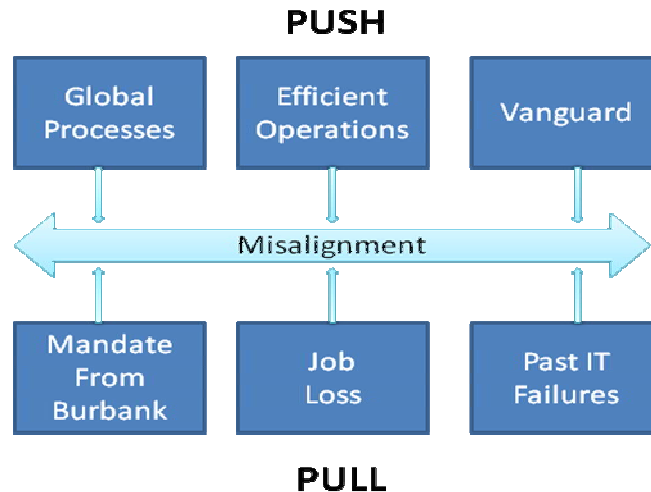
Figure 6: Push-Pull Misalignment

We see how imperative pull communication is through understanding how even the best of the push communication strategies can lead to misalignment. As Figure 6 shows, global processes can be pulled as a mandate from corporate, efficiency can get pulled as potential job loss, and Vanguard (project name) can be pulled in as yet another failure to happen based on similar stories from the past. Alignment of push and pull is necessary for employees' acceptance of cultural change and thus, it is an indicator of effective alignment.

DISCUSSIONS

In a situation where the organizational culture is strong, industry association is strong, and management is trying to change the culture of the organization, the role of communication becomes even more critical. A deeper level of communication is necessary if one wants to make a notable impact. This deeper-level communication is what is defined as pull communication. Pull happens automatically, on its own, as people try to make sense of what is happening around them. Therefore, push mechanisms must be used primarily as a framing device that can allow for and guide the natural occurrence of pull devices.

In spite of all the communication, people at Giga don't seem to be aligned towards the Vanguard initiative. In the face of the high level of intensity and quality of push communication, it is puzzling to find such lack of alignment, especially when there is strong leadership support and commitment to the transformation. One way to interpret the situation may be that the pull communication is working against all push communication. In fact, push may be reinforcing the negative pull that is largely driven by the stories and boundary objects from the past. In the following discussion, we will examine the major problems that are occurring as Giga attempts to create cultural change and the key solutions that can allow alignment to be achieved.

The Conduit Model (push) is primarily being used by management to prepare people for change and alignment with the Vanguard initiative. Most of these messages don't seem to be resonating with people in the company. Little attention is paid to these push communications that come down to them in the form of newsletters, presentation, portals, or conference calls.

Traditional push communication can be compared to a computer download which pours knowledge into an empty container.

> I am talking to an audience. So my head must be full of stuff. The audience is sitting there more or less silent, apparently listening, so their heads must essentially be empty. And the object of my communication is to download the stuff that is in my full brain into their empty heads. (Brown, et al., 2005: 113)

The obvious flaw with this argument is that audience's heads are not empty. Their heads are full of understanding about how the world works, and all that is needed is a tiny fuse of a story or a boundary object that can link up with all of the tacit understanding that they have in their minds. A good story can ignite that understanding such that, suddenly, a new pattern of understanding can flash into their minds; and they can see at once that the world fits together in quite a different way from what they had previously been thinking (Brown, et al., 2005: 113-114) leading to an effective pull that would be aligned due to conscious use of a story or a boundary object in the push communication.

Despite the fact that interactive face-to-face departmental meetings seem to work best, communication and change are talked about as things that need to be pushed out to everyone in the company to achieve the alignment objectives. The push model

seems to be the only method of communication at Giga. As a result, any time there is a breakdown in understanding; more push communication is prescribed through yet another channel. With so many channels being active, there is a sense of over communication. However, people don't feel that they are being heard or their concerns being incorporated into Vanguard. This is particularly true of workers in the international territories who, in some ways, see their unique identity being homogenized in the corporate attempt for globalization. A model of the general trend of Giga's misalignment is illustrated below:
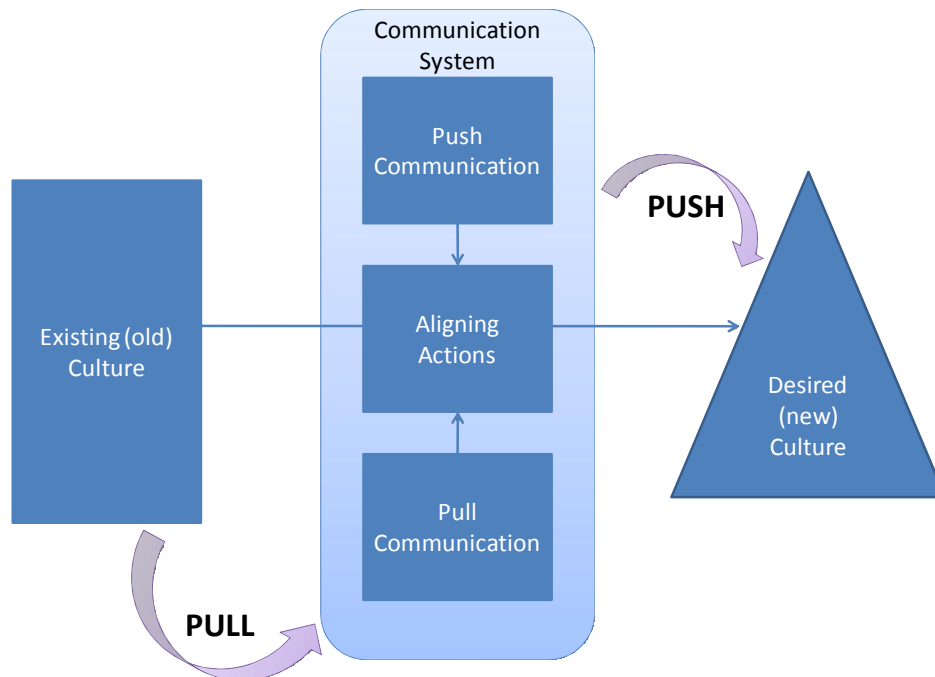

Figure 7. Communication System Misalignment

In large organizations, the decision to transform or change the organization happens over a period of three to five years, if not longer. The process often involves conflicts, debates, political maneuvering, and other combative techniques (Morrill, 1995). However, once a decision is made, the management team that remains is fairly committed to making it a success; and indeed, their credibility and future career depends on making the transformation a success, all of which makes the push-pull alignment very stable across the leadership team. Therefore, when there is a communication breakdown, it is usually not in the clarity and consistency of the messages at the leadership level nor in the channels that are deployed in push communication since most large organizations like Giga have a professional team dedicated to leveraging all available push mechanisms. The challenge of misalignment due to communication is usually the result of pull communication at lower level of the organization. It is magnetic force, which cannot be seen but is felt everywhere and affects everything. When pull is working against push, pull will always win because it is operating at a deeper, personal level.

