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Metaphor and the Embodied Mind: An Engine of Organizational Inquiry

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Abstract
In its most general form, the question our paper asks is: "why, after a question has been asked and answered, does a conversation of inquiry continue, and not just stop?" Why, in our conversations within and about organizations, do certain topics like control and structure get visited and revisited with images that alternate between opposite poles? We propose that the answer has to do with the reciprocal and metaphorical quality of language, especially the dialectic interplay between a few bodily based, orientational metaphors that structure and guide our conversations of inquiry. These bodily based, orientational metaphors reflect ontological dilemmas that undergird organizational life and fuel the semantics of everyday speech. We argue that this system of reciprocally related metaphorical referents and their dialectic interplay provides a kind of engine for organizational inquiry. The pursuit of inquiry through one metaphor brings with it a subsidiary reference to another that progressively grows in interpretive power and reframes the inquiry with an opposite valency. We explore how a few metaphorical oppositions such as light/dark, surface/deep, inside/outside, and separate/together provide an engine of inquiry for some recurring topics in organizational studies.

Keywords: Organizational Inquiry, Metaphor

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Metaphor and the Embodied Mind: An Engine of Organizational Inquiry

Introduction

We propose in a most tentative and exploratory way that language has a kind of perpetual motion machine built into it. To the naïve question of what keeps a good conversation going, we answer that the structure of language itself plays an important part. Key, bodily based metaphors and as they are realized through sets of binary oppositions give conversations a direction to move in and a way of reversing its direction as it reaches saturation. The result is a kind of oscillation among the poles of reciprocally linked sets of binary oppositions that keeps a conversation dynamic and fresh as it raises and revisits familiar topics in a wave-like pattern. We call this structural quality of language an "Engine of Inquiry".

Two important types of organizational conversations are used as examples. The first being conversations of inquiry into organizational problems generally, the second being conversations of how best to organize. For each example we will argue that sets of binary oppositions related to a core of bodily based metaphors provide a space for movement of the conversation. When reaching the end point of one binary opposition, the conversation transfers to another set in which its movement and sense of "progress" can resume, in a continuing oscillation.

We believe that this is a general property of language and that there are a large number of sets of binary oppositions which operate in this reciprocally oscillating way. The two examples we consider were chosen for convenience. The first example comes from an earlier paper (Boland, 1992) and serves as a structural prototype. The second example was developed as a possible explanation for the oscillation of organizational forms observed by Leach (1954) and organizational discourses observed by Barley and Kundra (1992).

We will first explore the bodily based metaphorical quality of language as developed by Lakoff and Johnson (1980, 1999). We will then discuss the work of Boland (1992) and Quinn (1994) as based on Lakoff and Johnson. Finally, we discuss Leach's (1954) and Barley and Kundra's (1992) observations of wave-like oscillations in social patterns of organizing and propose a set of oppositions based on a core set of bodily based metaphors that could account for those observations.

Metaphors are Constitutive of Understanding

The objectivist approach to language postulates a universal base of innate semantic "primitives" (e.g. features or concepts) that supposedly underlie the lexicon in all languages. The objectivist school draws its inspiration from the Cartesian tradition and is represented by the likes of Noam Chomsky (1966; 1972); Jerold Katz (1972) and Jerry Fodor (1983). It holds the view that we can best find truth by clearly separating mind from body so that we may purify our language categories, strip away the bias of our subjectivity, and reveal an objective core of meaning. Free from the bias of subjectivity,

this objective core of meaning would then enable us to use categories that truly reflect the world as it is and allow us to make reliably accurate representations of reality.

Lakoff and Johnson (1980,1999) argue against an objective view of language and cognition and propose an experientialist alternative. An important part of Lakoff and Johnson's joint project is to place metaphor as the quintessential challenge to the objectivist account, according to which only literal concepts and propositions can describe the real world. In the objectivist view of cognition 'metaphors do no more than provide ways of talking" – they are a mere literary device and therefore denied any serious place. Lakoff and Johnson counter by proposing that even rational thought is bound up inextricably with metaphorical reasoning and hence defies analysis in these objectivist terms. They posit that metaphors structure and further constrain all human understanding and reasoning.

In this view, metaphorical knowing is a mapping from some source domain to some target domain. For Johnson and Lakoff, mapping one domain into another by means of a metaphor not only plays a role in human understanding but is a central process in that understanding. Target domains are best thought of as "abstract" conceptual domains, often of the internal mental or emotional world such as "anger" (Lakoff, 1987), sometimes of the social world such as "marriage" (Quinn, 1990) , and occasionally unseen and unknown domains of the physical world as, for example, the world of molecular action (Quinn and Holland, 1987; Sweetser, 1990). Source domains are familiar ones most often of the physical world, these are easy to think with, in the sense that the thinker can readily conceptualize the relations among elements in such domains and changes in these relations that result when these elements are set in motion conceptually. Metaphors when used do not merely recast existing understanding in new terms, but supply the understander with heretofore unconsidered entailments drawn from the metaphorical source domain. Johnson in particular argues that metaphor governs and not merely facilitates reasoning and that new metaphorical entailments allow new inferences that would not have been otherwise reached.

