Metaphor-Icon Link in Poetic Texts: A Cognitive Approach to Iconicity

Masako K, HIRAGA*1)

詩的テキストにおける隠喩と類像: 認知論からの一考察

平智正子

要旨

本論は認知隠喩論,特にTurnerとFauconnierの'blending model'の枠組みを使い,隠喩と類像の相互関係を明らかにすることを目的としている。認知論の観点から見ると,隠喩も類像も共に類似性にもとづく意味作用である。従来の研究では,別々に扱われる傾向にあった隠喩と類像に対して,それらを相互に関係するものとして共通の枠組みで捉えることによって,語形成,語順,文法化,意味変化,詩的言語,手話,表記体系などの様々な言語現象に対して,より統合的で一貫した説明を与えることができる。特に,詩的テキストでは,隠喩と類像が前景化されており,両者の相互関係を探る上で格好のデータを提供すると考えられる。本論では,まず隠喩と類像の相互関係を理論的に解明し,詩的テキストを例にそれらの表出の話相について分析を試みる。

ABSTRACT

This study attempts to clarify the interrelationship of the notions of metaphor and iconicity in the theory of cognitive metaphor, particularly in the model of 'blending' (Turner and Fauconnier 1995, Fauconnier and Turner 1996, Turner 1996, 1998, among others). In cognitive and semiotic terms, 'icons' and 'metaphors' share that property of signification 'motivated' by similarity. Connecting things of similarity is one of the basic operations of the human mind. The treatment of metaphor and iconicity in an interrelated fashion will provide a more cohesive and integrated explanation of various linguistic phenomena. The list of such phenomena includes word formation, word order, grammaticalisation, semantic change, poetic discourse, signed languages and writing systems, as manifestations of the metaphor-icon link. This study shows that poetic texts, in particular, serve as an optimal example in this exploration because in poetic discourse, the metaphor-icon link is foregrounded rather than backgrounded as in ordinary discourse (Jakobson and Waugh 1979).

^{*1)} 放送大学助教授(人間の探究)

This paper, therefore, aims to contribute in the following two issues: (1) theoretical clarification of the interrelationship of metaphor and iconicity in cognitive terms; (2) demonstration of how a metaphor-icon link is manifested in illustrative examples of poetic discourse.

1 Introduction

Over the past decade, there has been a growing interest in metaphor and iconicity in the fields of cognitive and functional linguistics. Those linguists who have begun to look at metaphor and iconicity share the basic assumption that the nature of language structure and use is not entirely arbitrary but motivated in many cases by the general cognitive processes of analogical reasoning. The American philosopher, Charles Sanders Peirce, influenced the pioneers in the mid-20th century linguistics, such as Jakobson (1971[1966]) and Bolinger (1977), in their explorations of iconicity in linguistic signs. Although Peirce treated iconicity as embracing metaphor in his famous doctrine of the sign, this close link of iconicity and metaphor has not fully been elaborated in the literature. Even those current linguistic studies that have incorporated iconicity in the scope of their analysis have either discarded issues of metaphor from their studies (Haiman 1985a, 1985b, Waugh 1992, 1994, among others) or treated iconicity as a subordinate issue to metaphor (Lakoff and Johnson 1980, Lakoff and Turner 1989).

By contrast, this study attempts to clarify the interrelationship of metaphor and iconicity in the context of a cognitive theory of metaphor. In cognitive and semiotic terms, icons and metaphors share a common property of signification, namely, that 'motivated' by similarity. Whether the items to be connected are concrete objects, formal structures, relational properties or abstract concepts,

¹For the working definition of 'metaphor' and 'icon' to be employed in this paper, see Sections 2 and 3.

²Peirce divides iconic signs into three subtypes, i.e., images, diagrams, and metaphors, and gives the following definition: "Those which partake of simple qualities, or First Firstness, are *images*; those which represent the relations, mainly dyadic, or so regarded, of the parts of one thing by analogous relations in their own parts, are *diagrams*; those which represent the representative character of a representamen by representing a parallelism in something else, are *metaphors* (Italics in the original)" (1955 [1902]: 105). The in-text reference with different years of publication indicates that the year in brackets is a source or an original work and the year in parenthesis is an access volume according to which the citation is made.

³Danesi (1995) and Taub (1997) are exceptions. The former deals with the image content of metaphor as iconicity and reports a psycholinguistic experimental study. The latter is a detailed survey of an icon-metaphor link in American Sign Language.

connecting things of similarity is one of the basic operations of the human mind. The clarification of a metaphor-icon link will strengthen the cognitive approach so as to provide a more cohesive and integrated explanation of various linguistic phenomena, including word formation, word order, grammaticalisation, semantic change, poetic discourse, signed languages and writing systems, as manifestations of the metaphor-icon link. I believe, in particular, that poetic texts, like signed languages (Taub 1997) and logographic writing systems, are particularly suited for this exploration because in poetic discourse a metaphor-icon link is foregrounded rather than backgrounded as in ordinary spoken discourse (Jakobson and Waugh 1979).

This paper, therefore, contributes to the following two issues: (1) theoretical clarification -- defining the interrelationship of metaphor and iconicity in the model of cognitive metaphor. In particular, the model of 'blending' proposed by Turner and Fauconnier offers an effective tool to analyse how iconicity relates to various parts of the metaphorical process; (2) demonstration -- examining how a metaphor-icon link is manifested in the illustrative examples of poetic discourse.

2 A Glimpse of the Issue

2.1 Metaphor in Icon

Not many people had understood the word 'icon' in Japan until very recently when computer culture popularised this loan word for general use. When you actually manipulate the 'folders,' 'documents' and 'wastebasket' on the 'desktop' of your computer screen, you can see the shape of the folders and open, move, close or even discard them into the wastebasket as you wish. You can understand what the icons stand for even without instructions because the folders and documents on the screen resemble the objects that you already know in your office. The folder on the screen is an icon for a folder, the document for a document, the wastebasket for a wastebasket, and the desktop (the term actually refers to the screen itself) for the surface of a desk. Icons resemble the objects they stand for in terms of their shape, form, appearance or structure. Icons are easy to understand because their resemblance to the objects is immediate and concrete.

A moment's reflection, however, makes us realise that the folder, document, wastebasket and desktop are very different from the objects that we actually have in our office. Folders in our office do not include other folders in

⁴The computer examples mainly concern Macintosh screen display.

them, while folders on the screen can, in theory, contain an unlimited number of other folders. In our office, we do not usually put a wastebasket on the top of our desk, but the desktop of the computer screen has a wastebasket on the same surface as the file-folders.⁵

The use of the words, folders and desktop, to signify these icons is metaphorical in a technical sense, because we are making connections between different things based on the certain similarities. The folders represented by icons on the screen as well as the folder objects in our office are containers of information used for the purpose of storage and classification. The desktop is a place where we work both on the screen and in the office. When we call the rectangular signs on the screen folders and documents, the names for the icons are a metaphorical extension of the original items which signify the referents (i.e., the folder object and the document object). Names such as folders, documents and desktop, with their extended metaphorical meaning, cue the interpretation of the iconic signs. If we call these iconic signs by different names, say, 'box' or 'rectangular,' it would be difficult to draw the connection, because the metaphorical extension is less obvious. In short, a metaphor reinforces or navigates an iconic meaning of the sign.