Even though the push-pull dynamics was effective among the top leadership and change agents since management did indeed committed sizeable investment to change the organization culture, management failed to recognized the important of pull at lower level of the organization – especially the front-line employees who will be required to do most of the work to make the change successful and sustainable. Existing stories from which employees were pulling meaning were ignored in the push communication, leading to unintended consequences that occurred as people pulled their own meaning from the push communication that was being packaged and channeled at them, most of which was filtered and ignored by the overworked yet committed workforce. Management could have sensed and acknowledged the existing stories and directly addressed them through effective and authentic push communication. By incorporating some of the meaning that people were pulling into their subsequent push messages, management could have iteratively steered communication towards effective alignment between push and the pull. Engaging employees so that they felt involved would have led to the activation of pull mechanism that would have created positive energy aligned in the direction of change as people pull in meanings that make sense to them

in their own way and motivate them to take actions that are aligned towards a shared outcome of change – without a need for shared meaning.

Unfortunately for Giga, in the age of being bombarded with information from multiple sources, people very quickly tune out all the non-urgent communications that are typically pushed out through various corporate channels. In fact, "the span of absolute judgment and span of immediate memory impose severe limitations on the amount of information that we are able to receive, process, and remember" (Miller, 1956: 95). That is why effective push should leverage stories and boundary objects and iteratively sense and connect with the pull so every cycle leads to more and more alignment between shared objectives of change and personal relevance to employees. Stories and boundary objects are essential because "the process of memorizing may be simply the formation of chunks, or groups of items that go together, until there are few enough chunks so that we can recall all the items" (Miller, 1956: 95) and also connect them with other such group of items to make sense of the overall change and what it would mean to the individual - creating and effective push-pull alignment.

At Giga, people are trying to make sense of the industry changes and do understand that Giga needs to adapt and change to remain competitive. However, people are not able to relate to how Vanguard will help them get there. Vanguard is perceived as an initiative to give management better global visibility to information. Any pull effect is being generated from association of people in the industry and their understanding of what is happening in the industry: digital media, iPods, cell phones, the Internet revolution, new format standards, changing viewing patterns, and the general content overload available to the consumers. Because those implementing the change are not framing push mechanisms to align with the pull, employees are utilizing outside stories and boundary objects, which is working against alignment with Vanguard.

Alignment between the push and pull may be more effective when needs and the means to fulfill them simultaneously emerge (Zmud, 1984: 728). Without oversimplifying, means can be framed and pushed out while needs have to be pulled by individuals in ways that make the most sense to them in relation to their work and perceptions. This simultaneous push-pull process creates dynamic interactions that can bring clarity and build commitment.

Boundary objects have a special role to play in pull communication as people pick stories, metaphors, and labels and adapt them in ways that work for their personal meaning-making process. Organizations can become more conscious of these pull mechanisms and design push communication strategies that maximize the positive effect of pull.

Within Giga, there seems to be a clash of various boundary objects that is causing misalignment between the push and pull communications. Between the new FMCG terms, SAP terms, Giga terms, industry terms, departmental terms, and the territory terms, there is a lot of room for misinterpretation that may be leading people to close their minds to the noise of push communication and to rely on stories to make sense of the situation. People are talking about various boundary objects like Performance, Efficiency, Measurement, Globalization, Standardization, and Process, but they are not having any strong meaning attached to these objects. This is particularly true at lower levels of the organization and within international territories. The labels that are being pushed seem meaningless at these levels.

One important example of the misalignment of boundary objects can be illustrated with the stories surrounding the idea of Requirement. IT people refer to it as a stable object against which they are building the system. Business groups talk about it as the evolving needs that have to be met by the new system to make it future-proof. Territories perceive requirements as something that is being mandated by Burbank with which to comply within the global standardization process. Average users feel that their direct input has not been part of the requirements because their managers have been talking to IT on their behalf, which may mean some critical details have been left out. These details, which only front-line workers experience day to day, may not be on the radar screen of their managers. The single boundary object, Requirement, illustrates how complex the interpretations become when people are making sense of something they share among themselves, but they are creating different meanings for themselves. There are even stories about Requirement activities, such as blueprint sessions and process mapping sessions that are recalled differently by people from different groups, thus creating an environment where stories can flourish and, if left undirected through effective push, work towards misalignment.

The idea of using push to direct pull can be broken down into a basic understanding. One can also categorize push and pull with push as the minimum and necessary Dehydrated Talk while pull moves communication closer to Creative Dialogue (Appendix H). It is the alignment between push and pull which combines logic and feeling that is critical for organized action towards change, with thinking as push and feeling as pull. As Gratton and Ghoshal (2002: 216) explain,

> Rationality is essentially about structure; emotions are largely about meaning. Rationality is an exercise in disaggregation. It is deductive, and it forces attention on tangible data and their inter-relationships. Emotions, on the other hand, are holistic, less amenable to such disaggregation. They deal with feelings and ideas…the most creative, insightful and energizing conversations occur when the two are combined. Bringing thinking and feeling together is difficult, but to do so is to move from fragmentation to unity.

The logic of attraction suggests that people change to a new position because they are attracted to it, drawn to it, inspired by it. To manage change is to tell people what to do (a logic of replacement), but to lead change is to show people how to be (a logic of attraction). Most top managers assume that change is something that someone with authority does to someone who does not have authority (push). They overlook the logic of attraction and its power to pull change from within (Weick and Quinn, 1999: 380).

When the culture of the organization is being changed, then pull communication is what really matters. The pull effect gets amplified through face-to-face interactions. In territories, it has to be local senior management that carries out these conversations through positive stories and authentic dialogue. When this does not happen, as was mentioned at various points in the research interviews at Giga, communication becomes like clogged pipes that limit the flow of water to other parts of the house. Under the conduit communication model, the flow of information that needs to be pushed to employees would be limited leading to misalignment between push and pull.

