Metaphorical Blends, Recruited Frames and Metaphors across Cultures

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ABSTRACT

The study of metaphor has become the focal point for the study of cognitive linguistics. Under this new theoretical framework, linguists are no longer interested in just studying the forms of language. They are focusing on how the mind organizes concepts and how schemas relate to grammatical theory and metaphor, in particular. This new approach is known as cognitive linguistics a special field within the cognitive sciences, and it provides a profound way of addressing issues of linguistic creativity, symbol systems, and cultural systems. This is accomplished by means of mapping icons, diagrams, and concepts to mental states.

Introduction

There are many theoretical changes taking place among the language sciences that directly impact on how scholars should view intercultural communication. One of the more interesting ones comes from the cognitive sciences, especially from cognitive anthropology (D'Andrade. 1995; Palmer, 1996; and Tyler, 1978). Many universities in the United States and Europe have created special institutes that bring together researchers from different disciplines to cross-train and investigate the implications of cognitive models of language. These sciences include the disciplines of artificial intelligence, neuroscience, psychology, philosophy, linguistics, and anthropology (Gardner, 1987: 36-39). The earliest models of cognitive linguistics were based on the work of Noam Chomsky and his view of innate language faculties (Fodor, 1975; 1973; Pinker, 1994; 1997). Reactions to this earlier model emerged from several language related disciplines (Newmeyer, 1987: 99-126). In

these earlier denunciations of autonomous syntax, George Lakoff merits recognition as the founder of an alternative model of cognitive linguistics (Lakoff, 1989; 1999; Lakoff and Johnson, 1980; 1999). His approach to language followed a different tradition (Tyler, 1978; D'Andrade, 1995; and Fillmore, 1975). This new tradition focussed on how concepts are organized through language (Gardner, 1987: 340-359). The work of Gilles Fauconnier (1985, 1997) of the Department of Cognitive Sciences at UCSD follows in this tradition of the new psychology. He has developed an interesting model of mental spaces that explains the inner workings of linguistic creativity [1]. The implications of the new cognitive linguistics are discussed within the context of the cognitive sciences (Barsalou, 1992, 1998; Calvin, 1989; Edelman, 1987, 1989, 1992; and Tomasello, 1998). Prior to investigating the model of mental spaces and its implications for metaphorical analysis, it is necessary to first look at the semiotic foundations that underlie the cognitive sciences.

The Semiotic Quest

Modern linguistics grew out of the work of Ferdinand de Saussure around the turn of the last century (Koerner, 1972). This was especially true of earlier models of linguistic structuralism. Saussure (1968) redirected his own research away from diachronic models of language to the study of synchronic systems (Saussure, 1971). It was also at this time that he created the semiotic concept of the linguistic sign. It was a model of language couched within the psychological framework of association theory. A sign, he noted, is a connection between an idea or meaning and its linguistic form. The meaning of a sign (the signified) was paired with its expression or form (the signifier). Saussure went on to explain that the same meaning could have various forms. The same idea, for example, can be expressed through other forms of expression such language, dance, music, or art. As time passed, later researchers were to expand on this concept and create semiotic approaches to a wide range of disciplines. Language structure provided the motivation for the study of other forms of human expression: art (Burnham, 1971: Goodman, 1976), dance (Ajayi, 1998), music (Robson, 1959), painting (Johnson, 1969), the folktale (Propp, 1958), film (Metz, 1974), and culture (Lévi-Strauss, 1949, 1964, 1967, 1968, 1972). There were several interesting assumption associated with this early model of semiology. Saussure argued that the relationship between the meaning and the form of a sign is arbitrary, it is just a matter of social convention.

What is interesting about the cognitive sciences is that they no longer use this model of signs. There are two approaches to cognitive linguistics and were influenced either directly or indirectly by the work of Charles Sander Peirce (1931-1958). Transformational grammarians, for example, use a system based on the writings of Charles Morris (1946). Although Morris attempted to capture the Pericean Trichotomy of Representem, Object, and Interpretent, he failed. he

substituted Interpretent with Interpreter and what emerged from his writings was a different system based on relationships among Syntax, Semantics, and Pragmatics. Those who follow the earlier models of cognitive linguistics use the system developed by Morris. Those who follow the more recent model of cognitive linguistics follow the Peircean Trichotomy. This is especially true of cognitive anthropologists (Tyler, 1978; Palmer, 1996). Those who work in the arts also favor the Peircean system of signs. For them, icons were representations of pictures and diagrams resembled the structural properties of the objects that they depicted. Speakers of logographic languages such as Chinese, Japanese, and Korean do not concur with this Saussurean assumption about the arbitrary relationship between icons What is interesting about the work of Hiraga (2000, 1.2.1) is that she reiterates this challenge. Many signs are motivated, especially icons. Her contribution will be discussed under mental space theory. Before discussing this topic further, it is necessary to consider the work of Charles Sanders Peirce (1931-1958) and his contributions to semiotic theory.

The Peircean Trichotomy

About the time that Ferdinand de Saussure was creating his model of semiology, Charles Sander Peirce was writing about the same topic, but with some important differences. In contrast to the Saussurean dichotomy between a signified and a signifier, Peirce argued that there were three kinds of relationships involved in a sign. **A sign (A) stands for an object (B) to an interpretant (C)**. The role of the interpretant is important in his theory of semiotics because nothing is a sign unless it is seen and understood as a sign. Peirce divided his trichotomy further into signs of nature (qualisign, icon, and rhema), signs of fact (sinsign, index, and dicisign), and signs of culture (legisign, symbol, and argument).