The folders, documents and wastebasket on the computer screen can be described as both icons and metaphors at the same time. They are icons because they look similar to the objects they represent. They are metaphors because, through metaphorical extension of the names given, certain properties of the concept of folders, documents and wastebasket are cognitively mapped onto the signs on the screen, or onto the mathematical computation represented by those signs. Because of the visual resemblance of the folder and wastebasket icons with actual folders and wastebasket, we notice their iconicity more readily than their metaphor. In other words, while iconicity is more dominant than metaphor in the computer screen example, both iconicity and metaphor are at work in the signification of highly iconic signs.

2.2 Iconicity in Metaphor

Metaphor and iconicity occur together at the level of metaphorical signification, too. When computer jargon became popular, we began to use it in talking about something else. For example, when we say, "I have too many files open in my mind, and my mind is jammed," we are referring to our mind as if it were a computer. Here, we are not only using expressions from

⁵Incidentally, the wastebasket on the Macintosh screen is used not only for dumping the documents or applications, but it is also used for ejecting the floppy disks or compact disks from the drive.

computer vocabulary, but we are also conceptualising our mind as if it were a computer. So, we also say,

- a. My system crashed.
- b. He has a read-only memory.
- c. You gave me a lot of input.
- d. I have too much on my desktop.
- e. She's in emulation mode.

Metaphor allows us to understand a relatively abstract and unstructured subject matter (technically called a target domain) in terms of a more concrete and structured subject matter (a source domain). In our example, we use the terms designating computer processes as tools to represent the workings of our own minds. We know how to install, save and delete information in the computer because these are the terms that describe our practical experience with the computer. Therefore, it is natural to apply the pattern knowledge gained from the experience of using a computer to the invisible, complex functioning of our own brain. This is the experiential basis for metaphorical conceptualisation.

The same process that made computers icons of the files, desktops, and wastebaskets of the conventional office makes those same icons useful for conceptualising the functioning of the brain; we use items which are cognitively accessible as the source for metaphors. Metaphors may be imaged from visual, auditory, and other sensory experience. When we say, "I have too many files open in my mind," it is easy to evoke the image of a screen with many files open. And the image evoked in our mind is similar to the actual computer screen with many files open. In this way, we can say that the image content of metaphor, particularly of a source domain, is an iconic moment involved in metaphor. In Danesi's words, "the particular *content* of a metaphor can be said to constitute an interpretation of reality in terms of mental icons that literally allows us to see what is being talked about (italics in the original)" (1995: 266).

Not only the image content but also the correspondence of the two items mediated by metaphor signal an iconic moment. As mentioned earlier, metaphor is a mapping from a source to a target. Each mapping consists of a fixed set

⁶Metaphorical expressions are illustrated in italics, and metaphorical concepts in uppercase letters.

⁷This does not imply that there is not also the reverse process of conceptualisation, i.e., understanding computers in terms of the human mind -- COMPUTER IS A MIND. We say, for example, "this computer has a large memory," "His computer has a mind of its own," and "My computer is stubborn."

of correspondences between entities in the two domains. In our example, some of the characteristics of computers are mapped onto what we know about the human mind. For example, files correspond with a storage of ideas, crash with no functioning, read-only memory with a lack of learnability, input with information, and emulation mode with imitating.

Technically speaking, this mapping is a projection of image-schemas from the source domain onto the target domain. Image-schemas are skeletal patterns or structures that recur in our sensory and motor experiences, perceptual interactions, and cognitive operations (cf. Johnson 1987). For example, when we say, "I have too many files open in my mind," the image-schema of excess in the source ('too many opened files') and in the target ('too many ideas') are aligned. Note that there is an iconic moment in this alignment of image-schemas. The image of too many files corresponds to the image of too many ideas diagrammatically. In other words, they resemble each other in terms of the image-schemas of excess. There is a structural analogy between the two image-schemas.

While iconicity was more dominant in the computer screen example, metaphor is more dominant than iconicity in the signification process of MIND IS A COMPUTER, because the projection of the COMPUTER domain onto the HUMAN MIND domain is more conceptual than perceptual (visual, auditory or sensory). Nonetheless, the experiential motor-sensory image base and schematic parallel structure are iconic moments in the metaphorical signification (for further technical elaboration, see next section).

In what follows, I would like to demonstrate that in linguistic signs (Section 3), and particularly in poetic texts (Section 4), a close link between metaphor and icon is manifest in the two ways outlined above: (1) that there are iconic (both imagic⁸ and diagrammatic) moments in metaphor; and (2) that a form (structure) acquires an iconic (particularly, diagrammatic) meaning via metaphor. I would also like to show that the model of 'blending' proposed by Turner and Fauconnier (Turner 1996, 1998, Turner and Fauconnier 1995, 1997) provides an effective instrument to clarify the complexity of the metaphor-icon link.⁹

⁸The term 'imagic' is used to refer to Peircean notion of 'image' as a subtype of iconicity (for the definition of Peircean notion of 'image,' see Footnote 2).

⁹'Blending' actually covers a wide range of linguistic and non-linguistic phenomena including "conceptual metaphor, metonymy, counterfactuals, conceptual change" (Turner and Fauconnier 1995: 183), "classification, the making of hypotheses, inference, and the origin and combining of grammatical constructions," (ibid., 186) "idioms, ..., jokes, advertising, and other aspects of linguistic and nonlinguistic behavior" (loc. cit.).

3 Theoretical Implications of Metaphor-Icon Link

3.1 Iconicity and Metaphor Defined

In cognitive terms, iconicity (i.e., images and diagrams in Peircean terminology)¹⁰ deals with a mapping between form (structure) and meaning (cf. Lakoff and Turner 1989) in various degrees of abstraction, from concrete attributive resemblance to abstract relational analogy. Metaphor, on the other hand, is a mapping between two conceptual domains of meaning, a projection of a schematised pattern (system) from a less abstract source domain onto a more abstract target domain (cf. Lakoff and Johnson 1980, Lakoff 1987, 1993).

It is often the case that the basis of similarity in the icons is derived from visual, auditory and other formal traits of the object that they stand for, and that the iconic signs are often the visual, auditory or formal representations themselves. Metaphors, on the other hand, do not necessarily have such traits. Rather, they manifest themselves as a heuristic device to mediate dissimilar concepts by means of the similarity they yield. As Anderson (1984: 459) correctly points out, "a metaphor, like an image or an analogy, is what it represents -- but not because of an antecedent identity or similarity, not as a reminiscence, but in virtue of a similarity which it creates." Indeed, in icons, the similarity relationship between the sign and the object is taken to be preexistent. We assume that there is a similarity between the folder icon and the folder object even if we have no prior experience with the computers. In contrast, a metaphor connects two entities, say a mind and a computer, which are apriori dissimilar. The connecting act via a metaphor establishes the similarity between the two dissimilar entities, and thus creates a new meaning or interpretation.