Within Giga, there is currently a deep negative pull effect that seems to be generated by the negative stories of the past; the drivers for Vanguard are framed negatively – "survival of the business as margins get squeezed". Negative push framing leads to a negative pull effect thus decreasing positive desire for change. This phenomenon can be further understood from the research findings in Appreciative Inquiry:

> Self-initiated mental imagery has strong consequences on people's affective experience and on their actions taken. Positive imagery and positive affect are much more likely to generate action than are negative imagery and affect, which tend to lead to more defensive behavior. (Woodman and Dewett, 2004: 95)

This may also explain the challenge that Giga faces since most of its stories that capture the reasons and motivation for organizational change and transformation are articulated through stories with an unhappy ending, such as unaccountable losses and high costs due to process inefficiencies. Negative stories about past failures are strong, and they pull meanings that are counter to what the management wishes to achieve. The leadership stories about the reasons and motivation for change mostly have unhappy endings and are not causing employees to pull new meanings that can lead to positive outcomes in their behavior and actions.

Stories play multiple roles in organizations, including entertainment, conveying information, nurturing communities, promoting innovation, preserving organizations, and changing organizations. With a story, "listeners get inside the idea. They live the idea. They feel the idea. They experience the story as if they lived it themselves. In the process, the story, and the idea that resides inside it, can become theirs" (Brown, et al. 2005, p.111). Stories come naturally to us; even at age two, children understand the stories that their families tell them. When we tell stories, we find ourselves refreshed. (Brown, et al., 2005: 127). Stories also are ideal for giving a group a sense of the whole because people often don't have enough time or the context to understand the details of the various parts of an organization. Thus, management can use stories for effective push framing so that people are able to interpret and pull meaning in ways that align their actions towards the strategic objectives of the change.

Stories with a happy ending generate a springboard effect that puts the listener in a perfect frame of mind to be thinking about a new future, a new identity for themselves, or for their organization. For the story to have the springboard effect, it has to be performed with passion. This is because it is not the intellectual content of the story but rather the emotions that make the connection between the storyteller and the listener. This is what catches the listeners' attention, gives the story its "spring" and pushes the listeners to reinvent a new story in their own contexts (Brown, et al., 2005: 124). On the other hand, stories with an unhappy ending, like "that company went bankrupt because it didn't implement knowledge management," do not trigger the springboard effect, and so the opportunity to invent a new future is lost (Brown, et al., 2005: 122). Within Giga, there seems to be little effort put forth to deal with the stories about the past that may be silently dominating the sensemaking of employees and leading to misalignment.

Another problem that seems to be occurring with Giga is that, since they did not include broader involvement at the grassroots level of the organization, they never created boundary objects that would link the various levels. Push-pull alignment can be enhanced by management involving employees from different levels and locations in the strategy-crafting process so that what emerges is something that they collectively believe rather than that which is being imposed on them. In the case of Vanguard, this is particularly true of the international territories that neither feel any emotional connection or commitment to the strategy nor believe that it will benefit their territories. In fact, the general feeling is that Vanguard will create extra work for them for the benefit of the central corporate group. Early involvement would have allowed people from different levels and locations to put their fingerprints on the design of the change and would have given management early signals of the level of misalignment between the push and pull and what they need to do to make push more effective.

> Crafting image better captures the process by which effective strategies come to be. The planning image, long popular in literature, distorts this process. In my metaphor, managers are craftsmen, and strategy is their clay. Like a potter, they sit between past corporate capabilities and a future of market opportunities. And if they are truly craftsmen, they bring to their work an equally intimate knowledge of materials at hand. This is the essence of crafting strategy. (Mintzberg, 1987)

Therefore, it would be effective for Giga to bring together various levels of the hierarchy to begin to create boundary objects that can be utilized and understood by all levels. Once common boundary objects are established, push communication can be utilized to put these boundary objects in place. After this is done, push mechanisms must be relaxed, allowing people to find their own meanings and understandings through the natural occurrence of pull mechanisms. It is not particularly alignment of meanings that we are looking for, but alignment in actions. Thus, in allowing push mechanisms to create the framing actions, pull will allow people to find individualized reasons for being committed to those actions. Beer and Nohria (2000: 137) elaborate the sharp constract between push and pull though their Theory E and O and the right balance between the two (Appendix I). Their research reveals that the ideal condition is when both Theory E (push) and Theory O (pull) are aligned to maximize the success of change.

In previous alignment research, the focus has primarily been on the push effects of the communications. There is little literature that offers comprehensive understanding of the pull mechanisms that may be more important during dramatic transformations, such as the organizational culture change Giga is experiencing. Generally, push communication is considered an effective strategy for building alignment. Moreover, push communication is typically referred to as an effective mechanism for building shared meaning. The assumption is that shared meaning is necessary for joint action towards strategic objectives. Through my research of Giga, however, I have found that having push as the main driver towards change, especially in organizations where there is a strong existing culture, will not be effective unless it is in alignment with the existing pull.

Instead, during culture transformation, push communication should be focused on how to frame the new culture to the employees so that pull can interpret these change messages and develop enough momentum to break away from the existing culture. It is important for leadership to cultivate a deeper level of pull communication to help people align their actions to the new culture and let go of the comfort zone of the previous culture. Push communication can only frame the zone whereas pull mechanisms get unfolded through purposeful boundary objects and stories that are introduced to ensure a smooth transition to the new culture as people make sense of and adapt to the changing environment. This is the true nature of alignment and working within these guidelines will create an environment where achieving this alignment is not only possible, but almost unavoidable.

CONCLUSIONS

Culture change requires a different communication strategy—more pull than push. The stronger the culture, the more pull is needed. Alignment is the dynamic adjustments between push and pull to resolve the tension as deeper organizational structures are moved.

The research and practice world continue to deal with alignment as some type of problem that has to be resolved for the organization to be competitive. Some level of misalignment may be good, even necessary, for the organization to remain flexible and to encourage the emergence of multiple meanings that contribute towards an effective transformation process.

The concept of alignment has generally focused on shared meaning as the primary challenge that organizations must address. Communication seems to be the logical place to build the shared meaning. The tendency is for organizations to start an aggressive journey towards push communication through multiple channels to have their employees reach the state of shared meaning. In our view, this is not necessary and the focus of communication strategy should be more towards enhancing pull.