A Few Bodily Based Orientational Metaphors Structure and Guide our Conversations of Inquiry

Lakoff and Johnson argue that a small number of schemas of physical-world relations, which they call "image" schemas, underlie the metaphorical structure of everyday language, and are derived from our fundamental experiences of being embodied in the world. This conception of metaphor has some important implications for the ways humans understand. As Johnson (1987) points out, his and Lakoff's view of metaphor suggests a central role for what he calls embodiment, or bodily experience, in the development of individual understanding and in the evolution of human intellective capacities.

A very basic image schema is the "container" schema. For example, says Johnson, our understanding of containment is based on the experiences of looking into and taking things out of containers such as bowls, going in and out of containers such as rooms, and further comprehending our bodies themselves as containers of, for example, of blood and sensation. Our experience of our body as a container is a very fundamental experience. Our skin is the boundary between the interior and exterior of our body. Our

metabolism concerns ingesting, and excreting, inhaling and exhaling, protecting the warmer inner core from fluctuations in outer temperatures, and generally keeping the contents and appearance of our bodily container in good order. We use the body as container schema, in turn, to generate a wide range of containment metaphors such as ideas as a container and anger as a fluid in a container (Johnson, 1987, pp 33-40; Lakoff, 1987, pp. 271-273).

Another basic image schema is the "trajectory" schema . Our understanding of pathways and journeys is founded on our experiences, beginning as soon as we are able to crawl, of determining where we want to go and progressing along a chosen "trajectory" to reach that place. A good example of the trajectory schema and its derivative is the metaphor "life is an on-going journey" (Quinn, 1994) Our understanding of relatedness, based on a "relation" schema, is based on our experiences of our spatial position vis-à-vis other reference points—people, animal, things in our immediate environment that underlie relational metaphors such as relationship are "inseparable objects" and " an unbreakable bond" (Quinn, 1994). An "entity" schema derives from experiences of held possessions and objects and undergirds metaphors such as "marriages are well made products", or "our marriage as the rock of Gibraltar" (Quinn, 1994).

These orientational metaphors take an image-schematic understanding of the physical world and map it onto abstract concepts so that for example theoretical arguments can be understood as containers, full of inconsistencies or empty of data, human purposes can be understood as journeys or physical destinations that we strive to reach or from which we can be sidetracked, human social relationships can be conceptualized as points in space, perhaps close together, sometimes moving apart, and so forth.

An interesting example of the constitutive role of an orientational metaphor such as the container in human understanding is Lakoff's (1987, p. 380-415) case analysis of the word "anger". In this case the container metaphor is used to frame an internal mental or emotional world such as "anger". He shows how the analogy of "HEATED FLUID IN A CONTAINER" provides a central metaphor for anger. This metaphor provides a detailed correspondence between the source domain and the target domain, such as the fact that anger, like heating a fluid will increase pressure on its container [in this case the body] until some limit at which it explodes, injuring bystanders, and the fact that this explosion can be prevented, either by creating sufficient counter force to keep the fluid [anger] from erupting out of the container or by releasing fluid [anger] to lower the pressure of the container. According to Lakoff (1987) this 'extremely productive' metaphor accounts for several societal expressions around anger such as "I had reached the boiling point"; "His pent up anger welled up inside him"; "She blew up at me"; "I went through the roof"; "He managed to keep his anger bottled up inside him"; "I gave vent to my anger"; and many more.

Johnson (1987, p. 104-105) offers the example of another orientational metaphor, one that of buildings (akin to containers) that according to him unifies a large number of otherwise anomalous ways of talking about argument or theory construction. In this case the target domain refers to unknown domains of the physical world as opposed to the internal or emotional world illustrated in the previous example such as "Quantum theory needs more support". Lakoff and Johnson provide several examples of common usages of theories/arguments as buildings or containers. Some common examples include: "You'll

never build a strong theory on those assumptions"," I haven't figured out what form our theory will take", "Here are some facts to shore up your theory", "Evolutionary theory won't stand or fall on the strength of that argument", "So far we have only put together the framework of the theory", " He buttressed his theory with solid arguments" and, "Is that the foundation for you theory?"

Lakoff and Johnson (1980) take all these conventional expressions around theory construction into consideration and argue that all of them cluster together under one basic metaphorical system of understanding', that "THEORIES ARE BUILDINGS". Several other important metaphors for the concept of ARGUMENT or THEORY CONSTRUCTION, including metaphors such as ARGUMENT/THEORY IS WAR, ARGUMENT/THEORY IS A JOURNEY, and so forth were considered but none of the other metaphors were able to provide the unifying framework provided by the metaphor of "theory as buildings/ containers". Their central point is that orientational metaphors of this sort are a chief means for understanding, "They organize our conventional language about arguments and theories because they constitute our understanding of argument, including how we will experience and carry on a rational argument" (p.)

A recent study by Quinn (1994) looked at the metaphors Americans use to talk about marriage. Based on hundreds of hours of analyzed discourse on the topic, she found that only eight classes of metaphor for marriage recur. They were metaphors of "*sharedness*", such as "I felt like a marriage was a partnership" or "We're together in this"; metaphors of "*lastingness*", such as "It was stuck together pretty good"; metaphors of "*mutual benefit*", such as "Our marriage is a very good thing for us"; metaphors of "*compatibility*", such as "The best thing about Bill is that he fits me so well"; metaphors of "*difficulty*", such as "That was one of the hard barriers to get over", metaphors of "*effort*", such as "she works harder at our marriage than I do"; metaphor of "*success*" or "*failure*", such as "We knew that it was working", or, conversely, "The marriage may be doomed"; and metaphors of "*risk*", such as "There are so many odds against the marriage".