System of Trivalent Signs: Charles Sanders Peirce

	Firstness	Secondness	Thirdness
	Universe of Possibility, **Signs of Nature** (pre-perception)	Universe of Existence, **Signs of Fact** (perception)	Universe of Discourse, **Signs of Culture** (post-perception)
Representem	**Qualisign**	**Sinsign**	**Legisign**
Object	**Icon**	**Index**	**Symbol**
Interpretant	**Rhema**	**Dicisign**	**Argument**

This way of describing signs follows from his concept of Firstness (monadic signs that do not relate to anything and still form the basis for the creation of meaning), Secondness (the dyadic signs by which man interprets nature), and Thirdness (the triadic means by which culture determines how one interprets meaning). Thellefsen (2000a, 2000b) notes that Firstness has to do with pre-perception (signs of nature), Secondness has to do with perception (signs of humans), and Thirdness has to do with post-perception (signs of culture). This view of Peirce is consistent with his model of phaneroscopy, his version of phenomenology. Phaneron includes all that is present to consciousness. Unlike European phenomenologists, he did not distinguish between objects of thought and objects of sensate (sential) experience. All are objects of consciousness. These objects present themselves to consciousness as monads (Firstness), dyads (Secondness), or triads (Thirdness). Unlike Immanuel Kant, his phenomenology did not address things in themselves (*die Dinge an sich*). His signs dealt with objects of consciousness. It should be noted that in his earlier writing, Peirce was a nominalist (one who believes that only particulars are real) and advocated Hegel's logic based on the dyadic relations of thesis, antithesis, and synthesis. After reading Darwin (his contemporary) and comparing his views on evolution to those of Cuvier and Lamarck, Peirce decided on the views of Lamarck in evolution was based on the construction of universals or general at work in the universe. According to Peirce, all evolved from nature and into the mind. Hence, there is a continuity between mind and matter, this monism is characteristic of his thought. Hence, Firstness evolves into Secondness, and finally into Thirdness. This pattern of evolution requires a trivalent logic of sign, object, and interpretant (Ransdell, 1986). Lévi-Strauss, it should be noted, also believes that semiotics has to do with the transformation of nature into culture, but his model is dyadic and not trivalent.

Sign (A) stands for an object (B) to an Interpretant (C)		
The Sign A	The Object B	The Interpretant C
Representa men The form that the sign takes in the mind	The immediate object to which the actually sign refers	The interpretant (not interpreter), the sense made of the sign. It was Charles Morris who misunderstood Peirce and viewed the interpretant as the interpreter of the sign. Peirce, like Frege and Husserl, was trying to counter the rise of psychologism and wanted to avoid issues of agency in his model of sign functions. He used interpretant as a way of shifting agency to the sign itself.
A sign stands for something or someone	The sign stands for something, an object. It does not stand for that object	The sign addresses somebody or something and creates an equivalent sign in the mind, the interpretant of the first sign.

in some respect or capacity.	in all respects. It is There are two kinds of objects: dynamic and immediate. Dynamic objects occur in nature and immediate objects are semiotic or immediate objects.	
A potential sign	An actual sign	A cultural or conventional sign
Monadic Mode, A can exist independen tly	Dyadic Mode, A and B are connected	The concept of mediation where A and B are brought into relation C

Peirce goes on to develop three modes or categories of relations between signs and their objects: icons, index, and symbol[2]. These are the signs of humans and have to do with the relationship of the sign to its object.

Sign	Defining Characteristic	How Meaning is Achieved
Iconic Mode	An icon is a sign that represents an object by its similarity to that object. A photograph is an icon. A is an icon of B.	Icons resemble objects. They bear some kind of similarity to them.
Indexical Mode	An index is a sign that represents its object by its existential relationship to that object. Smoke is an index of fire because there is a causal relationship between A and B. A indexes B.	The index points to an object. There is a contiguity relationship (spatial or causal) between the sign and the object. For example, a thermometer is an index of air temperature.
Symbolic Mode	A symbol is a sign that refers to an object because of a custom or law or tradition. Language uses symbols. A is a symbol of B. Symbols denote their objects by means of an index and the represent their objects by means of icons.	The symbol is a sign that has achieved cultural or social status. It is based on a relationship based on custom, law, tradition, or a judgment.

In her discussion of the Peirceian trichotomy, Hiraga (2000 2.2.3) notes that what is important about this classification of signs is not its nomenclature, but its manifestation[3]. She notes that a picture is an icon, but when that represents a person known to the viewer, it becomes an index. Similarly, language is symbolic, but when language is used to point to someone by means of pronouns or demonstratives, it becomes indexical. Furthermore, she notes that all three modes can co-exist and when that happens, one of them is predominant over the others. The major contribution to cognitive semiotics, however, comes from Hiraga's reanalysis of iconicity within the context of Mental Space Theory.

The Significance Of Iconicity

The most interesting contribution made by Peirce to semiotics comes from his further discussion of icons and how they relate to images, diagrams, and metaphors. In images are icons that are characterized by mimicry. Peirce calls this the First Firstness (the first of the icons). Diagrams are icons that are characterized by analogous relations to the object involved. Finally, metaphors are icons that represent a parallelism. It is important to note that metaphors in this system are not treated as symbols, but as icons. This is because Peirce did not fully address the role of metaphor in his writings. This will be discussed shortly.