Boundary objects are one critical part of the pull communication. They allow people to create multiple meanings that help them understand the situation so they can decide and act in ways that are in line with their understanding as the transformation unfolds. By themselves, boundary objects are mere passive artifacts, but they become alive and dramatically more effective when there are stories that wrap around them. Stories make the pull communication much more powerful because they travel very efficiently through the organization without requiring huge communication content. Stories spark connections between groups and give purpose to ideas. Stories also facilitate organizational memory because retention and recall are more natural when people have an emotional connection and meaning attached to the stories. However, companies need to be aware that negative stories, especially from the past, do exist in the organizational memory bank; and they can exert a powerful, negative force against any transformation that the company may be trying to push across the organization.

Organizations and researchers may need to look at pull communication to understand alignment and misalignment and to

determine what levels of alignment are optimal for organizational effectiveness. It may indeed be true that some level of misalignment is necessary for companies to innovate and be flexible for change. The role of push communication may need to change from the relentless building of shared meaning to supporting diversity in meaning while also addressing the negative tension in the sensemaking of individuals and departments. For example, at Giga, some people want to change because they desire to learn new skills and need change to move up in the organization (positive pull) while others see the change as a threat to their job (negative pull). In such situations, the role of push communication can be used to enhance positive pull and help minimize negative pull.

This new alignment model better explains the forces that shape alignment and may help the organization and researchers look more closely at the individual and intergroup sensemaking during organizational transformations. Rather than additional push communication through new channels, a diversified and positive pull communication facilitated by the senior management may be more effective, especially when the organizational culture is being transformed.

LIMITATIONS

Several limitations of this research are important to keep in perspective. First, only one company was studied, which means that there could be variations across companies and industries. Second, only fourteen people were interviewed; this may not give a total reflection of the views of the entire population of employees who are involved or affected by the phenomenon being researched. This limitation can be addressed by collecting data from a large population through a survey instrument that covers the topics in the interview. Third, the Grounded Theory approach has limitations that involve contamination through the interview questions and the biases of the researcher (Silverman, 2001).

Overall, the conclusions and findings must be seen as suggestive rather than conclusive evidence of the phenomenon that has been described and supported theoretically. Readers are cautioned about the generalizability of our model since additional companies and a larger sample size would be required to draw general patterns of behavior in large organizations. Therefore, despite the strong and consistent themes emerging from our data, the qualitative nature of our inquiry limits the broader generalization of our findings.

An additional limitation of the research is the fact that the interviewees were not randomly selected. Some of the employees who were recommended were busy and did not reply, while a few came back with a keen interest to share their views. During the interview process, some of the interviewees provided additional names in their group, mostly subordinates, who they felt would be able to give additional perspective on the interview questions from their level within the organization. Even though the names were not random, it was indeed a good cross section of people between the executive team and worker level, between business and IT, between corporate and international territory, and between supply chain and PLM areas. The only area that could not be covered is the Finance group that represented the third of the mega-process areas of the Vanguard initiative.

CONTRIBUTION

This research contributes to the alignment literature as well as the literature of boundary objects and organizational storytelling. This is especially the case where they contribute to the broader research areas of change management and organizational communication. With the rate of change increasing, it is becoming increasingly important to explain why some companies seem to be well aligned with low levels of traditional (push) communication while effectively changing and adapting to the dynamic industry environment. Shared meaning and understanding of each other may not be necessary for alignment, which could save companies millions of dollars in internal communication that does not serve a useful purpose and may actually contribute to further misalignment.

This research contributes to the literature by identifying the relationship of organizational stories and boundary objects to alignment that was not previously evident. It may be helpful to further extend this research to see how storytelling interacts with alignment in different organizational settings and industries.

Collecting actual data to test alignment through boundary objects and stories is itself a finding since it allowed testing of existing theories on alignment and communication. Because interviews were conducted across different levels of the organization and in different geographic locations, the results provide a rich perspective on cultural differences and the relationship between the corporate office and territory offices.

This research has also attempted to integrate alignment literature in the context of change, culture, boundary objects, and storytelling literature to give a broader context of communication within organizations. The collected data provide evidence of the power of stories and boundary objects and how they are used in real-life settings to explain alignment and misalignment. In the process, this research attempted to leverage findings in social sciences and apply them to business settings in order to explain the important topic of organization alignment.

IMPLICATIONS

People in organizations with strong cultures have strong opinions and feelings that need to be addressed during the transformation process, especially when the change is complex, there are new areas for everyone, and there is a higher possibility of ambiguity and multiple meanings.