This interesting finding, that the superficially varied metaphors that people used to talk about marriage are reducible to a very small number of classes was superceded by another intriguing finding., that these metaphors were further reducible to four image schemas of physical-world relations that were the "bases" for all the metaphors in the talks that Quinn (1994) analyzed. The four basic image schemas were the "entity"; "trajectory", "relation", and "container" schemas that tended to draw for their sources physical experiences such as the experience of travelling or the experience of making something.

As elucidated by Naomi Quinn:

> The "well made product," "indestructible natural object," and "secure possession" metaphors can be considered to instantiate an ENTITY schema, the "ongoing journey" metaphor a TRAJECTORY schema, the "inseparable objects," "unbreakable bond" and "covenant with God" metaphors a RELATION schema, and the "permanent location" metaphor a CONTAINER schema." These four schemas are the bases for all metaphors for marriage in the talk I have analyzed.
>
> (Quinn, 1994; p. 69-70)

Another insight offered by Quinn's (1994) study is a sense of how the few shared orientational schemas/metaphors that emerge at a preconceptual level from our experience of being embodied in this earth interact in dialogue to keep our inquiry going.

Her study involved interviews with 22 husbands and wives in 11 marriages. Each individual was interviewed separately for an average of 15-16 hours. All interviewees were native born Americans in their first marriages. They were selected to maximize diversity in terms of geographic origins, religious affiliations, ethnic and racial identities, occupations, educational backgrounds, and the age of their marriages.

Quinn (1994) notes that in talking about their marital relationships the speakers would stay with one metaphor for some time for describing their marriage and would after a point in time during the same interview use a different (or often contradictory) metaphor for symbolizing the same marital situation. In essence, she found that the description of marriage can "take expressions in variant schematic or ontological terms (p.). However, the transformations they would accomplish would involve essentially metaphorical instantiations of the four different basic schemas. These metaphorical instantiations (including contradictory metaphors) were adopted by speakers to describe aspects of the experience of marriage. The discussions of their marriage shifted from metaphors for 'marital compatibility' to 'difficulty' to 'effort' to 'success or failure' to 'risk'. Particular basic schemas appear to be adopted by speakers to foreground different aspects of the experience of marriage. "For example, the ENTITY schema objectifies the marital experience while the TRAJECTORY schema highlights changes in this experience" (p. 70).

Quinn suggests that these given metaphors recur in talk about domain such as marriage not because the metaphors themselves have become conventional and taken the form of institutionalized usage. It may be that the metaphors are reintroduced over and over again where the use of one metaphor leads frequently to its opposite and contradictory metaphor because they are instantiations of a culturally shared model of marriage and the ontological dilemmas that undergird the model. Reasoning about marriage follows the well worn tracks of quandaries posed by the cultural model of marriage. According to Quinn, the cultural model that people have of marriage constitutes the dilemmas people reason about and frames the solutions they reason to.

In the American model of marriage, marriage is expected to be shared, mutually beneficial, and lasting. Quinn (1994) argues that this particular constellation of expectations derives from the mapping of our cultural conception of love onto the institution of marriage and the consequent structuring of marital expectations in terms of the motivational structure of love. Because people want to be with the person they love, they want and expect the marriage to be shared; because they want to fulfill the loved person's needs and have their own needs fulfilled by that person, they want and expect marriage to be beneficial to both spouses in the sense of mutually fulfilling; and because they do not want to lose the person they love, but want the person to go on loving them forever, people want and expect their marriages to be lasting.

However, this constellation of marital expectations leads to certain felt contradictions which Quinn suggests are reflected in the pendulum like quality of swaying between metaphors for marital compatibility, difficulty; effort; success or failure; and risk. This derives from a contradiction that arises inevitably between the expectation of mutual benefit and that of lastingness in the American cultural model of marriage.

Fulfillment of spouses' needs, the expected benefit of marriage, is understood in terms of the mutual benefit expected of all voluntary relationships. Just as in other such

relationships, if one individual or the other is not benefiting from this one—i.e., experiencing fulfillment, he or she is free to leave it. However, another understanding , one special to marriage, is that it is not supposed to end. A variety of situations can initiate a felt contradiction between the expectation of marital fulfillment and that of a lasting marriage. The further expectation that marriage be shared is implicated in another, slightly different, marital dilemma, because sharedness can affect fulfillment. A couple must share common goals and interests, joint activities and interpersonal intimacy to some degree in order to be in a position to fulfill each other's needs. Yet, too close a marriage may threaten the ability of each individual spouse to meet his or her autonomous needs.

Quinn (1994) argues that this central contradiction in the model of marriage (achievement of a lasting and successful marriage in the face of the formidable difficulties of fulfilling one's own and one's spouse's needs) fuels the back and forth movement between metaphors of marital lastingness, sharedness, difficulty, effort and so forth.

