

Idioms: A View from Cognitive Semantics

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According to the most common definition, idioms are linguistic expressions whose overall meaning cannot be predicted from the meanings of the constituent parts. Although we agree with the traditional view that there is no complete predictability, we suggest that there is a great deal of systematic conceptual motivation for the meaning of most idioms. Since most idioms are based on conceptual metaphors and metonymies, systematic motivation arises from sets of 'conceptual mappings or correspondences' that obtain between a source and a target domain in the sense of Lakoff and Kovecses (1987). We distinguish among three aspects of idiomatic meaning. First, the general meaning of idioms appears to be determined by the particular 'source domains' that apply to a particular target domain. Second, more specific aspects of idiomatic meaning are provided by the 'ontological mapping' that applies to a given idiomatic expression. Third, connotative aspects of idiomatic meaning can be accounted for by 'epistemic correspondences'. Finally, we also present an informal experimental study the results of which show that the cognitive semantic view can facilitate the learning of idioms for non-native speakers.

1 INTRODUCTION

In recent years, several linguists, philosophers, psychologists, psycholinguists, and anthropologists have begun to challenge many dogmas about some fundamentally important aspects of the study of language. The 'standard' views of the nature of meaning, of metaphor, of categorization, of syntax, of the relationship between form and meaning, and of that between linguistic meaning and encyclopedic knowledge, and others, have been challenged by such figures as George Lakoff, Ronald Langacker, and Mark Johnson (see especially Lakoff and Johnson 1980, Johnson 1987, Lakoff 1987, Langacker 1987, 1991, Lakoff and Turner 1989). This new approach to the study of language has come to be known as 'cognitive linguistics'. The new ideas have proved to be useful in, and have changed our perceptions of, the study of a wide variety of linguistic phenomena (for a good introduction and review, see Taylor 1989), including the study of idioms (see especially, Gibbs (1990, 1994) and, an early work in somewhat similar spirit, Makkai (1972)).

Idioms constitute one of the most difficult areas of foreign language learning for both teachers and learners—for both practical and theoretical reasons (see, for example, Garms and Redman 1986, Lattey 1986, Alexander 1987, Carter and McCarthy 1988, Danesi 1993). This situation alone makes it sufficiently worthwhile for us to see what cognitive linguistics, and especially its subfield cognitive semantics, can contribute to the teaching and learning of idioms in a

foreign language. Recent attempts by the applied linguistics community have tried to integrate some of the findings of cognitive linguistics concerning idioms, and other notions like prototype and metaphor, into the framework of applied linguistics (see, for example Alexander (1987), Danesi (1993), MacLennan (1994)). These studies look primarily at the overall applied linguistic framework in which the teaching/learning of idioms and metaphors can be placed but, due to their different purposes, they do not deal with the nature and conceptual complexity of idiomaticity. In particular, they do not address, or at least not in sufficient detail, such issues as the systematic nature of idioms, the conceptual mappings that are responsible for much of the meaning of idioms, the motivated nature of idioms, and the various kinds of cognitive mechanisms (like metaphor, metonymy, conventional knowledge) on which idioms are based. What we attempt to do here is to offer a cognitive semantic view of idioms that addresses these issues and thus provides a more solid basis for integration into applied linguistic models. We will *not* be concerned with grammatical aspects of idioms. (On this, see, for example Fillmore, Kay, and O'Connor (1988), Nunberg, Sag, and Wasow (1994).)

In this paper, we outline the main differences between the traditional, or standard view of the semantics of idioms and the view that has developed in cognitive semantics. Furthermore, we will provide a relatively detailed analysis of two conceptual domains that are very productive of idioms: that of fire and that of the human hand. In doing this, we wish to demonstrate in some detail the systematic nature of idioms, the cognitive mechanisms that are involved in the production of idioms, the motivated nature of idioms, and the emergence of idiomatic meaning. In addition, we will deal with the question of whether the cognitivist view of idioms can aid us in the teaching/learning of idioms. To this end, we report the results of an informal experiment on idiom learning.