Stories need to be considered as a serious part of corporate communication, especially during deep transformation such as a cultural change. If the stories are in conflict with the traditional and shallow push communication, it is hypothesized that the pull will win, leading to either non-action or action that causes stress and anxiety for individuals since their pull mechanism will be in conflict with the push that they are being overloaded with. In fact, most push communications in such scenarios may be counterproductive to generating commitment and may actually strengthen the stories that are working against the push communication.
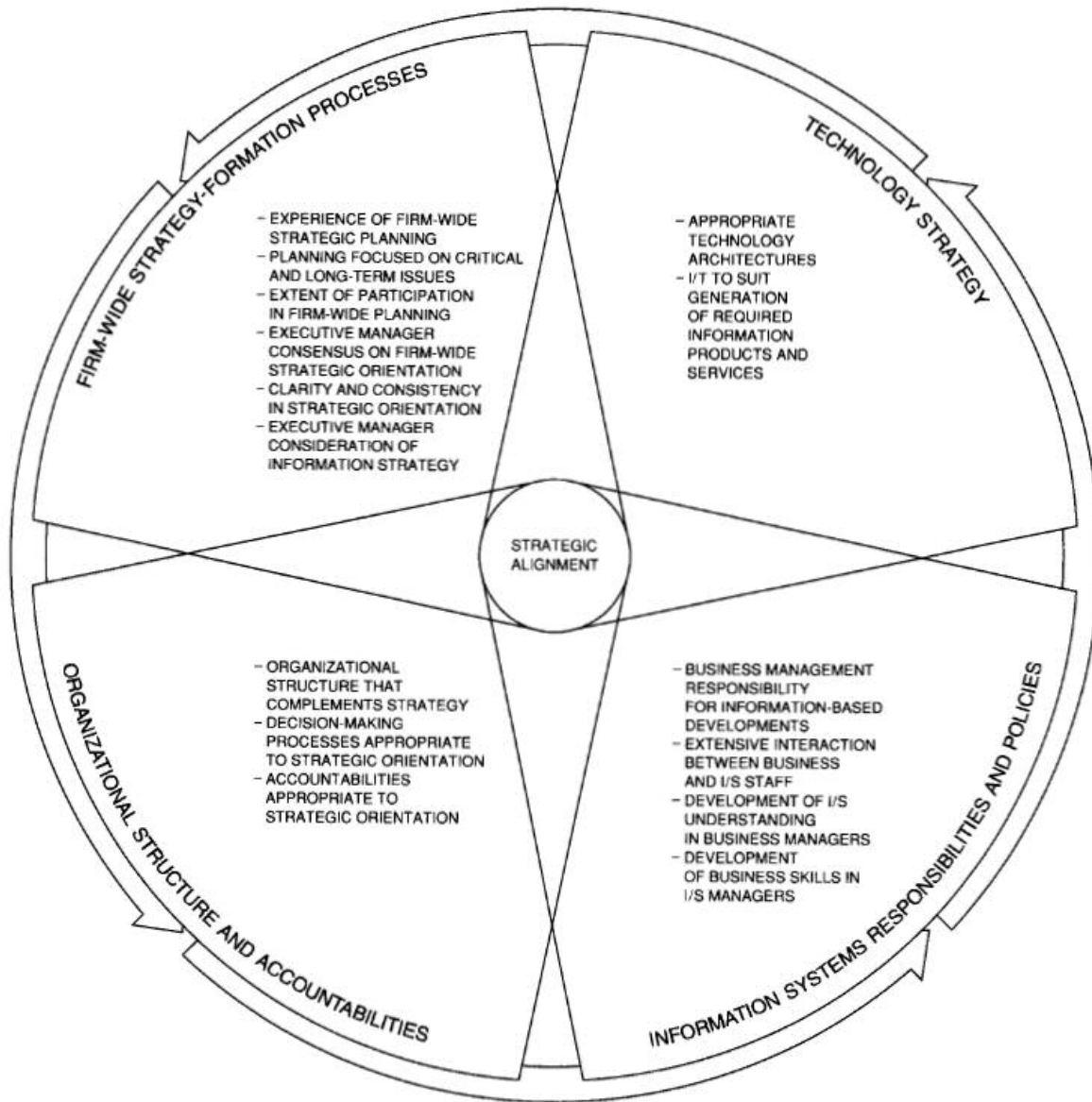
Future research might also look at the role of trust, superior-subordinate relationships, and the perception of benefits, since they may also explain the process of sensemaking and alignment in the push-pull dynamics. Also, a similar study in another setting may explain which characteristics are common and which are unique to the specific company situation. How do storytelling and boundary objects interact to make alignment more effective? It will be useful to carry out this research in an organizational setting where the cultural transformation was effectively managed.

There are several implications for practice. First, the research will help large organizations pay attention to the stories and boundary objects they use to communicate to their employees during a major transformation. Communication is always considered a factor in the alignment equation, but it is rarely broken down to specific stories and boundary objects that are purposefully and positively framed to trigger creative dialogue within the organization. Secondly, it will help IT and business groups to better align with each other and develop appreciation of each others' perspectives by understanding each others' stories. CEOs will continue to struggle with alignment until a new perspective on alignment is created that is built on a deeper foundation of pull communication, one which is driven by positively framed stories and boundary objects. Leadership will also benefit from understanding the existing negative stories that may be getting pulled in from the existing culture and may need to be neutralized by introducing new purposeful stories or boundary objects.

There are also important implications for research. First, alignment between business and IT is still a highly unexplored area in IT research. Most of the research focuses on developing shared meaning and understanding between multiple groups, which may not be necessary to achieve the desired objects of effective organizational transformation. This research shows that the issue of cultural change is much deeper because it reaches to the identity of individuals and how they relate to the world. It is deeper but does not have to be overly complex since the identity is largely constructed through the language used in their social interactions within the organizations. A few compelling stories may be more effective than massive push communication, which companies struggle to channel down to the employees who struggle to pay attention and interpret. Alignment may indeed mean light push communication that activates the deeper pull that leads to behavior changes towards the new culture.

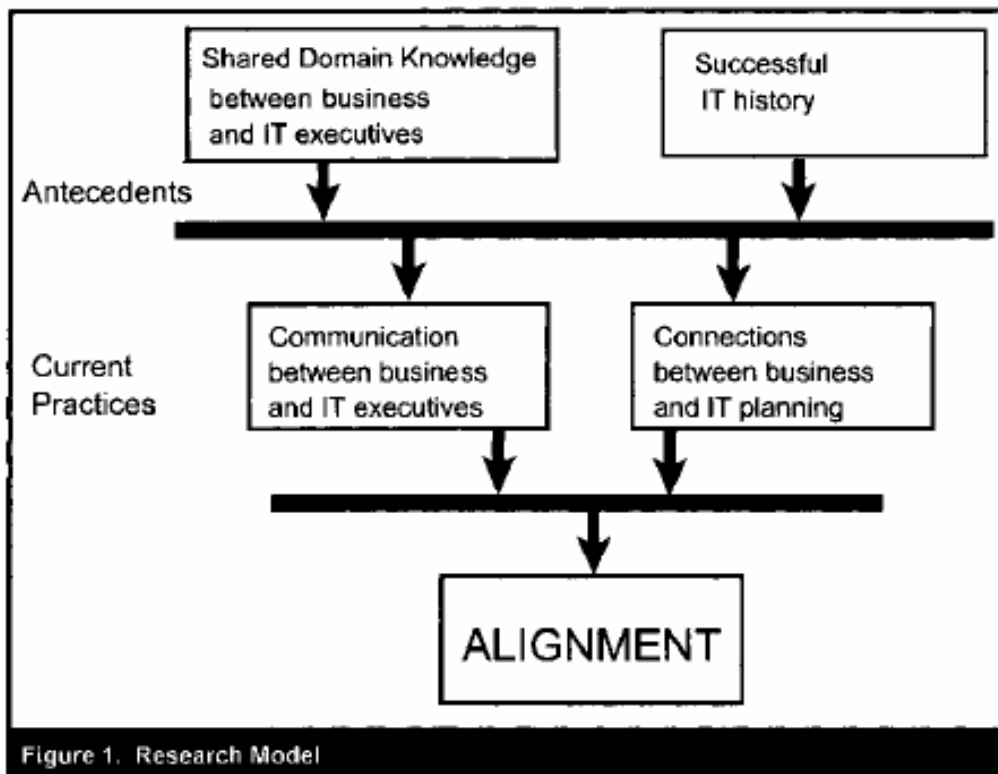By redefining alignment as the systematic integration of multiple meanings through the push-pull dynamics, an organization may be better able to react and respond to external changes. Stories and boundary objects may be the most effective push mechanisms for creating the environment for multiple meanings that pull people into organized action that leads to the successful cultural transformation of an organization.