The Dynamic Interplay of Metaphors in Conversation

Lakoff and Johnson do not explore the implications of embodied metaphors for the metaphorical structuring of extended conversations as Quinn (1994) has. Instead, they focus on short, separate phrases to serve as examples of how image schematas emerge from bodily experience and structure language and cognition at the micro level. What we propose to do in this paper is to put legs on their ideas, setting them inmotion, and seeing where they go when we follow them through time in conversations. We will also present a possible structure for the back and forth movement among image schemas as observed by Quinn (1994).

Our first example comes from an earlier paper by Boland (1992) in which several of Lakoff and Johnson's embodied images were proposed to interact dynamically over time as we engage in a conversation of inquiry. He proposed that the metaphor that a particular word participates in or points us to is itself ambiguous and subject to change during a conversational episode. The type of change he referred to was a sudden shift from one metaphorical reference to another, as in figure ground reversal. A word participating in one metaphorical complex would, through a process of dialogue, suddenly call another, quite different metaphorical relation of that word into play, and thereby change the image schema for the conversation.

The core bodily-based schemas he explored had to do with (1) the 'body as a container' and its derivative 'idea as container', especially the distinction of surface and deep in the container metaphor as it is used to frame our discussion of ideas and inquiry; and (2) the 'cycle of night and day' that we experience as alternating periods of light and dark, especially as we use the night and day cycle to frame our thinking about what we know and the quality of our knowledge.

We use the 'idea as container' schema to identify what is important, significant and enduring from what is superficial and temporary; what is true from false. We know 'deep in our heart' what is true, and we know 'not to judge a book by its cover'. We know that 'depth knowledge' is superior to 'surface knowledge'. Surface knowledge is

superficial, whereas depth knowledge is sophisticated and thorough. When we really know something well, we have penetrated to the central truth of the matter.

- He's just touched the surface of that question.
- She's deep thinker.
- Have we probed the issue deeply enough?
- You must get beneath the surface to understand the significance of this question.

These metaphors deriving from the 'idea as container' schema locate truth spatially, with the center of the container's space being the deepest, truest knowledge, and with the periphery or surface of the space being the less trustworthy kind of knowledge.

- The central point of his argument is...
- His thinking is really on the fringe of this issue.
- We need to get to the heart of the matter.
- Those ideas have been pushed to the sidelines.

Johnson (1987, p 119-121) also identifies the bodily experience of earthly cycles such as day and night, the progression of seasons, the waxing and waning moon and so forth as a source of shared experiential schemas. As with the container schema, we use these cycle schemas, especially the schema of night and day cycles, to generate metaphors of knowledge and understanding. Day is sunny and light, night is dark. Day is clear, night is unclear. When we want to understand something better, we try to bring some light to the subject. When we really know something well, we are very bright. When we lack knowledge or are unsure, we are in the dark.

- I now understand it as clear as day.
- Maybe he can shed some light on the subject.
- I didn't know about it, because they kept me in the dark.

Daylight is safe. Things are familiar and unthreatening during the day. Night is dangerous, unfamiliar and frightening. Evil creatures hide during the day and prowl for victims at night. Good people rise early at first light and work until dark, when their day is done.

- Let's wait to consider it in the light of day.
- His argument is murky and hard to follow.

A Metaphorical Conjunction — Sketch for an Engine of Inquiry

We can depict the 'container' and the 'night and day' schemas and their related metaphorical references as shown in Figure 1.

Schema	**Lacking Knowledge**	**Having Knowledge**
Container	Surface	Deep
Night and Day	Dark	Light

Figure 1. Two schemas of inquiry

The container schema uses a spatial metaphor. The larger the container the larger the space. Being in the center of the space means having a deep understanding or an in-depth knowledge. Being at the periphery of the space means merely having a surface understanding, or superficial knowledge. The night and day schema uses an illumination metaphor. The larger the area of illumination, the larger the possible area of knowledge. Being in a more brightly illuminated area means having a better knowledge. Being in a darker area means having less knowledge.

In the container schema, when we are at the surface and lack knowledge, we want to go deeper to achieve knowledge. In the night and day schema, when we are in the dark and lack knowledge, we want to seek light to achieve knowledge. These are the basic trajectories associated with each set of binary oppositions (see Figure 2).

Schema	**Lacking Knowledge**		**Having Knowledge**
Container	Surface	→ going deep to achieve knowledge	Deep
Night and Day	Dark	→ seeking light to achieve knowledge	Light

Figure 2. Metaphorical referents for seeking knowledge

However, as discussed above, words such as light and deep have multiple referents. We have taken 'light' to serve as referent for the space metaphor of the 'container' schema and 'deep' to serve as referent for the illumination metaphor of the

'night and day' schema, but in our ordinary language usage of these words, they are not univocal. These key words participate as referents in multiple metaphors. In this particular instance, we argue that the key words of each of these metaphorical structures participates in a subsidiary way in the other metaphor. That is, 'light' participates in both the illumination metaphor (as primary referent) and the spatial metaphor (as subsidiary referent). Similarly, 'deep' participates in both the spatial metaphor (as primary referent) and in the illumination metaphor (as subsidiary referent).

In order to seek knowledge, we try to cast light on a subject (primary referent), but light also refers to being light-weight, insubstantial, and superficial. Thus, it refers in a subsidiary way to the surface aspect of the container metaphor. Pushing too strongly toward the light or immersing oneself in the light increases the risk of going too far and becoming superficial and mere surface. This metaphorical reversal is shown in Figure 3. We will refer to the process of "going too far" with a metaphor as reaching a saturation with language.