3.2 Iconic Moments in Metaphor

The basic claims of the cognitive account of metaphor, developed by Lakoff, Johnson and Turner (Lakoff and Johnson 1980, Lakoff 1987, Lakoff and Turner 1989, Lakoff 1993), and elaborated as a more general model of 'blending' by Turner and Fauconnier can be summarised as follows (see Figure 1):

(1) Metaphor is a cognitive process in which one set of concepts (a target) is understood in terms of another (a source). According to the model of blending,

¹⁰For further discussion of Peircean iconicity and its manifestation in language, see Hiraga (1994).

metaphor is a conceptual integration of four (or more) mental spaces.¹¹ Mental spaces are small conceptual arrays constructed for local purposes of understanding. When a conceptual projection occurs, two input mental spaces (source and target in a metaphor) are created. These input spaces have relevant information from the respective domains, as well as additional structure from culture, context, point of view and other background information.

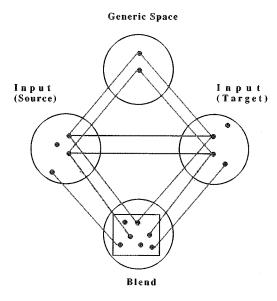


Figure 1: The Model of Blending¹²

- (2) There are two kinds of middle mental space in addition to the input spaces. These middle spaces are: (i) a generic space that applies to both input spaces; and (ii) a blended space that is a rich space integrating the generic structure, structures from each input space and background information. Often the blended space has an emergent structure of its own.
- (3) Each mental space has an image-schematic structure that is consistent and preserved through conceptual projection of generic and input spaces. The image-schemas are skeletal patterns in our sensory and motor experience, such as a

¹¹Turner and Fauconnier use the term 'mental space' in contrast to the term 'conceptual domain,' employed by Lakoff, Johnson, and other cognitivists. Mental spaces are small conceptual arrays put together for local purposes of action and understanding, while conceptual domain is a vast structural array that could not be made active in thinking (cf. Turner 1996).

¹²Figure 1 is based on the graphic representation of blending provided in the website for blending (cf. http://www.wam.umd.edu/~mturn/WWW/blending.html/).

container, a motion along a path, part and whole, centre and periphery, symmetry and so forth.

(4) The blended space develops inferences, arguments, ideas and emotions, which can modify the initial input spaces and change our views of the knowledge used to build those input spaces (cf. Turner 1996: 83).

Let us take the example, "I have too many files open in my mind," and recapitulate the main points about iconic moments in metaphor according to the model of blending. As we have seen, the conceptual metaphor, MIND IS A COMPUTER, allows us to understand an abstract entity, a human mind, in terms of a concrete entity, a computer. The cross-space mapping between the inputs constitutes the content of the generic space. In our example, the image-schemas of objects resembling files, an excessive amount of them, a machine and its movement in the source input ('too many opened files') are aligned with the image-schemas of abstract objects and manipulation of the mass of these objects in the target input ('too many ideas') by the generic space which has the highly abstract, skeletal image-schematic structure taken to apply to both the input spaces (e.g., a frame of an excess of objects).

Notice that there are iconic moments in this alignment of image-schemas. The choice of the term, 'image-schema,' itself suggests that both 'image' and 'diagram' are to be related to this cross-space mapping of metaphor. In the input spaces, from a vast amount of information provided by our bodily experiences, interactive perception, contextual and background knowledge, we have an array of images that do not clash with the entire cognitive process of metaphor. In our example, the image content includes visual (or interactive) images of an action of opening many files, a screen showing many files open, a dialogue box saying 'too many files open,' and/or a screen frozen due to too many files open. These are mimetic mental representations of sensory perceptions, and constitutes imagic iconicity. At the same time, a mental space develops a structure by selecting and schematising the images, namely, an image-schematic structure, which has a diagrammatic representation of the image content of mental space (e.g., an image-scheme of a blocked action due to an excessive amount of files). A similar process might occur in the target input space to a less concrete degree. For example, the evoked images for 'too many ideas' may be more abstract than what happens in the source, and so is its schematisation. Therefore, there are two types of iconic mappings in the input spaces: an attributive imagic mapping between the sensory perception and the image content, and an analogical diagrammatic mapping between the image content and the schematised images.

Conceptual and image projections do not only occur in input spaces, but

they also include a generic space and a blended space. There is a relationship of similarity between the generic space and the input spaces, because the generic space has an image-schematic structure shared with the two inputs. This shared image-schematic structure is skeletal and abstract. In the metaphor, "I have too many files open in my mind," the generic structure can be an image schema of a purposed action or a progress which is blocked with a difficulty. As the image-schematic structure is preserved, the two input spaces are structurally analogous. The analogy supported by the generic space can be described as diagrammatic because it is a structure-preserving schematic correspondence between the source and the generic space, and between the target and the generic space. In other words, diagrammatic iconicity is at work in the analogy between the corresponding image-schematic structures of the generic space and the input spaces.

This metaphor gets its full interpretation and understanding as a conceptual

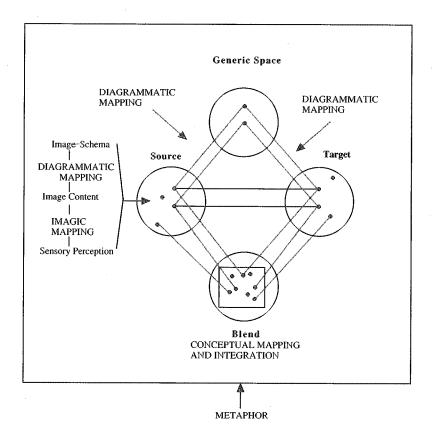


Figure 2: Metaphor-Icon Link in the Model of Blending

integration in the blended space, in which we have a conceptual mapping of partial structures from both inputs and the generic space, and which develops an emergent structure of its own, for example, disorder, a lack of proper motion, a stoppage, as a result of excessive movements. Figure 2 illustrates imagic and diagrammatic iconic mapping inherent in the conceptual mapping and integration of metaphor.

Needless to say, it is metaphor rather than iconicity that prevails in this particular example of "I have too many files open in my mind." For only the very abstract conceptual (theory-building) level seems to involve iconic moments: imagic and diagrammatic iconicity in the evoking of images and the schematisation of images in the input mental spaces, and diagrammatic iconicity in the correspondence or counterpart projection of image-schematic structures between the generic space and input spaces.

The discussion above has illustrated that the model of blending lends itself to understanding semiotic implications of imagic and diagrammatic iconicity in the cognitive process of metaphor. When we say that metaphor has iconic moments, it means that there are some traces of iconic mapping in general between a fairly abstract form and a concept. No visible figure mirrors the concept in the linguistic representation of this particular example of a conventional metaphor. This does not mean that language structure and use are deprived of iconicity. Until linguistic iconicity is delineated, however, it will not become visible, because it is not foregrounded.