APPENDIX A
ALIGNMENT FRAMEWORK

FIRM-WIDE STRATEGY-FORMATION PROCESSES

TECHNOLOGY STRATEGY

ORGANIZATIONAL STRUCTURE AND ACCOUNTABILITIES

INFORMATION SYSTEMS RESPONSIBILITIES AND POLICIES

STRATEGIC ALIGNMENT

- EXPERIENCE OF FIRM-WIDE STRATEGIC PLANNING
- PLANNING FOCUSED ON CRITICAL AND LONG-TERM ISSUES
- EXTENT OF PARTICIPATION IN FIRM-WIDE PLANNING
- EXECUTIVE MANAGER CONSENSUS ON FIRM-WIDE STRATEGIC ORIENTATION
- CLARITY AND CONSISTENCY IN STRATEGIC ORIENTATION
- EXECUTIVE MANAGER CONSIDERATION OF INFORMATION STRATEGY

- APPROPRIATE TECHNOLOGY ARCHITECTURES
- I/T TO SUIT GENERATION OF REQUIRED INFORMATION PRODUCTS AND SERVICES

- ORGANIZATIONAL STRUCTURE THAT COMPLEMENTS STRATEGY
- DECISION-MAKING PROCESSES APPROPRIATE TO STRATEGIC ORIENTATION
- ACCOUNTABILITIES APPROPRIATE TO STRATEGIC ORIENTATION

- BUSINESS MANAGEMENT RESPONSIBILITY FOR INFORMATION-BASED DEVELOPMENTS
- EXTENSIVE INTERACTION BETWEEN BUSINESS AND I/S STAFF
- DEVELOPMENT OF I/S UNDERSTANDING IN BUSINESS MANAGERS
- DEVELOPMENT OF BUSINESS SKILLS IN I/S MANAGERS

Source: Broadbent and Weill, 1993, p.175

APPENDIX B
ROLE OF COMMUNICATION IN ALIGNMENT

Figure 1. Research Model

Source: Reich and Benbasat, March 2000, p85
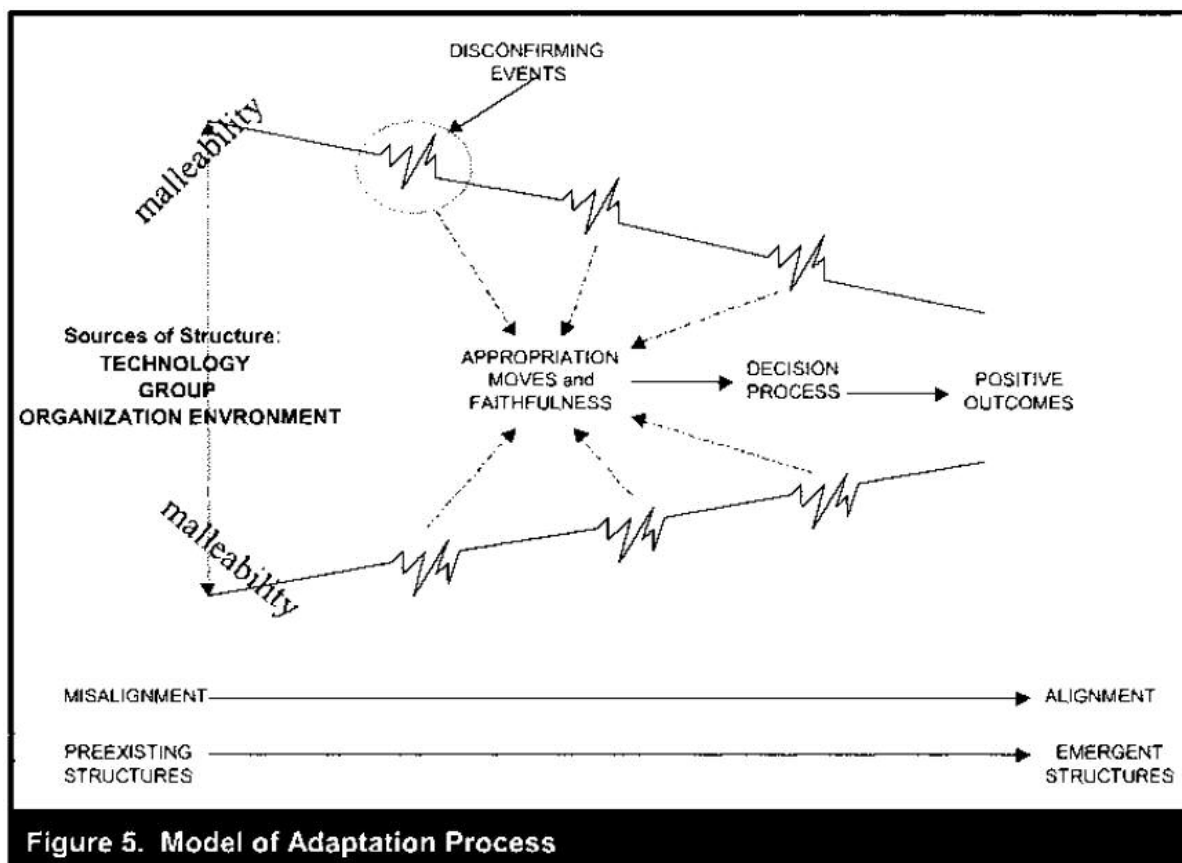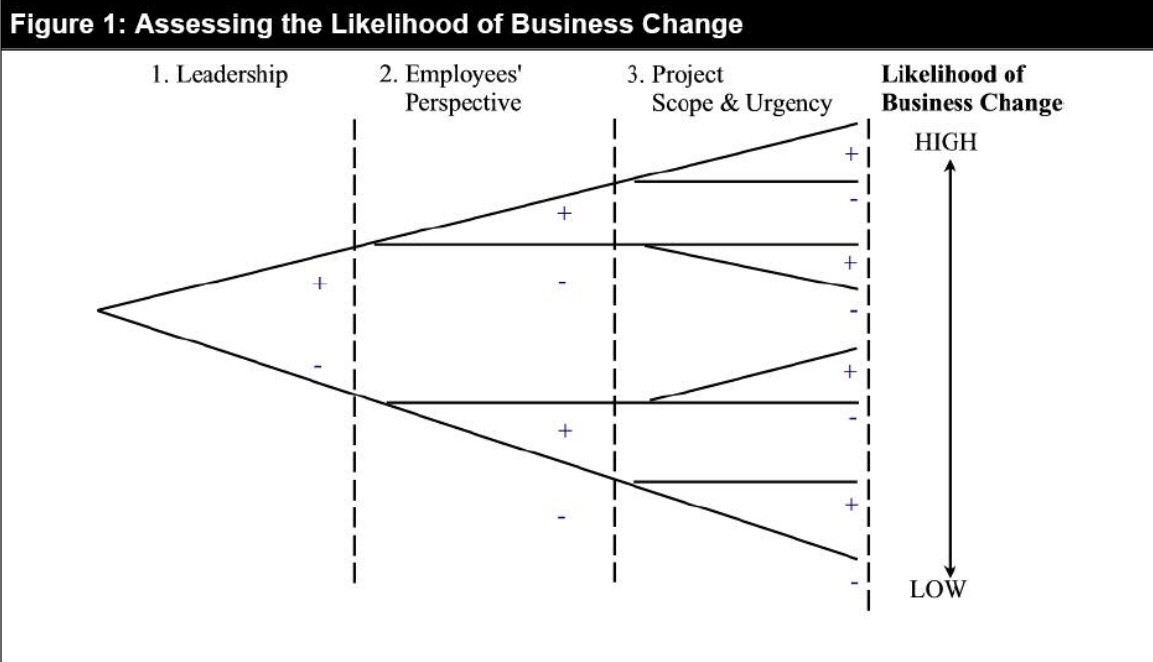
APPENDIX C
ROLE OF MISALIGNMENT IN ADAPTATION