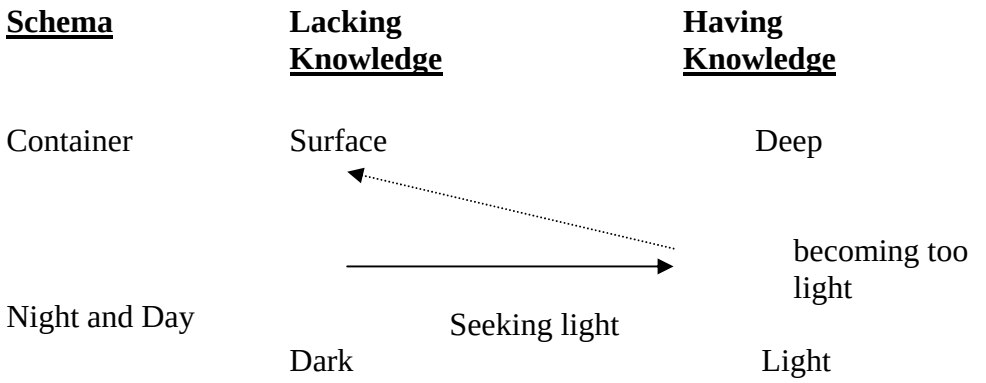

Figure 3. Switch of metaphorical referent from night and day to container schema after reaching saturation

Similarly, in order to seek knowledge we want to go deeper into a subject (primary referent), but deep also refers to the most isolated and darkest spot of a space and thus, in a subsidiary way to the dark aspect of the illumination metaphor. Pushing too strongly toward a deep understanding or overly embracing the deep increases the risk of going too deep, reaching saturation and becoming lost in the dark. Figure 4 depicts the reversal from being deep in the container metaphor to being dark in the night and day metaphor.

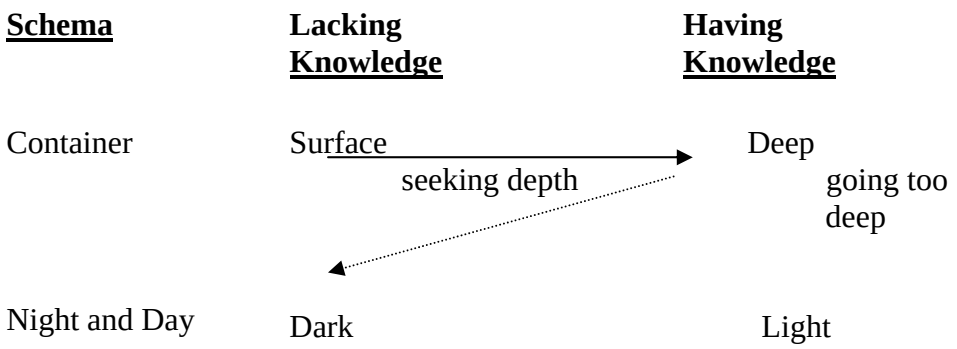

Figure 4. Switch of metaphorical referent from container to night and day schema after reaching saturation

When we put these two sets of reciprocally related primary and subsidiary metaphorical referents together we have the Engine Inquiry, a kind of perpetual motion machine for decision dialogue.

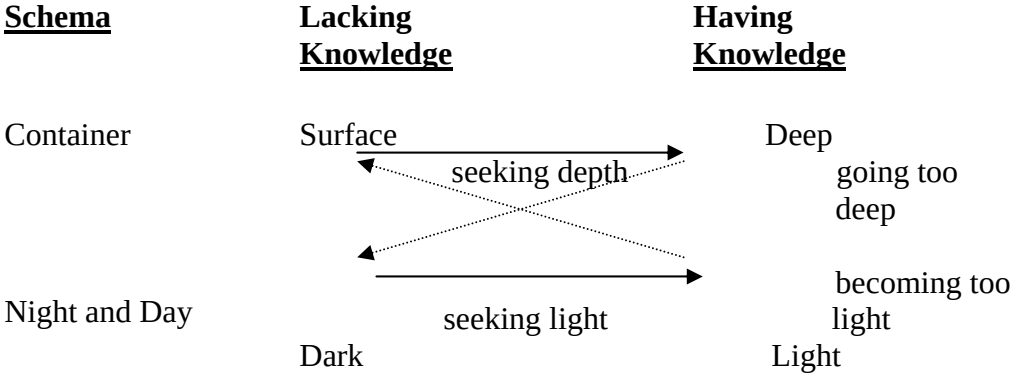

Figure 5. The Engine of Inquiry

In this system of reciprocally related metaphorical referents, the pursuit of inquiry through one metaphor brings with it a subsidiary reference that eventually increases in interpretive power and reframes the inquiry with an oppositely valent metaphor. Pursuing inquiry within one schema in order to increase knowledge creates the conditions that stimulate a switch to an alternative schema in which an awareness of our lack of knowledge is maximized, and the need for working toward knowledge in a new schema is most keenly felt. Yet, the basic trajectory of seeking knowledge by moving from one pole of a binary opposition to another, remains.