What is interesting about this model is that it allows for both bottom-up and top-down approaches to human information processing and this has interesting implications for a model of cognitive semiotics. Signs that are motivated such as icons show evidence of a bottom-up approach to concept formation. Signs of Firstness (Signs of Nature) and Signs of Secondness (Signs of Fact) are candidates for this approach. Signs of Thirdness (Signs of Culture), on the other hand are conventional provide evidence for a top-down approach. It is interesting to note that in his lifetime, Peirce began as a behaviorist and gradually espoused Gestalt Psychology. He was not involved in cognitive semiotics and this assertion about how his model of signs would approximate a human information system is speculation on the part of this author. Hence, one needs to readdress the categorization of metaphor as icons or symbols in the light of recent research on metaphor. Fauconnier (1997) views metaphors as symbols even though they are motivated as icons of resemblance and are diagrammatically structured.

Images, Diagrams, and Metaphors are Icons. Symbols are represented by means of Icons.		
Type of Icons	Relationship to Object	What is Related to What?
Images	Mimicry between sign and object	Images resemble their objects by mimicry, by partaking of some of the simple qualities of the object, their substance.

Diagrams	Structural analogy between sign and object	Diagrams exhibit structures analogous to their objects, but not their substance. A model of the solar system is a diagrammatic representation.
Metaphors	Parallelism between source domain and target domain	Metaphors represent a parallelism to something else. They differ from images and diagrams because they require something else, a third thing in addition to A and B. This third thing is a concept. Metaphors draw parallels between concepts and not between objects. Metaphor depends on convention.

In spite of all of his contributions on the iconicity of images and diagrams, Peirce did not elaborate on the iconicity of metaphor. Hiraga (2000:2.3) has directly addressed those issues. In her research, she documents how pictures are mapped into diagrams and how these are further developed into image-structures within the mental space model. It is now time to turn to that model in order to further understand how metaphor and iconicity work together as iconic moments.

Contrastng Models Of Cognitive Linguistics

As noted earlier, an interesting approach to the study of metaphor can be found in the work of Fauconnier (1985; 1996). What makes this approach interesting is that it further articulates how the complexities of meaning and form are related to each other. He follows the functional model of cognitive linguistics developed by Lakoff (1987, 1998, 1999). These works are significant because they broke away from this tradition of autonomous syntax that dominated earlier models of cognitive linguistics. He claims, for example, that language is not about the organization of forms, but about the organization of concepts[4].

The Two Major Models of Cognitive Linguistics		
Formalist Paradigm:	Noam Chomsky	Autonomous Syntax, Language as Innate Structure. Morris trichotomy of syntax, semantics, and pragmatics.
	Jerry Fodor	Syntactic Modularity, Mentalese (thought is immanent in language)
	Gerrald Katz	Lexicon as a repository for cultural and social information, Semantic Interpretation (thought is immanent in language)
	Ferdinand De Saussure, Louis Hjelmslev, Noam Chomsky	Tropes belong to figurative language and formalists are only concerned with literal language.

Functionalist Paradigm	Ronald Langacker George Lakoff Charles Fillmore Leonard Talmy	Schemas, Frames, functions, and Prototypes
	Bernd Heine Max Plank Institute	Grammaticalization (the creation of new linguistic categories diachronically)
	Stephen A. Tyler Roy D'Andrade Aaron Cicourel Leonard Talmy	Lexicon provides signs that are used to point to meanings that are physical entities, mental entities, actions, acts, and relationships. Meanings are negotiated through social and cultural interaction. Thought transcends language. Ideas and images occur independently of language. Hence, auditory schemas, visual schemas, kinesthetic schemas, conceptual frames, and prototypes underlie thought.
	Raymond Gibbs, George Lakoff, Stephen A. Tyler, Gary Palmer, Charles Sanders Peirce	The distinction between figurative and Literal Language does not exist. Much of everyday language is figurative. Signs signify their referents and do not represent them.

Lakoff employs the concept of grammatical frames. Frames are not new to cognitive psychology. The classical work on schema can be found in the research of Shank and Ableson (1977). Since then, Minsky (1985), Mandler (1984, 1985) and others have contributed significantly to this model. Lakoff envisions schemas as bounded, distinct, and unitary representations that organize experience. A schema is developed as a result of prior experiences with a particular kind of event. Schemas are abstract representations that act as processing mechanisms and enable one to comprehend events that they activate. Fillmore (1975: 123-131) described linguistic schema or frames as an abstract outline that leaves many positions blank so that the details are filled in when new scenes are introduced. A schema where all of the positions are filled in with default values is known as a prototype. In Fillmore's model, the text-internal world is filled in by aspects of scenes that are never identified explicitly in the texts. He uses as an example of cultural frames or schemas the Japanese *kaku* and English *to write*. Both appear to be translations of each other in that they evoke the concepts of a writer, an implement, a surface on which traces occur, and a product. However, these words are not translations because they emerge from different schemas. In Japanese, *kaku* means 書. It could mean to write a sentence, a word, a character, a sketch, or a doodle. In English, *to write* is restricted to the concept of language. Writing cannot include pictures, charts, graphs, or doodles. In the English schema, the kind of implement is not specified.

It could be a pen, a pencil, a typewriter, a computer, or even a plane as in skywriting. Hence, the writing schema is an organized framework of objects and relations, which are to be filled with concrete details. Furthermore, these schemas can be embedded into other schemas such as an entity that one is trying to communicate (authors, English, paper). What is important about schemas is that they relate different domains to each other[5]. Writing schema relates pencils to paper, chalk to blackboards, and manuscripts to English[6].