3.3 Iconic Meaning Given to Form by Metaphor

One of the ways by which we can detect iconicity in linguistic resources (such as sounds, words, sentences, discourses and writing systems) comes from conventional metaphors relating to our conception of language. Lakoff and Johnson (1980: 126-138) provide a basic insight into how metaphor can give meaning to form. They point out that we conceptualise language by orientational and ontological metaphors, that is, in terms of space and in terms of objects. A pervasive conceptualisation of language is the CONDUIT metaphor (Reddy 1979) in which ideas are seen as objects, linguistic expressions as containers, and communication as sending and receiving the containers containing ideas as objects. Because we speak and write in a linear order, we also conceptualise language in terms of space in a linear order. There are a handful of conventional conceptual metaphors which elaborate the ontological and orientational metaphors of language, and which function as a useful tool to give iconic meanings to form. Table 1 gives several examples of such conventional metaphors. For ease of discussion, we will call these conventional

metaphors Grammatical Metaphors, because these metaphors, more or less, concern the relationship of form and meaning in grammatical conventions (e.g., phonology, morphology, word formation, and word order).

Metaphor	Source		Target
ONTO- LOCATION	QUANTITY OF FORM		QUANTITY OF CONTENT
	IDENTITY OR DIFFERENCE OF	MATERIAL	IDENTITY OR
		LOGICAL	DIFFERENCE
		SEQUENCE	OF CONTENT
	SYMMETRY/ASYMMETRY OF FORM		SYMMETRY/ASYMMETRY OF CONTENT
ORIENTA- TIONAL	LOCATION OF FORM	NEAR	STRENGTH
		CENTRE	IMPORTANCE
	SEQUENCE OF FORM	LINEAR	SEQUENCE OF TIME
		LINEAR	CAUSE/EFFECT
		FIRST/LAST	VALUE
		FIRST/LAST	UP/DOWN, LEFT/RIGHT, NEAR/FAR

Table 1: Grammatical Metaphors

Because we conceptualise expressions as containers and meanings as contents, we assume that the bigger containers have the larger contents. So, MORE FORM IS MORE MEANING. For example, prolongation, repetition, iteration, and reduplication of linguistic forms such as a sound, a syllable, and a word tend to stand for more of the content. The SAMENESS of FORM stands for the SAMENESS of CONTENT, the DIFFERENCE of FORM, the DIFFERENCE of CONTENT. For example, the use of the same (similar) sound signifies the same meaning in English morphology, an [s] for the plural, a [non] for the negative prefix and so forth. LOCATION of FORM also gives iconic meanings. In general orientational experiences, we put important things in the centre. For example, there tends to be a building or a monument of importance (a castle, a church or a tower) at the centre of a city, a village or a campus. In English, for instance, when a word is embellished with inflections and affixes, they are peripheral. The stem, which expresses the core meaning. stays in the central position. It is rare that the central shape of a word is altered. Not only the location of the form, but also the sequential order of the form can mirror the space, time and causal sequence of the content. In the standard representation of temporal events, for example, it is more common to

state things along the occurrence in time, from past to the present rather than reverse. Examples abound in the iconicity literature in linguistics (for more examples and discussions, see Jakobson 1971 [1966], Bolinger 1977, Haiman 1985 a, 1985b, Waugh 1992, 1994, Hiraga 1994, among others)

Both auditory and written language forms can receive an iconic meaning from the grammatical metaphors discussed above. The relationship of form and meaning in grammatical metaphorical mapping is diagrammatic, because what is preserved is an analogical relationship mediated indirectly by means of metaphors. This contrasts a direct attributive connection such as pure imagic iconicity between the linguistic form and meaning, e.g., a case of onomatopoeia and visual language such as logographs.

To conclude the section, we have discussed that there are two types of metaphor-icon link in language: iconicity in metaphor and metaphor in icon. Iconicity in metaphor concerns the imagic and diagrammatic representation in the creation of meaning in metaphor. This is most prototypically illustrated in the notion of image-schematic structures crucial in the cognitive account for metaphor. Metaphor in icon also relates to imagic and diagrammatic aspects of the linguistic form. Conventional metaphors which conceptualise our everyday experiences and reality also conceptualise our understanding of language structure and use. These metaphors navigate the way we interpret the forms of linguistic expressions.

The relationships of these two types of metaphor-icon link may be graphically represented by Figure 3.

In the box of 'meaning,' the metaphorical process is illustrated according to the model of blending. There are four mental spaces. Imagic and diagrammatic iconicity relate to (1) inside structure of input spaces in which sensory perception is projected onto the image content by imagic mapping, and then onto the image-schema by diagrammatic mapping; and (2) the relationship of inputs to the generic spaces in which the diagrammatic mapping projects one space onto another. The box of 'form' represents the linguistic resources. When the form mirrors the meaning as in the case of onomatopoeia and visible language (e.g., some logographs), the imagic mapping occurs in the direction from form to meaning, as illustrated by an arrow. On the other hand, when the grammatical metaphors give meaning to form, there occurs a diagrammatic mapping in the direction from meaning to form illustrated by an arrow. The general structure preserved by this diagrammatic mapping of form and meaning constitutes the generic space in which the grammatical metaphors reside.

The effectiveness of the model of blending shows up here. For it is with this model that we can specify which part(s) of the metaphorical process --

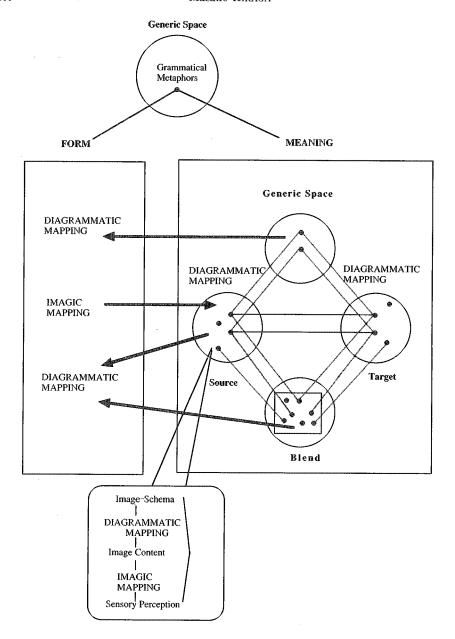


Figure 3: Metaphor-Icon Link in Language

whether the input, generic, or blended spaces — relate(s) to the diagrammatic mapping of form and meaning. In theory there are four possibilities: a mapping (1) from generic space onto form; (2) from input source space to form; (3) from input target space to form; and (4) from blended space to form. However,

in practice, the case (3) is unlikely because the target space in metaphor, by its own nature, is where the mapping finalises rather than initiates.

4 Case Studies of Poetic Texts

I have demonstrated that a framework of cognitive linguistics can provide a tool to analyse the intimate connection between form and meaning that iconicity requires, particularly with reference to an interrelated manifestation of metaphor and iconicity. The rest of this paper develops the idea that poetic texts foreground the link between metaphor and iconicity.

Even though it can be said that the link is more overt than covert in poetic discourse than ordinary discourse, there are a variety of degrees and combinations with which metaphor and iconicity manifest themselves. Some texts display pure iconicity in which the visual or auditory form itself mirrors the meaning. Other texts (actually, most texts) show iconicity more subtly by way of metaphors. On the one hand, the metaphorical structure of a poetic text may involve image content and diagrammatic parallelism in the creation and the interpretation of meaning. On the other hand, the metaphorical reading of a text may support certain iconic patterns prevailing in the textual form such as syntactic structures, lexical choice, phonological patterns, or the choice of certain characters, letters and layouts in writing.