Metaphor as an Engine of Alternating Social Structures and Dialogues

We will now demonstrate how the dynamic interplay of metaphors and their binary oppositions can potentially explain the oscillation of organizational forms and discourses as reported by Leach (1954) and Barley and Kundra (1992). In each case the authors describe a wave-like oscillation between different social structures and dialogues of organization, without providing an adequate explanation.

In Leach's (1954) anthropological study of Kachin social structure, he identifies two distinct forms between which the Kachin people oscillate. One structure, Gumlao, is a form of democracy emphasizing equality of rank among all Kachins. The other structure, Gumsa, is a form of autocracy in which feudal chieftains are an hereditary aristocracy and demand tribute payments in goods and labor from commoners. The Kachins were hill people and the Gumsa social structure appeared to have been adopted by them from the tribal structure of the valley dwelling Shah people, who had a stable system of monarchy with a well established hierarchy of titles and positions.

Leach was especially intrigued that although Gumsa and Gumloa forms were unstable and the Kachin social structure oscillated between the two over time, both Gumsa and Gumloa structures used the same cultural symbols, rituals and myths, though with very different interpretations. Leach did not have a good explanation for this pattern of alternating structural forms in Kachin society. His thesis was merely that strong individuals in Gumloa type equalitarian communities who were eager to advance themselves copied the claims to aristocracy and titles of the Shah princes and established Gumsa structures. Over time, Kachins resented paying the food and labor demanded by the Gumsa chiefs and revolted, reestablishing a Gumloa structure.

Barley and Kundra (1992) argue that a similar pattern of alternating forms of organizing is reflected in the discourse of American managerial thought. Drawing on historical data since the 1870s Barley and Kundra suggest that the history of American managerial thought appears less a progression than a continued wrestling with two counterpunctual themes – the ideology of normative control versus the ideology of rational control. They trace the alternation between normative and rational control beginning with normative ideology of 'Industrial Betterment' that characterized the period 1870-1900; to the rational ideology of the "Scientific management" movement prevalent from 1900-1923; to the normative "Welfare capitalism/human relations", ideology holding sway from 1923 to 1955; to "Systems rationalism", the primary mode of thought from 1955 and 1980; and finally to the normative "Organization culture" movement that characterizes the 1980s to the present.

The proponents of normative control claimed that organizations are, or should be, collectives. Whether the dominant image was of community, group, or culture, each depicted the organization as a locus of shared values, and moral involvement. All three rhetorical waves under the normative ideology blurred the boundaries between work and non work and between managers and workers. Further, since the proponents envisioned cohesion and loyalty as the ultimate source of productivity, they exhorted managers to be leaders: to set an example, to inspire, to motivate, and to provide for the employees' welfare. As sentient social beings, employees were said to perform more diligently when they were committed to a collective whose ideals they valued. Control therefore rested on shaping workers identities, emotions, attitudes and beliefs in ways that are not too remote from the equalitarian notions of the Kachin's Gumloa structure as described by Leach.

In contrast, advocates of scientific management and systems rationalism that emphasized the rhetorics of rational control, argued that productivity stemmed from carefully articulated methods and systems. The firm was portrayed as a machine either mechanical or computational, that could be analyzed into component parts, modified and reassembled into a more effective whole. Managers were exhorted to be experts; to bring rational analysis and a body of empirical knowledge to bear on the firm's problems. Furthermore, the assumption was that employees were calculative actors with instrumental orientations to work. Employees were said either to understand the economic advantages of an efficient system or to be powerless to resist a well designed structure. Since compliance was therefore unproblematic, control could be readily exercised by manipulating systems. Again, the hierarchy of rational systems, though not hereditary, were similar to the top-down, dominant-submissive quality of Kachin's Gumsa structure.

How does one explain this continual alternation between the rhetorics of normative and rational control over the course of American Management history? Structural anthropologists (Levi Strauss, 1963; 1967; Needham, 1973; Mabury-Lewis and Almagor, 1989) have long maintained that cultures evolve around core ideas that are oppositional or dualistic in nature. These dualisms are said to define the ontological dilemmas that undergird everyday life, and fuel the semantics of everyday speech (Eisenstadt, 1989).

The central dilemma identified by early social theorists (Marx, 1906) concerned the integrity of the social fabric. How could relations based on utilitarianism and rational calculation remain integrated and socially fulfilling? It seemed that increasing differentiation would beget crises of integration and that increasing integration would beget crises of differentiation. Barley and Kundra (1992) suggest that questions of how to balance these opposing processes not only continue to motivate much sociological research, but appear to have become a central motif in western culture. Several anthropologists and sociologists have recently argued that all western societies treat traditionalism/rationalism and communalism/individualism dualistically (Eisenstadt, 1989; Abbott, 1990). Associated with each pole are opposing solutions to the problem of control; normative control and regimes of collective interest versus rational control and regimes of self interest.

We humbly submit that the bodily based, metaphorical quality of language, operating through reciprocally linked sets of binary oppositions, as in the "engine of inquiry" discussed above, may be work in producing and reproducing these alternating forms social structures and discourses. We propose that the wave-like oscillations between a rationalistic pole of self interest and an emotionalistic pole of communalism can be mapped onto a metaphorical structure based on the same four basic image schemas of Lakoff and Johnson (1980) that were identified by Quinn (1994) in her extended interviews with married couples. Using the same format as in the original "engine of inquiry" figures from above, we will show how the four image schemas of "container", "relation", "trajectory" and "entity" can account for the oscillation between these oppositional forms of social structure and managerial discourse.