Cultures differ in how they organize concepts. This has been evident in the study of grammaticality. The older view that all languages share the same linguistic categories no longer be sustained in the light of research on grammaticality (Heine, 1997). This is because many of the linguistic forms that linguists assumed to be universal, are derived structures. The sequence of Verb + Time Word in Old Latin, for example, conflates into Verb Stem + Tense Ending. Nouns + postpositions emerge as Nouns + Case Endings. The emergence of such derived structures are numerous easy to document. As Heine (1997: 3) noted, the main function of language is to convey meaning and linguistic forms are used to express these deeper constructs. Hence, it is not surprising that languages invent new structures through time in their organization of concepts. In English, for example, prepositions are a rich source of abstract image schemas. In Spanish, on the other hand, verbs provide many of same functions (Heine, 1997: 92, 103-104). Rather than explaining sentential structures merely as constraints on grammatical forms, the functional cognitive linguistics approach accounts for many such constructions in terms of cognitive functions such as the spatial relation between figure and ground. Consider, for example, the following systematic patterning in English (Croft, 1998: 85-86):

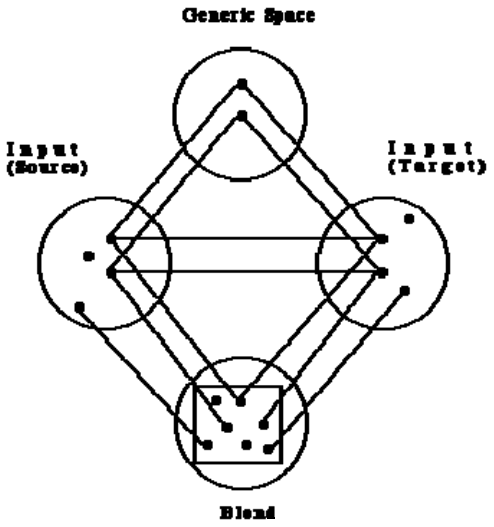
a. John loaded watermelons on the truck.
b. John loaded the truck with watermelons.

In sentence (a), the figure (that which is profiled) is the direct object and the ground is the oblique phrase governed by a spatial preposition. In the (b) sentence, the ground is the direct object and the figure is an oblique phrase governed by *with*. What accounts for these constructions is the fact that an agent (John) acts on the figure to alter its relationship to the ground. In sentence (a), the figure is the direct object because the ground is constructed as subsequent to the figure in the causal chain. In sentence (b), on the other hand, the ground is the direct object and the figure is oblique because the figure is construed as antecedent to the ground and hence must be governed by the antecedent preposition *with*. Grammar does not have to do with the structure of forms, but with the structure of events (Croft, 1998: 81-82).

Mental Space Theory

Mental Space Theory developed out of this cognitive tradition and provides a representational model of how people create conceptual arrays when they think or express ideas through language or non-verbal communication. It is a model predicated on the assumption that people organize their ideas locally in mental spaces in order to understand or perform actions. In this regard, it shares a common interest in gnoseology with the Peircean trichotomy of signs. However, instead of limiting itself to the study of underlying concept, it is concerned more with the systematic analysis of conceptual frames and mental structures used to understand the world. It also incorporates epistemology, a theory of knowledge, into its model of mental space configurations. These scenarios can be imagined, perceived, or remembered.

Fauconnier (1985) uses the mapping of cognitive space as an epistemological organizer of mental space. He accomplishes this by establishing four mental spaces: the source domain, the target domain, the blended space, and the generic space. These uses of visual space as epistemological organizer of mental space are important for both oral and print cultures. The first two spaces of importance are the source and the target spaces[7]. From these one creates a new mental space, a blend. This new space becomes the foundation for drawing inferences, and elaborating ideas. Just how these spaces are connected is provided in the enclosed diagram (infra). The inputs spaces (the source and the target) are cross-mapped. Consider, for example, the metaphor of the surgeon is a butcher (Fauconnier and Turner, 1996: 144). One domain is about the surgeon (the source) and the other is about the butcher (the target). These domains are connected to their own generic space that contains generic information about these roles[8]. Hence, each of these inputs (source and target spaces) comes with its own knowledge frame. Surgeons operate on patients, they use instruments such as scalpels, the task is performed in operating rooms, and the goal of the surgeon is to heal the patient. Now, butchers also have knowledge frames. They use cleavers and not scalpels. They work in butcher shops



and their goal is to severe the flesh of a carcass. When these two domains are brought together into a blended space, they create a new concept: a surgeon who is being compared to a butcher. In this new space, however, the surgeon is seen as incompetent. What has happened here is that a new value has emerged from this blend[9]. The role of the surgeon and the role of the butcher combine to create a new role found in the generic space. This new role assists in the articulation of the blend. New structures may emerge from the integration of the four mental spaces (this is represented by the box in the blend space).