As illustrative examples of the complexity of metaphor-icon link, I would like to present an analysis of two short English poems. The two poems display both local and global metaphors. Local metaphors are placed in various parts of the poem. They are based on either conceptual mappings (in which structured image-schematic concepts are mapped from one onto another [involving diagrammatic iconicity]), image mappings (in which locally evoked images are mapped from one onto another [involving imagic iconicity]), or a combination of both. The local metaphors may or may not contribute to the formation of a global conceptual metaphor, which is a metaphorical reading of the whole text, i.e., the poem as metaphor. The two poems analysed below differ in the degree and the types of manifestation of iconicity. The former exhibits imagic iconicity overtly, while the latter diagrammatic iconicity covertly. The analysis will show that in both the metaphor-icon link is at work quite strongly in the creation and the interpretation of meaning. It also demonstrates that the model of blending can clarify the dynamic mechanism of metaphorical-iconic mappings, because it

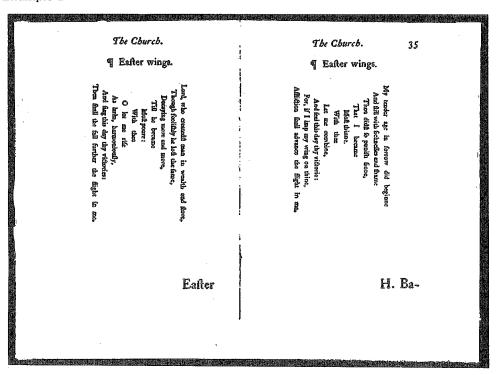
¹³For further discussion on image mapping and conceptual mapping, see Lakoff and Turner (1989: 90-96).

allows us to see which part of the metaphorical process relates to which type of iconic mapping of the poetic text.

4.1 "Easter Wings"

"Easter Wings" by George Herbert (1880 [1633]: 34-35) is one of the best-known examples of pattern poetry in the English language. The poem is presented as a silhouette of wings. The visual image mirrors the theme of the poem, which is concisely stated in its title, "Easter Wings." This is a typical example of imagic iconicity, as the relationship of form and meaning is immediate and mimetic. The very shape of the poem — the rising wings of two birds — exhibits the content of the poem in which a human being is described as a bird (specifically as a lark).

Example 1



There are at least two major input spaces created by the reading of this poem as a global metaphor: a bird and a human being. The narrator of the poem, a human being, created by the Lord and who has fallen into the poorest condition, is (re)presented as a bird which is about to rise on Easter Day. This is done not only in linguistic expressions such as 'let me *rise* as *larks*,' 'the

flight in me,' and 'imp my wing on thine,' but also in graphic expressions such as the shape of the two sets of wings, and their layout on two facing pages. Hence, the input source space of a bird for a global metaphorical mapping is at the same time the target space for an imagic iconic mapping from the visual source space of a bird (wings) as illustrated below in Figure 4. At the same time, Figure 4 shows that there is a diagrammatic iconic mapping between the form and the blended space of a global metaphor in this text. Notice that the wings, an icon for the bird, had to be put vertically on the pages in order to display the fact that they are wings and the bird is rising. The wing shape is an imagic icon because it is a direct mimicry. The rising shape, on the other hand, is a result of the reading of the poem's content. The wings on the second page look smaller because the first and the last lines are shorter than those on

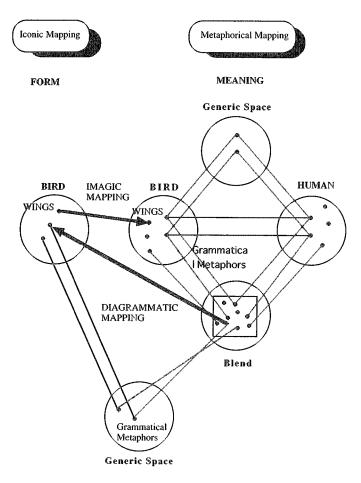


Figure 4: Metaphor-Icon Link in "Easter Wings"

the previous page. They give an impression that the bird on the second page has *taken off* or is *flying further*. Seen as a global metaphor, the vertical form of the two wings is charged by layers of religious readings provided by Christian tradition and culture. The form embodies the metaphorical meaning of Easter as rising from death, awakens associations with splendidly winged angels, and image patterns such as fall and rise, decay and advance, loss and victory, to list but a few.

The poem, moreover, exhibits structural correspondences between form and meaning navigated by conventional metaphors for linguistic forms as discussed in the previous section. The most narrow lines are given emphasis both by location, i. e., at the centre of each stanza and length, i. e., their brevity. The central position of the wings displays a phrase repeated in both verses of the poem, 'With thee.' If one interprets this poem as a religious declaration against a Christian cultural background, 'with thee' is central to the poem's declaration of belief. The focal significance of 'with thee' is centralised visually or physically in the core of the poem. In addition, 'with thee' at the joint of the wings suggests a relationship -- as if that most poor creature at his most diminished is saved by a hand reached out. The other short lines, one in each stanza, 'most poor' and 'most thin,' form a pair. There is an analogical link between the shortness of form and the smallness of the objects ('man' in the first stanza, and 'I' in the second stanza) described.14 The third line in the first stanza, 'Decaying more and more,' also corresponds diagrammatically to the decrease in the length of the lines of the poem. These correspondences are more subtle and less noticeable than the overall silhouette of the poem; nonetheless, they are as important. These are cases of diagrammatic iconicity.

It is clear that the imagic iconicity dominates in this text because, if we put the words of the poem in an ordinary prosaic format or even in a horizontal layout as in Example 2, the intended iconic effect of the poem is easily lost (Harris 1995: 61).¹⁵

¹⁴There are other repetitions in the poem. For example, '... became most ...,' 'let me ...,' '... this day thy victories,' and 'the flight in me' are repeated in each stanza. These repetitions reinforce the content expressed.

¹⁵Surprisingly, the poem appears in horizontal form in many modern editions (see Herbert 1994 [1633]: 35, for example).

Example 2

Lord, who createdst man in wealth and store,
Though foolishly he lost the same,
Decaying more and more,
Till he became
Most poore:
With thee
O let me rise
As larks, harmoniously,
And sing this day thy victories:
Then shall the fall further the flight in me.

My tender age in sorrow did beginne:

And still with sicknesses and shame

Thou didst so punish sinne,

That I became

Most thinne.

With thee

Let me combine

And feel this day thy victorie:

For, if I imp my wing on thine,

Affliction shall advance the flight in me.

In short, the meaning expressed by the language and the visual form of this poem constitute simultaneously an image, a diagram and a metaphor of "Easter Wings." The image is the dominant iconic manifestation in this particular example; but, the creativity of this image is enhanced by the diagrammatic and metaphorical manifestations as clarified by the analysis.