Figure 5. Model of Adaptation Process

Source: Majchrzak, Rice and King, 2000, p.595

APPENDIX D
THREE FACTORS FOR SUCCESSFUL BUSINESS CHANGE

Figure 1: Assessing the Likelihood of Business Change

Source: Gibson 2003, p108

APPENDIX E
COMPARISON OF TWO COMMUNICATION MODELS

CONDUIT MODEL
Strengths
- Reliable and precise channel for communicating well established elements in the vocabulary of a community of knowing and techniques of practice.
- Can facilitate culture building, organization-wide integration activities through shared and common images.

Weaknesses
- Does not value diversity; emphasis on uniform data and decision models and communication format across the organization can hamper the emergence of unique communities of knowing.
- Inappropriate for supporting the narrative forms of cognition that are central to the perspective making process.
- Common vocabulary and set of decision models denies the importance of perspective taking.
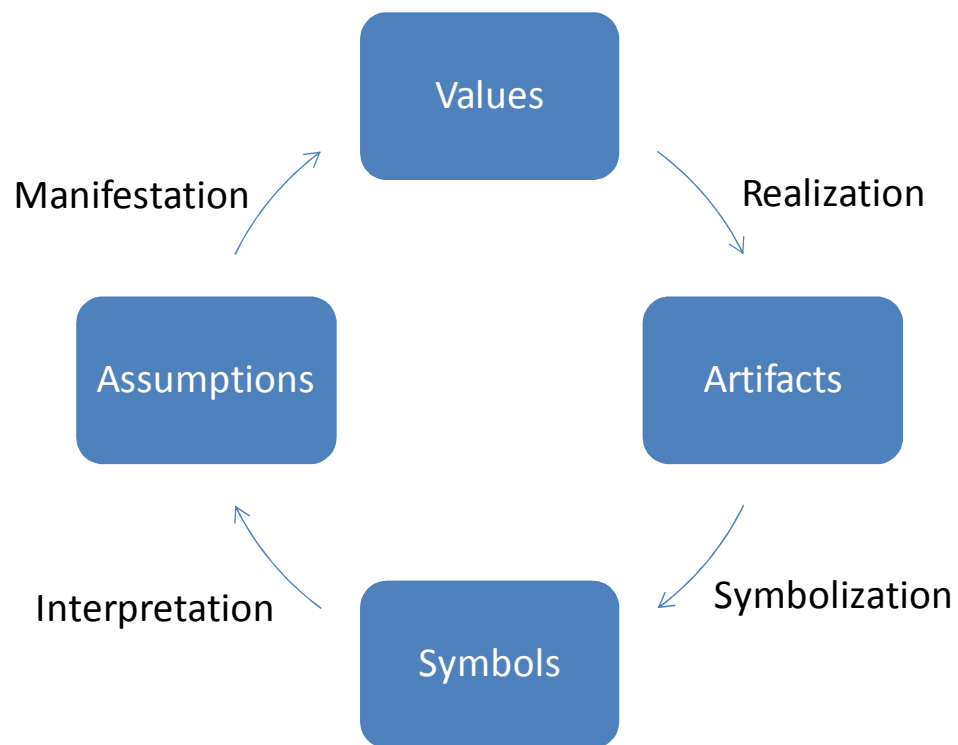
LANGUAGE GAME MODEL
Strengths
- Facilitates perspective making by virtue of its insistence on primacy of speaking and action in a community of knowing.
- Underscores the importance of enabling and protecting local logics, local practices and local vocabularies.
- Implicates the importance of narrative in a community of knowing.
- Emphasis on narratives enables reflection on underlying logics, values and identities of the community of knowing.