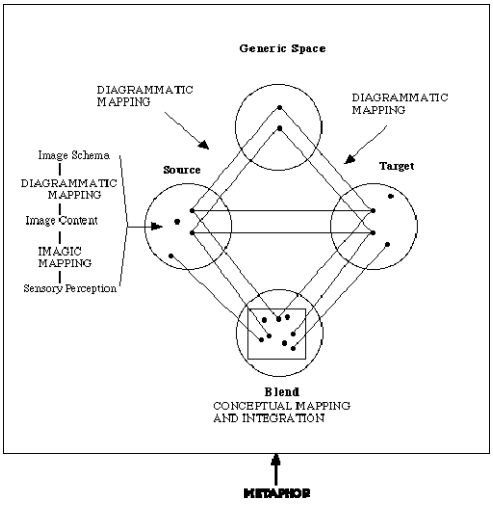
The Cross-Mapping of Input Spaces		
Generic Space	Source: surgeon	Target: butcher
Intent	Save lives	Dismember carcass
Instrument	Use scalpel	Use cleaver
Manner of Use	Precise, skillful	Inexact, casual
Object	Patient	Carcass
Location	Operating room	Butcher shop

When these input spaces are blended, one comes up with a new mental space in which the surgeon still uses an operating room, he is a surgeon but acts like a butcher, he has a patient but treats it like a carcass, and he is incompetent. There is much more to blending than bringing two domains together, composition, completion, elaboration. First, composition involves the projection of contents from the input into the blended space. Next, completion takes place and involves patterns in the blend that need to be filled out or completed. Elaboration is a simulated mental performance of the event in the blend.

Mental spaces are not part of language or grammar, but constitute tacit levels of linguistic representation that enable one to better understand many of the perplexing problems of linguistic philosophy, viz., opacity, attributivity, intentional identity, presupposition projects, counterfactuals, and comparatives (Fauconnier and Sweetser, 1996). The construction of mental spaces revealed that language is not merely interpreted with respect to worlds, models, and situations, but it is involved in modeling scenarios of events and entities that blend meanings and create emergent structures and values of its own[10]. It is involved in building up mental spaces, the relationships between them, and the relationships within them. What makes this study of mental spaces different is that it is based on the notion of pragmatic functions. These are mapping functions between domains that have been established within the contexts of social pragmatics, an ideal cognitive model. Hence, pragmatic connectors operate onto the present mental objects to establish new spaces or domains. These parent and daughter spaces can be built up through the use of various linguistic devices.

The Mapping Of Icons: Images, Diagrams And Metaphors

When Peirce created his taxonomy of object signs (icon, index, and symbol), he expanded icons to include images, diagrams, and metaphors. All of these subtypes of icons share similarities in representation. An image, for example, represents the simple qualities of an object and is mimetic. A diagram represents the structural relationships within an icon, and is analogical. It resembles the structure of its object. Metaphors, on the other hand, differ from images and diagrams by requiring the existence of a parallelism to something else besides a sign and its object. This something else could be an idea or another construct. What is established between these two concepts in a metaphor is their parallelism. When one says, "the surgeon is a butcher," he claims that there is a parallelism between the mental space of the surgeon and that of the butcher. These mental spaces are blended together to create a blend, a new mental space. Hence, a metaphor, like an image or an analogy, is what it represents. In this model, grammatical constructions are metaphors because they represent orientational schemas of how ideas are organized in language.



上げる ageru (to give), 上 ue (above)
下さる kudasaru (to give), 下 shita (below)

In Japanese, there are two forms of the verb "to give." One is used by someone of a lower status who gives something to one of a higher status (*ageru*). The kanji character for this verb is the same form as "above." When a person of higher status gives something to someone of a lower status, the other form of "to give" is used (*kudasaru*). The kanji character for this verb is the same form as "below." The concept of status is motivated in both of these icons. At the level of moraic structure, these words can be written in a hiragana syllabary.

What is interesting about the work by Hiraga (2000: chapter 2) on iconicity (images, indexes, and metaphors) is that she has openly challenged the Saussurean

claim about the arbitrariness between meanings and forms. It may appear that metaphors are established solely by convention, but this claim needs to be reinvestigated. Metaphors are icons and share much with other icons, images and diagrams. Contrary to what Saussure says the relationship between and image or a diagram and its meaning is not arbitrary. Images and diagrams are motivated by sensory motor experiences. Hence, it is not surprising to find that many kanji characters in Japanese retain their imagistic and diagrammatic content. In her study of Haiku poetry, Hiraga (2000: chapters 3-4) demonstrates how the Japanese language manifests mappings of image-schema which she refers to as "iconic moments." There are three systems of expression in Japanese: *kanji* (words of Chinese origin), *hiragana* (words of Japanese origin), and *katakana* (words of foreign origin). An image-schema that resides in the meaning component in a cognitive linguistic model may be mapped onto a logographic form (*kanji*) or moraic forms (a *hiragana* or *katakana* syllabary). These mappings perform different functions. The syllabary is used to express moraic structure just as an alphabet is used to convey syllable structure. Chinese logographics, on the other hand perform special iconic functions involving non-arbitrary relationships to images and diagrams. The logogram for a "tree" *ki* in Japanese is not arbitrary. It was historically motivated by the image of a tree. Its diagrammatic structure resembles the original pictographs found in the ancient writing systems of China. Not all kanji characters still represent the imagistic or diagrammatic content of their original formulations. There have been many linguistic reforms along the way and many Japanese radical forms have become highly diagrammatic, especially those icons that are based on picture writing (Mayan hieroglyphics, Egyptian hieroglyphics and Chinese logograms). Upon closer examination, many writing systems are motivated by iconic representations. In English, for example, the spelling system captures a strong system of lexical stratification. One can readily tell lexical origins of a word from its spelling. Words with <*gh*> signify Germanic origin, "light, night, fight." Words with <*ph*> signify their Greek origin, "philosophy, physics, phrase, phoneme." Although the structure of English orthography was established by convention, it is not totally arbitrary but demonstrated evidence of lexical organization since its inception that was based on Old English orthography. When the Spanish language underwent orthographical reform, it lost all of its information on lexical stratification, "filosofía, física, frase, fonema." In the case of the Japanese logograph for tree <*ki*>, the iconic representation is motivated as its is an icon that is diagrammatic of a tree.