In place of the "container" and "night and day" schemas used in the engine of inquiry, we will use the "container" and "relation" schemas , as shown in Figure 6.

Schema	**Lacking Social Order**	**Having Social Order**
Container	Inside	Outside
Relation	Separate	Together

Figure 6. Two Schemas of Social Order.

Here, the container metaphor applies to the self, not to knowledge as in the engine of inquiry. Being inside one's self is associated with a highly subjective, highly affective state. Being inside one's self is to be lost inside one's feelings.

- He's being controlled by his emotions.
- She's wearing her heart on her sleeve.
- His heart is ruling his head.
- She's lost inside of herself.

Being deep inside one's self in an extreme form results in a loss of self. In extreme forms, being lost inside one's self might be seen as being brainwashed as in a cult, or as obsessive like stalker.

The trajectory for one who is lost inside one's self is to step outside of the self. If being deep within the self with affect is to have a "warm and fuzzy" feeling, stepping outside is a way to "take a cold, hard look at one's self".

- He needs to gain a perspective on himself.
- She needs to have a cool head.
- He needs to see himself in the light of day.
- Look at yourself as others do.

The trajectory outside one's self is a movement toward reason. For Plato, being trapped inside a cave was a human's natural state, to move outside the cave was the dream of pure reason. For Descartes, reason and the mind were split from the body. To be able to imagine stepping outside himself and viewing himself in his rocker, before the fire in his study, was Descartes' first step to declaring "Cogito Ergo Sum".

The other core metaphor in Figure 6, the relation schema, has a bipolar structure ranging from separate to together. Once again, the subject of the metaphor is the self. Being separate is associated with being a loner, and in a strong form with being selfish.

- He is alone in his thoughts.
- She thinks only of herelf.

An extreme form of being separated would be a hermit. We see ourselves as social animals, and being separate is, in a sense, unnatural. Humans are supposed to be

with others. The trajectory for one who is separate, then, is to move toward togetherness with others.

- He needs a sense of belonging.
- Happiness is opening your heart to others.
- I found my true self with them.

We have arranged the container and relation schemas of Figure 6 so that the trajectory for the container schema is to step outside one's self to seek reason and thereby overcome being lost in affect within the self. The trajectory for the relation schema is to seek togetherness in community with others as a way to overcome thinking only of one's self. We pose these trajectories as a seeking of order. Stepping outside one's self is a seeking of order through reason, a rational order, and moving toward a relation of togetherness is a seeking of a communal order, a natural order. These primary trajectories are shown in figure 7.

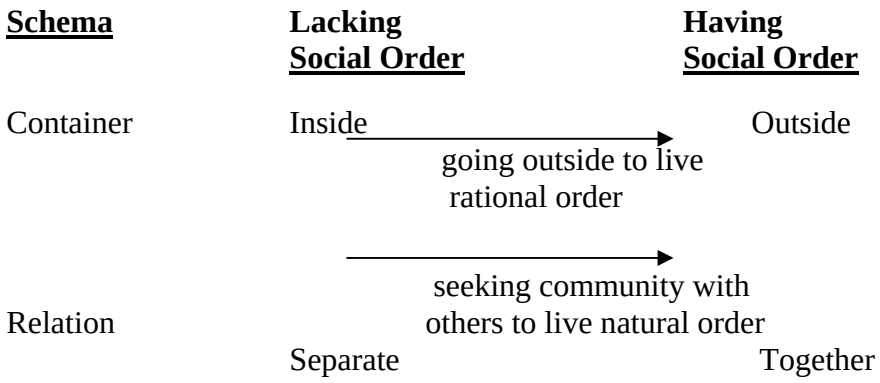

Figure 7. The trajectory schema of seeking social order.

As in the engine of inquiry developed above, we posit that the "container" and "relation" schema are operating simultaneously, not sequentially. They are both present when our conversation involves questions of self, other, reason and affect, but one will be in focal attention, the other in subsidiary attention. The conversation keeps going (as a kind of perpetual motion machine) because of the shift between focal and subsidiary schemas whenever one schema is pushed too far, and becomes saturated.

For the relation schemata of the engine of social structure dialogue that we are developing here, the switching points occur when seeking togetherness goes too far and the separate self goes beyond a finding of self in community to a losing of self in community. At the point of saturation, the degree of affect from giving one's self to a community reaches such an extent that one suffers a loss of self, like the member of a cult. At the saturation point, a switch to the container schema becomes likely, and a new trajectory of seeking to step outside one's self becomes possible (Figure 8).