Weaknesses
- Increasingly specialized language games results in epistemic inhibitions (imposed by each community's unique paradigm) and comes in the way of perspective taking.
- May heighten conflict among communities.
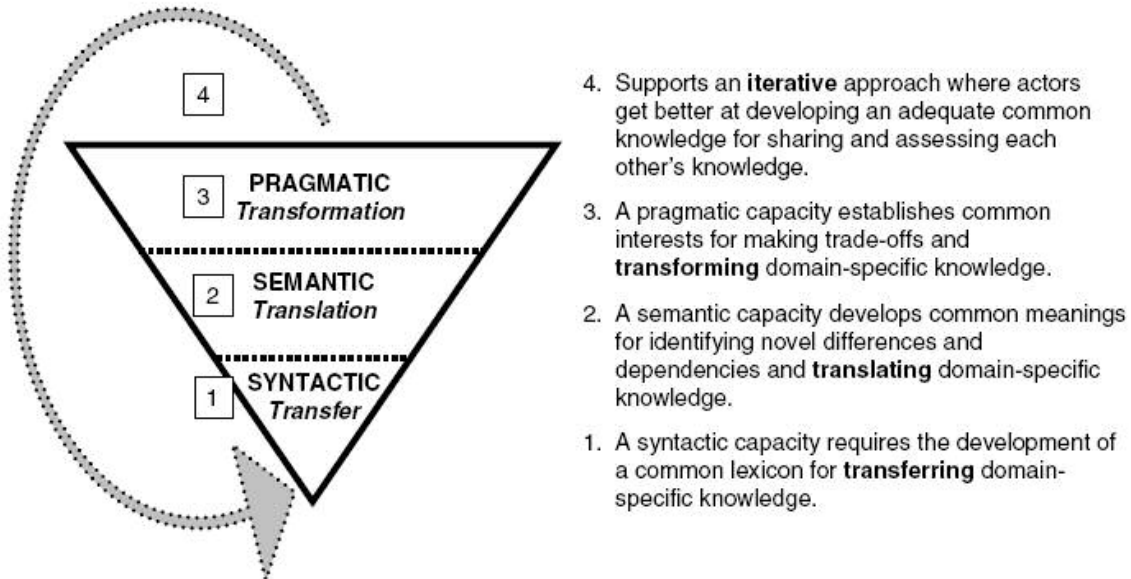
Source: Boland and Tenkasi 1995, p. 361

APPENDIX F
HATCH'S MODEL OF CULTURAL DYNAMICS

Values

Realization

Manifestation

Assumptions

Artifacts

Interpretation

Symbolization

Symbols

Hatch's model of cultural dynamics

APPENDIX G
FRAMEWORK AND THE FOUR CHARACTERISTICS OF BOUNDARY CAPABILITY

4. Supports an **iterative** approach where actors get better at developing an adequate common knowledge for sharing and assessing each other's knowledge.

3. A pragmatic capacity establishes common interests for making trade-offs and **transforming** domain-specific knowledge.

2. A semantic capacity develops common meanings for identifying novel differences and dependencies and **translating** domain-specific knowledge.

1. A syntactic capacity requires the development of a common lexicon for **transferring** domain-specific knowledge.

Source: Carlile 2004, p. 563

APPENDIX H
ANALYTICAL-EMOTIONAL DIMENSIONS OF COMMUNICATION

High

Analytical
Rationality

Low

	Disciplined Debate	**Creative Dialogue**
	- judgement	- inspiration
	- compromise	- sensemaking
	Dehydrated Talk	**Intimate Exchange**
	- ritual fulfilment	- trust building
	- subjugation	- empathy

Low   High

Emotional
Authenticity
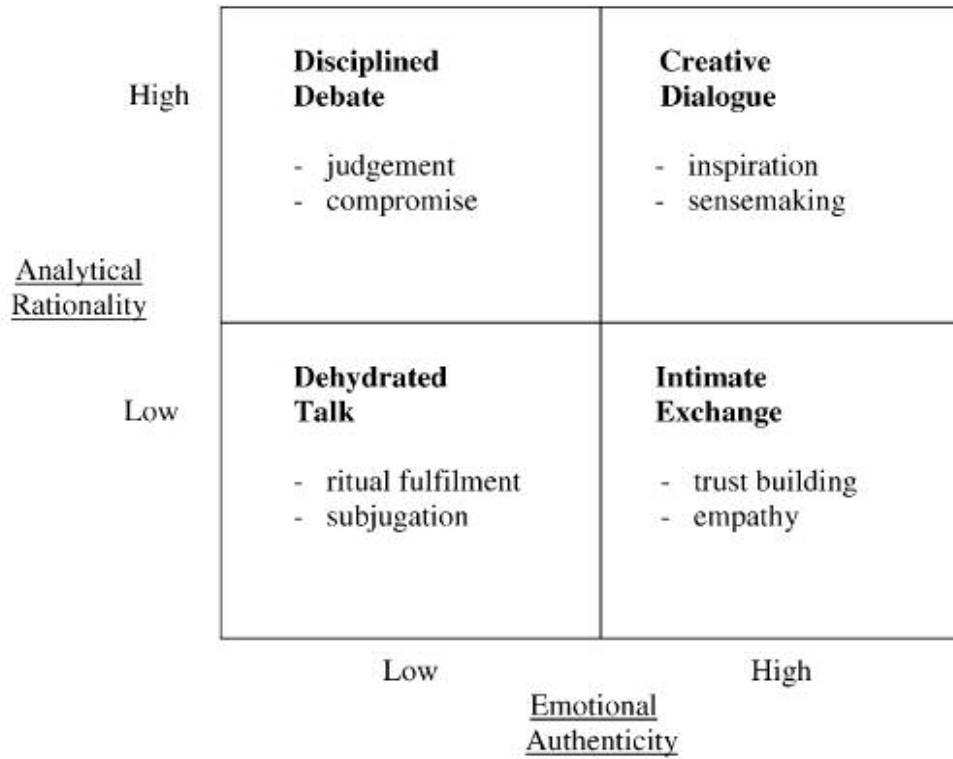
Source: Gratton and Ghoshal 2002, p. 212

APPENDIX I
COMMUNICATION THEORIES E AND O

Dimensions of Change	Theory E	Theory O	Theories E and O Combined
Goals	maximize shareholder value	develop organizational capabilities	explicitly embrace the paradox between economic value and organizational capability
Leadership	manage change from the top down	encourage participation from the bottom up	set direction from the top and engage the people below
Focus	emphasize structure and systems	build up corporate culture: employees' behavior and attitudes	focus simultaneously on the hard (structures and systems) and the soft (corporate culture)
Process	plan and establish programs	experiment and evolve	plan for spontaneity
Reward System	motivate through financial incentives	motivate through commitment – use pay as fair exchange	use incentives to reinforce change but not to drive it
Use of Consultants	consultants analyze problems and shape solutions	consultants support management in shaping their own solutions	consultants are expert resources who empower employees

Source: Beer and Nohria 2000, p. 137

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