Metaphors Across Cultures

In a recent article (St. Clair, 2001), the implications of research in cognitive linguistics was discussed. In that article, the author used the metaphor of "John is a

tiger" to briefly provide an account of mental spaces. This same metaphor is discussed here in greater detail, but more importantly across diverse cultures. When one claims that "John is like a tiger," he is offering a simile that something is like something else. When one says, "John is a tiger," he is connecting two conceptual spaces and blending them into a third space where the meaning of the metaphor can be found. One of the input spaces in the model of mental spaces is a source and the other is a target. In the mental space model, there are lines connecting the domain of John and the domain of the tiger. These are cross-mappings that relate both input spaces to each other in terms of their conceptual arrays.

Conceptual Arrays	John –Target of Metaphor	Tiger – Source of Metaphor
Species Characteristics	Human Two-legged Walks upright Limited body hair	Animal Four-legged Walks on all four legs Covered by fur
Gender	Male	Male
Habitat	Lives in the city Omnivore	Lives in the jungle Carnivore
Interpersonal Relationships	Has a girlfriend or wife Dates women	Has a many female partners Stalks prey
Personal Traits	Can be aggressive	Is aggressive

These two input spaces are brought together in a blend where some of these cross-mappings are retained and merged into the metaphorical world where "John is a tiger." It is in this blended space that linguistic creativity occurs. It is also in this space where new features or structures can emerge. The result is a new mental space or a new concept in which "John" is metaphorically a "tiger."

Blended Space
John is a human but acts like an animal (the tiger), John lives in a city, John is an omnivore, John has a girlfriend, John is a male
Emergent Features: John is sexually aggressive, John stalks women, John is a beast

The box that one finds in the blended space represents emergent features or concepts. The concept of emergence is very interesting from a systems science perspective. Scholars who develop such models are quick to point out that features exist at one level of organization and not at lower levels. They assume that emergent features exist, but do not explain how they emerged (Buckley, 1967; Busch and Busch, 1991; Churchman, 1968; Dillon, 1983; Luhman, 1995; and Miller, 1978). This model accounts for that factor. It says that emergent features or

concepts arise from the blending of conceptual arrays. The reason why this theoretical construct was not noticed in the past is because systems theorists explained their networks from the top down, from higher components to lower ones.

Several theoretical problems occur when one comes to the realization that this metaphor can be understood in many different ways across cultures and the reason for this is simply that each culture provides its own generic space, its own recruited frames, and its own knowledge structures. These factors are all organized at the generic space level and impacts on how input spaces are to be blended. It is interesting to consider some of these possible scenarios across various cultures.

In the United States, tigers can be found in zoos. They do not impact on the daily lives of its citizenry. Consequently, the cultural frames for the tiger is biological rather than cultural. If any cultural frame occurs at all, it comes from children's stories and not from live experiences or encounters with this animal. For North Americans, the tiger is a biological entity and not a cultural one. *Panthera tigris* is the largest of all cats, much larger than a lion. It is found in the forests of Asia and has five subspecies: Siberian (China, North Korea, and Russia), Sumatran, Indo-Chinese, Bengal (India, Bangladesh, Nepal, and Myanmar) and South Chinese. Most North Americans envision only one of these species, the Bengal tiger. This, it turns out, is their prototype for "Tigers."As noted below, in each of these regions, local knowledge of tigers is used to create input and generic structures that are to be used in the blended space.

In Southern Asia, the story is different. In Northern India, the tiger is associated with the Hindu goddess Durga. She is associated with the tiger. Even her consort, Shiva, wears a tiger skin around his hips. The tiger was her vehicle and she appears on the back of a tiger during her fourth incarnation, the *Changraghanta*. This event is celebrated in October for nine nights and is known as the Navapatri (Sanskrit *nava* nine and *patri* night). There are many stories about tigers in Indian folklore. Bhadra of the Buddhist scriptures, for example, a cousin of the Buddha and one of his great disciples, was often seen accompanied by a tiger. What does this metaphor mean in Indian culture? Obviously, it has very different connotations from the English example. The tale of Lord Shiva who was commonly saluted as Shambo entered European literature in 1889 (Helen Bannerman) as the story of *Little Black Sambo*. The cultural connotations of the original story were lost and it was seen only as a racist literary tale. Hence, the tiger is connected to specific events in the cultural history of Buddha. It is a chapter in the story of the involution and the evolution of the spirit during the journey of reincarnation. Tibetan folklore has a similar cultural connotation in which Dombi Heruka or Dompipa, one of the 84 tantric masters was known as a tiger-rider. This knowledge frame means that the metaphor of "John is a tiger" would conjure up different connotations and metaphorical blends in India.

Tigers in China are used in their iconography to stand for the four cardinal directions. White tiger represents the earth, the west and therefore the afterlife. It is

also what the Chinese call the constellation Orion. Blue tigers represent the east, fertility, and vegetation. Red tigers represent the south and fire. Yellow tigers represent the sun at the center of the four cardinal directions. The cultural folklore of the tiger continues with other kinds of symbolism and frames of knowledge. It is one of the twelve animals of the Chinese calendar and stands for strength, courage, and perseverance. Tigers drive away demons and Feng Shui practitioners often use the *CH'I* of the Tiger in this way. Furthermore, the head of a Tiger is used to terrify the enemy as evidenced in the Tiger dance ritual. Chinese deities also ride tigers as evidenced by the Taoist Immortal, Chang Tao-ling. The Tiger is the third sign of the Chinese Zodiac and is thought of as the rule of the earth. The Dragon, his counterpart is seen as the ruler of the sky. The Tiger is a yang animal and when mated with the Phoenix, they comprise the perfect couple, man and wife. Not surprisingly, the Tiger, a symbol of natural born leaders, is also the symbol of the Emperor.