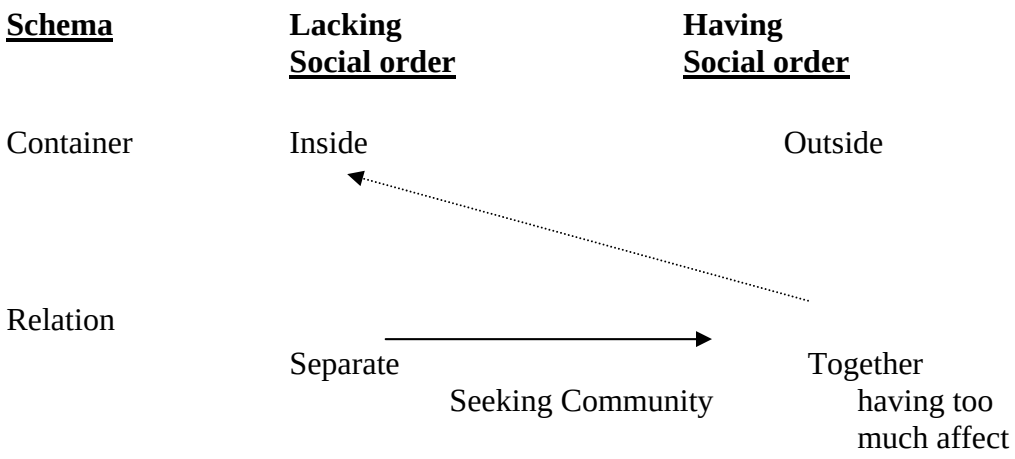

Figure 8. Switch of metaphorical referent from relation to container schema after reaching saturation.

Similarly, when the container schema is pushed too far and stepping outside one's self goes beyond finding reason to becoming overly calculating and selfish, a switch from the container to the relation schema can occur. The rationality achieved by going outside one's self leaves the self as isolated, alone and too separate from others. A new trajectory within the relation schema is called for in which the isolated, self-interested self seeks affect in community with others (Figure 9).

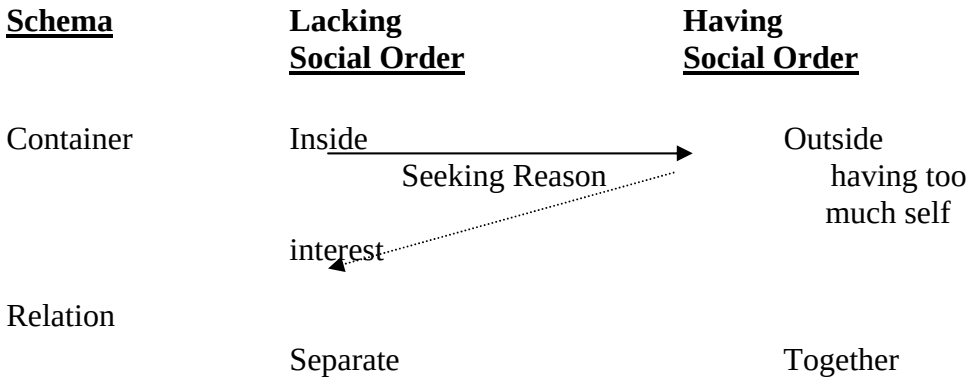

Figure 9. Switch of metaphorical referent from relation to container schema after reaching saturation.

We bring these trajectories and switching points together in Figure 10 as an engine of organizational inquiry.

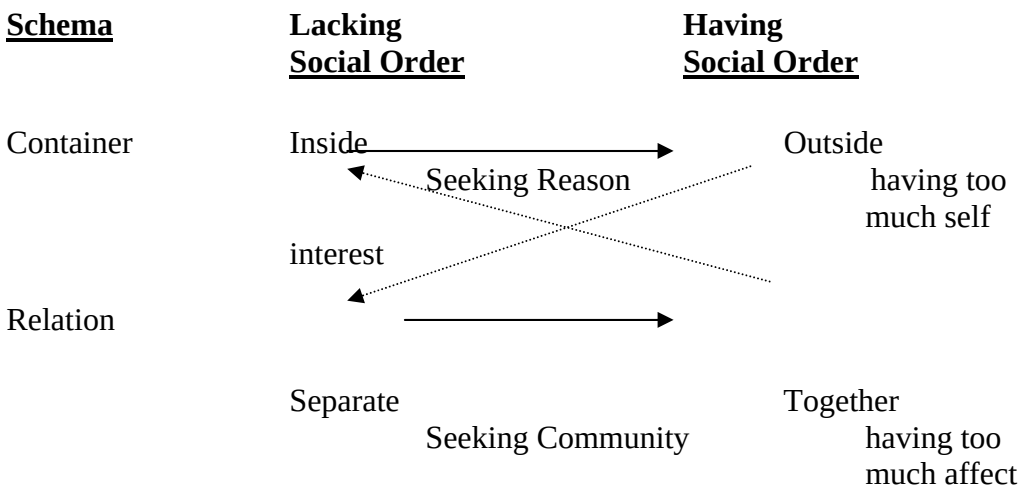

Figure 10. An Engine of Organizational Inquiry

We do not claim that this is the only such structure of bodily based image schemas which form an engine of inquiry relevant to organization structures. We imagine that there are many such metaphorical conjunctions in which sets of binary oppositions found in everyday talk have this pattern of use in which a trajectory in one image schema leads to saturation and a switching of image schemas. In the new image schema, which had been latent as a subsidiary referent of the words being used by the old, primary referent, the trajectory towards social order can continue, and the result is an oscillation.

We have used the tensions between affect and reason and between independence and community as the basis for the particular structures if image schemas we have presented. We imagine that other organizational contradictions and human experiences of dilemmas based on being embodied on earth also give rise to metaphorical conjunctions that are structure in language use as engines of inquiry.

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