4.2 "Love's Philosophy"16

Love's Philosophy17

The fountains mingle with the river,	1	
And the rivers with the ocean,	2	
The winds of heaven mix for ever	3	
With a sweet emotion;	4	
Nothing in the world is single,	5	
All things by a law divine	6	
In one another's being mingle	7	
Why not I with thine?	8	
See the mountains kiss high heaven,	9	
And the waves clasp one another;	10	
No sister flower would be forgiven		
If it disdained its brother:	12	
And the sunlight clasps the earth,		
And the moonbeams kiss the sea	14	
What are all these kissings worth,	15	
If thou kiss not me?	16	

P. B. Shelley's "Love's Philosophy" (1904 [1820]: 216) abounds in the use of local metaphors. ¹⁸ Let us see what conventional metaphors are employed in the text and how they are sculpted into the composite metaphorical conception for a given target space, which is hinted by the title of the poem, "Love's

¹⁶A major part of the analysis was presented as "Cognitive Metaphors and Iconicity: The Case of Shelley's 'Love's Philosophy'," at the 16th Annual Conference of the Poetics and Linguistics Association, at Queen's University, Belfast, April 1996.

¹⁷There is a different version of the poem in *The Poetical Works of P. B. Shelley*, published by Oxford University Press, 1943. The basic claims made in this paper also applies to this version.

¹⁸The choice of this particular poetic text is accidental; but, the choice of the English Romantic period is suggested by Donald Freeman (personal communication, and 1978). He says, "The poets of the English Romantic period were concerned perhaps more than those of any other epoch with the role of poetic language in a theory of poetry. The Romantic era thus is a highly appropriate locus for an inquiry into the relationship between poetic syntax and poetic structure. That relationship is one of iconicity: syntactic patterns in these poems correlate in particularly rich and interesting ways with the statement that each poem makes" (1978: 654-655).

Philosophy." The abundant use of metaphorical expressions reflects conventional cognitive metaphors as follows:

- a. A NATURAL PHENOMENON IS AN ENTITY
- b. A NATURAL OBJECT IS AN ENTITY
- c. FEELING IS AN ENTITY
- d. NATURE IS HUMAN
- e. OPPOSITES FORM PAIRS
- f. FUSION IS MIXING
- g . UNDERSTANDING IS SEEING
- h. CONTACT IS TOUCHING
- i. REQUESTING IS QUESTIONING
- j. LOVE IS A FUSION OF OPPOSITES
- k. LOVE IS CONTACT
- 1. LOVE IS PAIRING

The first cognitive metaphors, A NATURAL PHENOMENON IS AN ENTITY, A NATURAL OBJECT IS AN ENTITY and FEELING IS AN EN TITY, are what Lakoff and Johnson (1980: 25-32) call 'ontological metaphors' which enable us to conceive continuous events, on-going realities, and unstable or even moving states of the things as if they were quantifiable objects, entities or units with which we can refer to, quantify, identify and so on. In this poem, NATURAL PHENOMENA and NATURAL OBJECTS such as 'fou ntains,' 'rivers,' 'winds,' 'mountains,' 'heaven,' 'waves,' 'sunlight,' 'earth,' 'moonbeams' and 'sea' are treated as discrete ENTITIES which have boundaries and shapes. 'Emotion' is seen as if it were an ENTITY, which is countable and even modifiable by an adjective of taste, 'sweet.'

Furthermore, some of these entities are personified by the NATURE IS HUMAN metaphor: e.g., the 'mountains' that 'kiss' high 'heaven,' the 'waves' that 'clasp' one another, the 'sister flower' that 'disdained' its 'brother flower,' the 'sunlight' that clasps the 'earth,' the 'moonbeams' that 'kiss' the 'sea.' It might be worth pointing out in this connection that some of the metaphors are what Lakoff and Turner (1989) classified as a nonconventional expansion of conventional metaphors. For example, the metaphor of a 'sister-flower' disdaining its 'brother-flower' in the lines 11 and 12 extends the NATURE IS HUMAN metaphor to include not only the male/female distinction but also the particular kinship of brother and sister.

The ENTITIES are put into semantic oppositions such as: LARGE vs. SMALL ('river' vs. 'fountain'; 'ocean' vs. 'river'); HUMAN vs. DIVINE ('emotion' vs. 'heaven'); HUMAN vs. NATURE ('emotion,' 'I,' 'thou,' 'me,' 'thine,' 'brother,' 'sister' vs. 'fountains,' 'river,' 'ocean,' 'wind,' 'mountains,' 'waves,' 'flower,' 'sunlight,' 'earth,' 'moonbeams,' 'sea'); EARTH vs. HEAVEN ('fountains,' 'river,' 'ocean,' 'mountains,' 'waves,' 'flower,' 'earth,' 'sea' vs. 'heaven,' 'law,' 'divine,' 'sunlight,' 'moonbeams'); MAN vs. WOMAN ('brother' vs. 'sister'; 'I' vs. 'thou'; 'me' vs. 'thine'); WATER vs. SOIL ('fountains,' 'river,' 'ocean,' 'waves,' 'sea' vs. 'earth,' 'mountains'); and DAY vs. NIGHT ('sunlight' vs. 'moonbeams').

FUSION is expressed by the verbs of MIXING such as 'mingle' and 'mix.' What is FUSED has the same quality: SHAPELESSNESS. The image of FUSION is thus introduced by the MIXTURE OF THE FLOW OF LIQUID, such as the 'fountains' mixed with the 'rivers,' and the 'rivers' with the 'ocean,' and by the MIXTURE OF THE FLOW OF THE INVISIBLE, such as the 'winds' mixed with each other with a 'sweet emotion.'

As the poem progresses, the image of FUSION turns into the image of CONTACT, particularly PHYSICAL CONTACT. It seems to indicate the progression of the lover's longing from an abstract fantasy to a concrete vision. The opening line of the second stanza starts with the verb 'see' in the imperative mood. This is a focal point. The act of seeing merges with its double meaning via the metaphor UNDERSTANDING IS SEEING, and the seeing by the physical eye and the mind's eye fuse. The cognitive metaphor UNDERSTANDING IS SEEING is pervasive in ordinary language. For example, "I see what you mean," "It looks different from my point of view," "I was totally in the dark during the presentation she gave," "I've got the whole picture," and "He gave an illuminating paper."

CONTACT is expressed by the verbs of PHYSICAL BINDING and TOUCHING such as 'clasp' and 'kiss.' Those being united by PHYSICAL CONTACT are PERSONS, i.e., PERSONIFIED NATURAL OBJECTS. Obviously the poem uses nonconventional elaboration of image-schemas such as "the mountains kiss the heaven," "the sunlight clasps the earth," "the moonbeam kisses the sea." In the conventional metaphors, the PERSONIFIED NATURE may 'touch' and 'manipulate' the objects such as "the mountain ridge touched the sky," or "wind carries seeds"; but, it does not interact to the fully human degree as described by this poem.

PAIRING is implied by the semantic oppositions as pointed above; but, it is expressed in more specific terms by a paired set of antonyms such as 'I' and 'thou,' 'brother' and 'sister,' 'sun' and 'moon.' The image of PAIRING is also

supported by the abundance of MIXING and CONTACT metaphors.

Each stanza ends with a question, which also implies a double meaning: an inquiry and a request. While the questions at the end of the poem are direct questions, they also function as a request, longing and/or wooing (indirect speech acts). Thus, each stanza is a REQUEST (LONGING, WOOING) in the form of a QUESTION.