We will proceed as follows. In section 2, we compare the traditional with the cognitivist view of idioms. In section 3, using idioms related to the concept of fire, we examine the question of how metaphor contributes to the understanding of many idioms. In section 4, using idioms related to the human hand, we will show how metonymy and conventional knowledge play a role in the interpretation of idioms. In section 5, we will present the results of an informal experimental study conducted to compare the effectiveness of the cognitivist approach with that of the traditional approach as methods of teaching/learning English idioms. We will use only English idiomatic expressions to demonstrate the points we wish to make but we believe that the ideas we will present can be fruitfully applied to other languages as well.

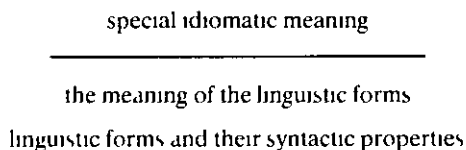
2 THE COGNITIVIST VERSUS THE TRADITIONAL VIEW OF IDIOMS

The category of idiom is a mixed bag. It involves metaphors (e.g. *spill the beans*), metonymies (e.g. *throw up one's hands*), pairs of words (e.g. *cats and dogs*), idioms with *it* (e.g. *live it up*), similes (e.g. *as easy as pie*), sayings (e.g. *a bird in the hand is worth two in the bush*), phrasal verbs (e.g. *come up*, as in 'Christmas is *coming up*'), grammatical idioms (e.g. *let alone*), and others. (For classifications

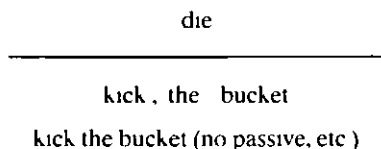
of idioms, see, for example the *Longman Dictionary of English Idioms*, 1979, and the *Oxford Dictionary of Current Idiomatic English*, Vol 1 1975 (2nd edn 1993), Vol 2 1983, and Alexander (1987) and Lattey (1986)) Most views of idioms agree that idioms consist of two or more words and that the overall meaning of these words is unpredictable from the meanings of the constituent words (For the standard views, see for example Gairns and Redman (1986), Carter and McCarthy (1988), McArthur (1992), and the idiom dictionaries cited above)

In the traditional view, idioms are regarded as a special set of the larger category of words (e g Carter and McCarthy 1988 19) They are assumed to be a matter of language alone, that is, they are taken to be items of the lexicon that are independent of any conceptual system According to the traditional view, all there is to idioms is that, similar to words, they have certain syntactic properties and have a meaning that is special, relative to the meanings of the forms that comprise it

This general characterization of the 'traditional view' is not intended to be negative in every way For example, Carter and McCarthy (1988), following in the tradition of Bolinger (1965), rightly stress the idea that the vocabulary of a language cannot be equated with the sum of the single words in the language In doing this, they draw attention to the significance, and the problematics, of idioms in the context of teaching/learning foreign languages Nevertheless, the 'core' conception of idioms in what we term the 'traditional view' can be represented in diagrammatic form as follows



For example



(As in the diagram, meanings will be given in single quotation marks throughout the remainder of the study)

Idioms are also taken to be independent of each other This follows from the previous view that idioms are simply a matter of language If they were just a matter of language, then we would need to characterize only their syntactic properties and meanings one by one Words are characterized in the lexicon one by one according to their syntactic properties and meaning, and the same is assumed to apply to idioms Certain relationships between words are

recognized but these are only certain sense relations, such as homonymy, synonymy, polysemy, and antonymy. Idioms may be seen as standing in the same relationships. It should be noticed, however, that these are relations of linguistic meanings, not relations in a conceptual system. In the traditional view, linguistic meaning is divorced from the human conceptual system and encyclopedic knowledge that speakers of a language share (see for example, Hauman 1980).

We would like to suggest that one major stumbling block in understanding the nature of idioms and making use of this understanding in the teaching of foreign languages is that they are regarded as linguistic expressions that are independent of any conceptual system and that they are isolated from each other at the conceptual level.