The recent motion picture, "*Crouching Tiger, Hidden Dragon*" has cultural connotations that totally escape adequate interpretation from the cultural perspective of the west. Dragons are libidinous. They are supernatural and mysterious. Dragons possess magical powers; they can fly and when they do, they ultimately land on their feet. They do not like to be dominated by others. They are idealists and perfectionists. There are two types of Dragon lovers: those who fall in love and commit themselves and those who are loners and perhaps never marry. Both were depicted in *Crouching Tiger, Hidden Dragon*. The metaphors associated with dragons continue to escape western interpretation because they are based on different knowledge structures, and recruited cultural frames. Dragon ladies and old tiger ladies have little meaning in English. For example, what would English speakers have to say about expressions such as to "mount the dragon" or distinguishing between *long* (five clawed dragons), and *mang* (four clawed dragons)? Furthermore, what does it mean to say that the Dragon brings Four Benedictions of the East: wealth, virtue, harmony, and virtue?

In Japan, the dragon is *tora* and adds much to its Chinese counterpart, *long*. What makes cultural studies fascinating are the study of these generic spaces, recruited frames, and cultural connotations. Even if human beings share core semantic mechanisms such as mental spaces, what they do with those mental spaces differ substantially in content and cultural creativity. What would "John is a tiger" mean in Asia? Obviously, it would mean something very different from what it connotes in English. The tiger is one of the signs of the zodiac and it could be construed in those terms[11].

Concluding Remarks

This article is about the newly emerging discipline of functional cognitive linguistics and how it impacts on models of intercultural communication. Some of these have been discussed here. However, others remain merit discussion elsewhere. Turner and Fauconnier (1995), for example, have addressed noun compounds and have demonstrated how they are the result of mental space blends. What their work demonstrates is that loan words are blends[12]. They are new metaphors that have emerged from old borrowed concepts. Sometimes the form is borrowed, but almost always only part of the meaning structure is borrowed. The term "loan word" is based on the old idea that items are borrowed as complete whole units from one culture to another. They are not. Only parts are borrowed and the more interesting questions is which parts, and why those parts. Another area in which blends develop can be found in the rise of Asian English. This is not English, nor is it Asian. It is a blend between the two. The more interesting question has to do with just what is borrowed[13]. Part of the answer to these questions has been addressed in the explication of the metaphor "John is a tiger." Generic spaces, recruited cultural frames, and knowledge structures play a major role in cross-cultural lexicography.

The concept of visual metaphors provides an interesting topic for the study of iconicity proposed by Hiraga (2000). Similarly, the study of sign language can now be theoretical articulated within this new framework. Some of these changes in theory may be very threatening to those scholars who are committed to certain traditional notions emerging from Saussurean linguistics, generative linguistics, linguistic semantics (formal analysis of language), and philosophical semantics. Many other language-related disciplines such as cultural linguistics (Palmer, 1996: chapter 2) are redefining themselves to incorporate this new framework. What is new and exciting is the interface with the other cognitive sciences and their implications for linguistic theory. As Palmer (1996:3) noted, "language evokes imagery and requires imagination for its interpretation." Langacker (1987) how shown how imagery governs grammatical constructions. Discourse itself is structured and governed by the schematic imagery of sociolinguistic events (Palmer, 1996: chapter 7). This essay continues that tradition of research in iconicity.

Finally, Strauss and Quinn (1997) view the study of cultural frames as an important area of investigation. They establish a new cross-cultural relationship between the structures of the mind and the structures of the outer world (Quinn and Holland, 1987). Rather than treat culture as unchanged, unified, and uncontested, they view culture as underlying frames or schemas as interactions. Their view of culture is similar to that of *habitus* as advanced by Bourdieu (1977; 1990). Human beings are always constrained by the dispositions of learned experiences, but their habitual responses rest on knowledge that is not learned from or cognitively presented as rules. What they have internalized are cultural schemas that enable them to react to new contexts. The details of their partially specified internal worlds are filled in through the contexts of daily interaction. The articulation of these cross-cultural frames or schemas is the responsibility of the new cognitive sciences

(D'Andrade 1995: 149). They are, after all, the cultural filters that explain how experiences are understood in cross-cultural contexts. Cultural symbols do not determine how one views that world, the old view of epistemological relativism. What these symbols do is provide frames (in Fillmore's sense) that further activate larger schemas for particular experiences. Cultures differ in how they frame knowledge and social interaction. The explication of these cultural frames, scripts, and scenarios constitutes the study of cross-cultural communication.

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Related Web Sources on Iconicity

The Interplay of Metaphor and Iconicity: An Explanation by the Model of Blending. http://www.metaphor.ei.tuat.ac.jp/metaphor/Hiraga.pdf

Blending and an Interpretation of Haiku: A Cognitive Approach http://muse.jhu.edu/journals/poetics_today/v020/20.3hiraga.pdf?