Now that it is clear that many of the metaphorical expressions in this poem are based on the conventional cognitive metaphors that we use in everyday language, then, the question is how Shelley exploited conventional metaphors to create his unique poetic text. We have pointed out that he used a non-conventional extension and elaboration of conventional metaphors to some extent. Nevertheless, the most prominent technique is the formation of composite metaphors by combining multiple conventional metaphors together to produce a richer and more complex set of metaphorical networks, which gives inferences beyond those that follow from each of the metaphors alone.

The overall global mapping present in the poem is a mapping of the NATURE domain onto the HUMAN domain. All the MIXING and FUSION and CONTACT in NATURE are mapped onto the PAIRING of two lovers. The network of composite metaphors discussed above constitutes a series of local blends, which are recruited at the time of the global blend of the NATURE and the HUMAN. The input source space has a rich image-schematic structure provided by various pairing acts of natural phenomena and objects. The input target space recruits an image-schematic structure from our common-sense knowledge and background information about the lovers.

The image-schematic structure of each input space is preserved in the abstract structure in the generic space, a frame of PAIRING, in this example. A frame of PAIRING is schematised in two ways: a coupling of the two things, similar (e.g., the water and the water, the waves and the waves, the flower and the flower, the human and the human) and different (e.g., the solid and the air, brother and sister, man and woman).

In the blended space, all these structures from the generic space and the input spaces are preserved, and in addition, some emergent structures arise. For example, a separation of the two lovers. The lovers in this poem have not been united. Shelley's poem is a blend which recruits inferences not only from linguistic conventions instantiated in a composite metaphorical network but also from common-sense knowledge, culture, tradition, history and religion. The poem can be a general statement about love's philosophy. It can also address a potentiality of what may happen. Or it can also be Shelley's own message towards his lover. The poetic imagination extends the conventional metaphors of

love to the realm both of the poet's particular experience and of the potential experience of all lovers, which all reside in the blend.

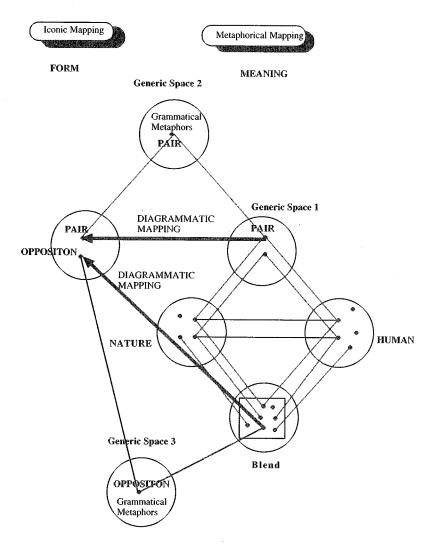


Figure 5: Metaphor-Icon Link in "Love's Philosophy"

Figure 5 illustrates the metaphorical blend discussed above and the diagrammatic iconic mappings to be explained in detail below. The point in this particular poetic text is that the poem's form can acquire an iconic meaning by the grammatical metaphors which actually constitute the content of the two generic spaces (Generic Space 2 and 3) for the two iconic mappings. Firstly, there is a diagrammatic mapping between the schematic structural form of the

poem and the image-schema of the generic space (Generic Space 1, a frame of pairing of the similar and of the different) of global metaphor, bridged by the generic space of a grammatical metaphor (Generic Space 2, A PAIRED FORM IS A PAIRED CONTENT). Secondly, there is another diagrammatic mapping between the schematic structural form of the poem and the image-schema of the blended space. This concerns an iconic mapping of the image-schema of separation projected through the generic space (Generic Space 3, AN OPPOSING FORM IS AN OPPOSING CONTENT).

Let us first look at the lexical architecture of the poem. The frequency of the use of certain words in this poem mirrors PAIRING, which is a shared image-schematic frame of the global metaphor. Even a hasty reader would notice that several lexical items are used repeatedly. The most prominent characteristic of these repetitions is that the same (or similar) items are repeated only twice as if they are PAIRING each other. There are ten identical pairs and five semi-identical pairs, which are either derivationally or inflectionally similar. Table 2 shows these pairs and their position in the text.

Parts of speech	Lexical item	Line number
Verb	mingle clasp	1 and 7 10 and 13
Noun	river heaven	1 and 2 3 and 9
Pronoun	one another I - me thine - thou it - its	7 and 10 8 and 16 8 and 16 12 and 12
Determiner	all a no - nothing why - what	6 and 15 4 and 6 5 and 11 8 and 15
Adverb	not	8 and 16
Preposition	in	5 and 7
Conjunction	if	12 and 16

Table 2: Lexical Pairs in "Love's Philosophy"

On the stanzaic level, too, the first and the second stanza form a PAIR in such a way that each stanza has the same number of elements lexically, syntactically and prosodically, as summarised in Table 3.

	First stanza	Second stanza
Lexical items repeatedly used	six the's two be's	six the's two be's
	four with's	four kiss's
Adjectives	one adjectivesweet	one adjective-high
Plural nouns	four nouns—fountains, rivers, winds, and things	four nounsmountains, waves, moonbeams, and kissings
Rhyme scheme	ababcdcd	ababcdcd

Table 3: Stanzaic Pairs in "Love's Philosophy"

Lexically, the first and the second stanza have the following: six the's, two be's (including 'being'), one lexical item repeated four times (i.e., four with's in the first stanza and four kiss's in the second), one adjective (i.e., sweet in the first stanza and high in the second), four plural nouns (i.e., fountains, rivers, winds, and things in the first stanza and mountains, waves, moonbeams, and kissings in the second). Syntactically, there are five affirmative sentences and one interrogative sentence in each stanza. And prosodically, both stanzas have the same end rhyme scheme, i.e., ababcdcd.

The fact that the poem consists of two stanzas indicates that the stanzaic form of the poem itself is a means of the OPPOSING PAIRS making CONTACT.

The syntactic features of some elements and the syntactic patterns in the text also reflect the image-schemas of OPPOSITES. Firstly, the OPPOSITION of 'I' and 'thou' seems to be supported by the presupposed SEPARATION between 'I' and 'thou,' expressed by the final questions of each stanza, which contain a negation: "why not I with thine?" and "what are all these kissings worth, if thou kiss not me?" (Italics mine.) Secondly, the OPPOSITIONS are also embodied in the grammatical differences between the first and the second stanza. For example, in the first stanza, the verbs are all intransitive, and each line has one preposition, whereas in the second stanza, the verbs are all transitive, and there is no preposition. Hence, the first stanza and the second stanza are grammatically contrastive. In addition, the affirmative introductory sentences and the interrogative concluding sentence form an OPPOSITION within each stanza, though they form a PAIR between the first and the second stanza.

We have seen so far how this poem manifests a multi-layered metaphor-icon link. There are several conventional conceptual metaphors sculpted into the composite metaphorical conception of LOVE. There are images in local

metaphors, too, which enrich the feel of the poem by mapping a mixing act of waters, and of invisible air onto a mingling act of lovers, by mapping a contact of visible natural objects and of fragrant flowers onto a kissing of lovers. The lexical, syntactic and stanzaic form of the poem displays a diagrammatic relationship to the content of the text navigated by the global metaphorical blend as well as conventional grammatical metaphors.