To be sure, there have been attempts by lexicographers and compilers of idiom dictionaries and workbooks to find systematicity in idioms. To see how they have tried to systematize idioms (and not just list them in alphabetical order), consider the following sentences:

- (1) He was *spitting fire*
- (2) The *fire* between them finally *went out*
- (3) The painting *set fire to* the composer's imagination
- (4) Go ahead. *Fire away!*

As can be seen, each of the sentences contains an idiom that has the word *fire* in it. In the examples, three of them are nouns and one is a verb. There are several idiom dictionaries that make use of this fact and organize their entries around words such as *fire*, that occur in idioms (e.g. the *Longman Dictionary of English Idioms*, 1979, Renton's *Metaphorically Speaking* (1986), *Chambers Idioms* (1982), and, at least partly, *A Dictionary of American Idioms* (1975)). While this way of arranging idioms in a dictionary may be useful for some purposes (like answering questions about how many idioms there are in English with the word *fire* in them), the arrangement does not seem to reflect any kind of conceptual organization. The idioms are merely systematized on the basis of a formal property, i.e. according to whether the word *fire* occurs in them.

A second way in which idioms could be, but are rarely, arranged is the 'thesaurus-like arrangement'. This follows the format of *Roget's Thesaurus*. In addition to the idioms above, this arrangement would also have items such as the following:

- (5) The killing *sparked off* riots in the major cities
- (6) He was *burning the candle at both ends*
- (7) The bank robber *snuffed out* Sam's life
- (8) The speaker *fanned the flames* of the crowd's enthusiasm

In these examples, we have idioms that are related to various aspects of the phenomenon of fire, including its beginning (*spark off*), its end (*snuff out*), how it makes use of an energy source (*burn the candle at both ends*), how it can be made more intense (*fan the flames*), and the danger it presents (*fan the flames*,

spit fire) As the examples suggest, in addition to the word *fire*, several other words are used from the domain of fire, such as *burn*, *candle*, *snuff*, *flame*, etc. These and many other examples suggest that it is the conceptual domain (the concept) of fire—and not the individual words themselves—that participates in the process of creating idiomatic expressions. The individual words merely reveal this deeper process of conceptualization.

Given this analysis, an important generalization can be made: many, or perhaps most, idioms are products of our conceptual system, and not simply a matter of language (i.e. a matter of the lexicon). An idiom is not just an expression that has meaning that is somehow special in relation to the meanings of its constituent parts, but it arises from our more general knowledge of the world (embodied in our conceptual system). In other words, idioms (or, at least, the majority of them) are conceptual, and not linguistic, in nature.

If this is the case, we can rely on this knowledge to make sense of the meanings of idioms, hence the meanings of idioms can be seen as motivated and not arbitrary (Lakoff 1987 and 1993, Gibbs 1990 and 1994). The knowledge provides the motivation for the overall idiomatic meaning. (Note that we are *not* using the term “motivation” in its usual sense in learning theory, we will explain the intended new sense below.) This goes against the prevailing dogma which maintains that idioms are arbitrary pairings of forms (each with a meaning) and a special overall meaning. Motivation is to be distinguished from prediction (Lakoff 1987). When we say that the meaning of an idiom is motivated we are not claiming that its meaning is fully predictable. In other words, no claim is made that, given the non-idiomatic meaning of an idiom (e.g. ‘emit sparks’ for the expression *spark off*), we can entirely *predict* what the idiomatic meaning (e.g. ‘begin’) will be that is associated with the words (e.g. *spark* and *off*). Motivation is a much weaker notion than prediction. In some cases, we do not have conceptual motivation for the meaning of idioms at all (as in the case of the well-worn idiom *kick the bucket*). Understandably, these latter kinds of idiomatic expressions are the most celebrated examples of idioms in the standard view.