Metaphor-Iconic Link in Poetic Texts: A Cognitive Approach to Iconcity. http://www.conknet.com/~mmagnus/SSArticles/hiraga/hiraga.html

Lawrence W. Barsalou – Online Papers. http://userwww.service.emory.edu/~barsalou/Publications/online.html

Frames: **Barsalou** http://userwww.service.emory.edu/~barsalou/Research/research-frames.html

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[1] Traditionally, there are two kinds of creativity (Longinus, 1932). One occurs when new forms are developed and the other can be found in the emergence of new meanings. Much of what is called "creativity" in generative grammar consists of the creation of new forms that are either generated by rules (phrase structure grammars) or variations on a theme (transformational rules). What is interesting about mental space theory is that it has to do with the creation of new ideas, new concepts in the form of blended spaces (Fauconnier, 1985; Coulson and Faulconnier 1999; Fauconnier and Sweetser, 1996' Sweetser, 1996; Gibbs, 1992; Lakoff and Johnson, 1980, 1987; and Turner, 1991, 1994.

[2] Peirce was interested in gnoseology, the systematic analysis of the concepts used by thought to interpret the world (Deledalle, 2000: 70). There is an object because there is thought.

Hence, the act of representing an object to the mind is the mediate object. The representamen is the immediate representation exhibited to the mind. The act by which the mind is conscious immediately of the represented object to the mind and the mediately to the remote object represented is the interpretant. From this gnoseologic perspective, there are only three modes of thinking: iconic, indexical, and symbolic.

[3] One assumes that Hiraga is using this term within the context of the theory of the hypersign as advocated by the Perpignan Group (1980: 40). They have reworked the set of ten Peirceian signs into a hypersign table. In their reanalysis, the words Realization and Materialization have a special meaning. It involves the movement from Firstness (the signs of nature) to Secondness (the signs of humans). Movement from Secondness (the signs of humans) to Thirdness (the signs of culture) is accomplished by means of Formalization or Necessitation. Consequently, one could interpret Hiraga (2000 2.2.3) to mean that signs of Firstness are moved into signs of Secondness. Her reference to language being symbolic, one assumes, has to do with Formalization, the movement from Secondness (signs of humans) to Thirdness (signs of culture).

[4] The central features of this theory are the identification of meaning with conceptualizations or mental experiences and the analysis of grammatical structure as residing in configurations of symbolic elements. Conceptual schema provides the organizing principle around which expressions are construed. Factors that influence construal are specificity, perspective, figure and ground, and prominence (Langacker, 1987 1993: 323-328).

[5] Most cognitive psychologists use the nomenclature of schemas or schemata and frames interchangeably. Fillmore (1975) differentiates between schemas and frames. For him, they have to do with the different levels of specificity in which they are invoked and enabled. This distinction is not maintained in this essay.

[6] An interesting cross-cultural conflict of schemas can be found in how one answers the telephone. In Japan, for example, when the phone rings, the resident picks up the phone and says nothing. It is incumbent on the person calling to identify himself by saying "*moshi moshi, ano ne*." In North America, on the other hand, the schema involves the person on the receiving end to identify himself by saying "hello." This is a signal for the person making the call to begin the conversation.

[7] The Source Mental Space functions as the background in a figure/ground system. The Target Mental Space functions as the figure, the profiled component in a field.

[8] The cross-mapping between the input spaces (marked by solid lines) create structures in the generic space. This means that the generic space is more abstract and schematic than the input spaces. Information from the generic space is also linked to the blended space where it uses input information to compose, complete, and elaborate the metaphorical blend.

[9] In a blend, there is the integration of knowledge from different domains. This knowledge comes from established frames that are recruited into the blend through the processes of composition (the attribution of relations or elements from the input frames), completion (comparing the projected the pattern with long term memory structures), and elaboration (the use of the blend to create new scenarios and emergent structures).

[10] This begs the question of how the lexicon is organized. For example, current wisdom says that the lexicon is organized in terms of prototypes. Not all cultures, however, share the same prototypes. Similarly, the lexicon is organized into functional relationships, and once again not all cultures share in the same functional configurations. The theory will eventually have to address how these lexical items are represented and accessed as source and target spaces.

Another problem can be found in the distinction between newly created metaphors and rehearsals. This model is excellent in accounting for the former, but not the latter.

[11] However, from the perspective of popular culture, it would make more sense in this cultural framework of modern Japan to inquire into one's blood type instead of one's sign.

[12] When one borrows a word from another language into his language, the result is known as a *loanword*. The assumption underlying this term is that these ideas and forms are borrowed *in toto*. Such is not the case. What many call loan words are really lexical blends. They are new words that made up of recruited frames and knowledge structures from two languages. The interesting question that needs to be asked about loan blends should be "What is borrowed and blended in the process?" Some languages borrow schematic structures and others borrow portions of the phonological forms. Are these borrowing and blending patterns culturally determined? Are there linguistic constraints on borrowing as evidenced by the fact that languages differ in their syllabic and moraic phonotactic patterns? What role does background knowledge play in the reinterpretation of the new blended form? When Latin borrowed the Greek word *phusis* and called it *natura*, the result was due to certain significant cultural and linguistic forces across those cultures. *Physis* captures the Greek concept of becoming. It has been translated as "growth," but it is the process itself that this word captures. *Natura* in Latin means the end product of growth, nature. The Latin language breaks up events into perfect (finished) and imperfect (unfinished) forms. There is a propensity in Roman culture to foreground or profile completion and so *physis*, an unfinished and changing process, was borrowed as the finished and completed product of change, nature.

[13] Asian English developed because of cross-cultural disparities. The cultural values of England, Australia, and the United States were represented in their language text books. This direct and confrontational style did not work well among those who used these texts in their own cultural background. To compensate for these conflicting cultural paradigms, a new blended language developed into what is now known as Asian English. Blended languages are common. India provides numerous examples of linguistic and cultural blends.