To summarise, "Love's Philosophy," describing the longing of a narrator to be one with his separated (or unreachable) lover, displays the theme iconically and metaphorically in its cognitive content, linguistic form and image, particularly achieved by a creative choice of vocabulary and grammatical patterns. Indeed, the poem is a metaphorical icon of 'love's philosophy.' The analysis by the model of blending has demonstrated how and where the organic unity of the poem is buttressed by diagrammatic and metaphorical coherence between the formal dimension and the dimension of concept and image in the poetic text.

5 Concluding Remarks

This study has shown that the model of blending offers a useful analytical tool to explain the mechanism of iconic and metaphorical mapping in cognitive terms. An original contribution of this paper is a demonstration of the effectiveness of this model for clarifying the complex interrelationship between metaphor and iconicity in the dynamic production of meaning in language in general, and in poetic texts in particular.

It has been demonstrated that a close metaphor-icon link is manifest in two ways: (1) that there are iconic (both imagic and diagrammatic) moments in metaphor; and (2) that a form acquires an iconic meaning by grammatical metaphors. The analysis of the link in ordinary language and poetic texts has illustrated that the model of blending can specify which parts of the metaphorical process -- whether the input, generic or blended spaces -- relate to the diagrammatic iconic mapping of form and meaning.

Poems can be varied in their metaphor-icon structure. "The Easter Wings" is dominantly iconic and has a much less rich use of metaphor, while "Love's Philosophy" is particularly rich and complex in its metaphor with respect to cognitive, image and grammatical aspects. These two poems are believed to be at relatively extreme ends of the spectrums and, to some extent, can be used as measuring standards for other poems to be analysed in the future studies. Some poems show the metaphor-icon link in the visual and syntactic modalities as illustrated in the examples in the present paper. Others display such a link in

auditory modality. The poetic analysis of this paper has proved that the metaphor-icon link is not a simple one. In order to see how the organic unity of poetic texts is achieved by the metaphor-icon link, we need a detailed reading of the texts in their various aspects — visual and auditory forms, structure of meaning, pragmatic and cultural contexts and background information.

What remains for future investigation is a qualitative sophistication of the analysis for the purpose of concise and precise explanation, and quantitative evidential support from different types of material resource such as visual, auditory and formal modalities of language structure and use, in different languages and different genres (cf. D. Freeman 1993, Hiraga, in press(a), (b), M. Freeman, in press, among others).

References

- Anderson, Douglas. 1984. "Peirce on Metaphor." Transactions of the Charles S. Peirce Society: A Quarterly Journal in American Philosophy 20 (4), 453-468.
- Bolinger, Dweight. 1977. Meaning and Form. London: Longman.
- Danesi, Marcel. 1995. "The Iconicity of Metaphor." In Syntactic Iconicity and Linguistic Freezes: The Human Dimension, ed. Marge E. Landesberg, 265-284. Berlin: Mouton de Gruyter.
- Freeman, Donald C. 1978. "Syntax and Romantic Poetics." In *Proceedings of the 12th International Congress of Linguists*, eds. Wolfgang U. Dressler and Wolfgang Meid, 654-657. Innsbruck: Innsbrucker Beitrage zur Sprachwissenschaft.
- ----. 1993. "'According to My Bond': King Lear and Re-Cognition." Language and Literature 2 (1), 1-18.
- Freeman, Margaret. In press. "Poetry and the Scope of Metaphor: Toward a Cognitive Theory of Literature." In *Metaphor and Metonymy at the Crossroads*, ed. Antonio Barcelona. Berlin: Mouton de Gruyter.
- Haiman, John. 1985a. Natural Syntax: Iconicity and Erosion. New York: Cambridge University Press.
- ----- Ed. 1985b. Iconicity in Syntax. Amsterdam: John Benjamins.
- Harris, Roy. 1995. The Signs of Writing. London: Routledge.
- Herbert, George. 1880 [1633]. "Easter Wings." *The Temple*. Cambridge: T. Buck and R. Daniel, Printers to the University of Cambridge.
- -----. 1994 [1633]. "Easter Wings." The Works of George Herbert, 35. Ware, Hertfordshire: Wordsworth Editions.
- Hiraga, Masako K. 1994. "Diagrams and Metaphors: Iconic Aspects in Language." Journal of Pragmatics 22 (1), 5-21.
- -----. In press(a). "'Blending' and an Interpretation of *Haiku*: A Cognitive Approach." *Poetics Today*.
- -----. In press(b). "Rough Sea and the Milky Way: 'Blending' in a *Haiku* Text." In *Computation for Metaphors*, *Analogy and Agents*, ed. Chrystopher Nehaniv. Berlin: Springer-Verlag.

- Jakobson, Roman. 1971 [1966]. "Quest for the Essence of Language." In Selected Writings II, 345-359. The Hague: Mouton.
- Jakobson, Roman and Linda R. Waugh. 1979. The Sound Shape of Language. Bloomington, IN: Indiana University Press.
- Johnson, Mark. 1987. The Body in the Mind: The Bodily Basis of Meaning, Imagination, and Reason. Chicago: University of Chicago Press.
- Lakoff, George. 1987. Woman, Fire, and Dangerous Things: What Categories Reveal about the Mind. Chicago: Chicago University Press.
- ed. Andrew Ortony, 202-251. 2nd ed. Cambridge: Cambridge University Press.
- Lakoff, George and Mark Johnson. 1980. *Metaphors We Live By*. Chicago: Chicago University Press.
- Lakoff, George and Mark Turner. 1989. More than Cool Reason: A Field Guide to Poetic Metaphor. Chicago: Chicago University Press.
- Peirce, Charles S. 1955 [1902]. "Logic and Semiotic: Theory of Signs." *Philosophical Writings*, ed. Buchler, Justus, 98-119. New York: Dover.
- Reddy, Michael. 1970. "The Conduit Metaphor." In *Metaphor and Thought*, ed. Andrew Ortony. Cambridge University Press.
- Shelley, P. B. 1904 [1820]. "Love's philosophy." In *The Golden Treasury*, ed. Francis T. Palgrave. London: MacMillan.
- Taub, Sarah. 1997. Language in the Body. Unpublished doctoral dissertation. University of California, Berkeley.
- Turner, Mark. 1996. The Literary Mind. Oxford: Oxford University Press.
- ----. 1998. "Figure." In *Figurative Language and Thought*, eds. Albert N. Katz, Cristina Cacciari, Raymond W. Gibbs, Jr. and Mark Turner, 44-87. Oxford: Oxford University Press.
- Turner, Mark, and Gilles Fauconnier. 1995. "Conceptual Integration and Formal Expression." *Metaphor and Symbolic Activity* 10 (3), 183-204.
- -----. 1997. "A Mechanism of Creativity." Paper presented at the 2nd International Conference of the Literary Semantics Association, Freiburg, Germany. Solicited for a special issue of *Poetics Today*.
- Waugh, Linda R. 1992. "Presidential Address: Let's Take the Con out of the Iconicity: Constraints on Iconicity in the Lexicon." American Journal of Semiotics 9, 7-48.
- -----. 1994. "Degrees of Iconicity in the Lexicon." *Journal of Pragmatics* 22 (1), 55-70.

(平成10年11月30日受理)