The motivation for the occurrence of particular words in a large number of idioms can be thought of as a cognitive mechanism that links domains of knowledge to idiomatic meanings. The kinds of mechanisms that seem to be especially relevant in the case of many idioms are metaphor, metonymy, and conventional knowledge (Lakoff 1987). (We will deal with idioms based on metaphor in section 3, and with idioms based on metonymy and conventional knowledge in section 4.) We can show this picture in Figure 1. We will be in a position to illustrate this view of idioms in the next section. At this point, we note that, as Figure 1 shows, this is a much more complex picture of idioms than the one presented earlier. The main focus of this study will be on the two components in the middle: cognitive mechanisms and conventional knowledge (i.e. conceptual domains). As will be seen below, a given domain of knowledge can often account for a particular idiomatic meaning in a direct way, that is, without metaphor or metonymy. We view metaphor and metonymy as cognitive

Idiomatic meaning

the overall special meaning of an idiom

Cognitive mechanisms

metaphor metonymy conventional knowledge (= domain(s) of knowledge)

Conceptual domain(s)

one or more domains of knowledge

Linguistic forms and their meanings

the words that comprise an idiom their syntactic properties together with their meanings

Figure 1 The conceptual motivation for many idioms

mechanisms that relate a domain (or domains) of knowledge to an idiomatic meaning in an indirect way

We would like to suggest that the implication of these ideas for teaching idioms is that this kind of motivation should facilitate the teachability/learnability of idioms (see, for instance, Irujo 1993). Theoretically at least by providing the learners with cognitive motivation for idioms, learners should be able to learn the idioms faster and retain them longer in memory. Our informal experimental study, to be considered later, was aimed at exploring this possibility.

3 METAPHOR-BASED IDIOMS

Conceptual metaphors bring into correspondence two domains of knowledge. One is typically a well-delineated, familiar physical domain and the other a less well-delineated, less familiar, abstract domain. The first is called a source domain, the second a target domain. (For a fuller description of this view, see especially Lakoff and Johnson 1980 and Lakoff 1993.) The source domain is typically applied to provide understanding about the target. In the examples above, the domain of fire is used to understand a varied set of abstract concepts, many of which are concepts denoting an emotion. Emotion concepts and concepts denoting personal relationships are particularly susceptible to metaphorical understanding (see, for example, Kövecses 1986, 1988, 1990, 1991 a, b, and 1995c). Radden (1995) provides an excellent account of idioms that have to do with *coming* and *going* using the conceptual machinery of cognitive semantics.

But how do conceptual metaphors provide semantic motivation for the occurrence of particular words in idioms? To see this, let us again take some of the examples we have seen above.

In the expression *sput fire*, the domain of fire is used to understand the domain of anger. That is, anger is comprehended via the concept of fire. Following the conventions of cognitive semantics, we can call this the **ANGER IS FIRE** conceptual metaphor (where the capital letters indicate concepts rather than words). In the case of the sentence 'The *fire* between them finally *went out*', the conceptual metaphor underlying the idiom is **LOVE IS FIRE**, in 'The painting *set fire* to the

composer's imagination", it is IMAGINATION IS FIRE, in "The killing *sparked off* riots", it is CONFLICT IS FIRE, in the case of *burning the candle at both ends*, it is ENERGY IS FUEL FOR THE FIRE, in the case of *snuff out*, it is LIFE IS A FLAME, in the case of *fan the flames*, it is ENTHUSIASM IS FIRE (We note here that some conceptual metaphors are reversible, e.g. we have ANGER IS FIRE, but also A FIRE IS AN ANGRY PERSON, and so we can talk about an "*angry fire*" On this issue, see Kovecses 1986)

Thus, we seem to have the following conceptual metaphors accounting for the above idioms

ANGER IS FIRE
 LOVE IS FIRE
 IMAGINATION IS FIRE
 CONFLICT IS FIRE
 ENERGY IS FUEL FOR THE FIRE
 ENTHUSIASM IS FIRE

Thus, what we are claiming is that it is these conceptual metaphors that function like the connecting element between an abstract domain (such as anger, love, etc.) and a more physical domain (which is fire in the examples) (However, it should be clearly understood that there are many additional conceptual metaphors that use fire as a source domain. Those mentioned above represent only a sample of *all* the "fire-metaphors")

These conceptual metaphors can be seen as conceptually motivating the use of words such as *spark off*, *fire*, *go out*, *burn the candle*, *fan the flames*, etc. in the idioms in which they occur. Given these conceptual metaphors, we can see why the idioms have the general meaning that they do, that is, why they have to do with anger, love, imagination, etc., respectively. The reason is that these conceptual metaphors exist and they serve as links between two otherwise independently existing conceptual domains. Because of the connections they make in our conceptual system, the conceptual metaphors allow us to use terms from one domain (e.g. fire) to talk about another (e.g. anger and love). The idioms that employ these terms (such as those of fire) will be about certain target domains (such as anger) as a result of the existence of conceptual metaphors (such as ANGER IS FIRE). Now we are in a position to provide a specific illustration of Figure 1 in the previous section. To do this, we take the idiomatic expression *to spit fire* as an example.

| | |
|---------------------------|------------------------|
| Special idiomatic meaning | 'be very angry' |
| Cognitive mechanisms | metaphor ANGER IS FIRE |
| Conceptual domain(s) | FIRE and ANGER |
| Linguistic forms | spit fire |
| Meanings of forms | 'spit', 'fire' |

Obviously, the meaning of *spit fire* is more complex than just 'be very angry'. We will come back to some of the complexities concerning its meaning later in the section. The point we are making here is that our ability to see many idioms as

being conceptually motivated (i.e. as having the general meaning they do) arises from the existence of conceptual metaphors. Another way of putting this is to say that the general meaning of many idioms (i.e. what concepts they are about) remains completely unmotivated unless we take into account the interplay between meaning and our conceptual system as comprised by conceptual metaphors to a large extent. In other words, we claim that the meaning of many (though not all) idioms depends on, and is inseparable from, the (metaphorical) conceptual system.

At this stage, two additional points need to be made to complete our argument. So far, we have shown that the meaning of many idioms (but not that of all idioms, such as *kick the bucket*) is not independent of the domains of knowledge that make up a large part of our conceptual system and that conceptual metaphors provide the link between the special idiomatic meaning and the conceptual knowledge. What we have to show now is that (1) the conceptual metaphors really exist, that is, they have psychological validity, and (2) that many of the idioms we have seen so far are not isolated linguistic expressions, but come from a source domain used to understand and talk about a target domain. To a large degree, to do the first involves being able to do the second.

If conceptual metaphors really exist and if metaphors are indeed conceptual in nature, we should be able to find examples for ANGER IS FIRE, LOVE IS FIRE, IMAGINATION IS FIRE, etc. in addition to the single linguistic example we have identified for each so far and on the basis of which we have assumed the existence of these conceptual metaphors. Indeed, it does not seem to be very difficult to find further examples.

ANGER IS FIRE

After the row, he *was spitting fire*
Smoke was coming out of his ears
 He is *smoldering* with anger
 She was *fuming*
 Boy, am I *burned up*!

LOVE IS FIRE

The *fire* between them finally *went out*
 I am *burning* with love
 She *carries a torch* for him
 The *flames are gone* from our relationship

IMAGINATION IS FIRE

The painting *set fire to* the composer's imagination
 His imagination *caught fire*
 Her imagination is *on fire*
 The story *kindled* the boy's imagination

CONFLICT IS FIRE

The killing *sparked off* the riot
 The *flames* of war *spread* quickly

The country was *consumed* by the *inferno* of war
 They *extinguished the last sparks* of the revolution

ENERGY IS FUEL FOR THE FIRE

Don't *burn the candle at both ends*
 I *am burned out*
 I need someone *to stoke my fire*

ENTHUSIASM IS FIRE

The speaker *fanned the flames* of the crowd's enthusiasm
 The team played so well that the crowd *caught fire*
 He was *burning* with excitement
 Don't be a *wet blanket*
 Her enthusiasm was *ignited* by the new teacher

It may be observed that some of the examples given above consist of only one word (e.g. *burn*, *ignite*, *kindle*), and given that idioms are multi-word expressions by definition, they do not count as idioms at all. We have listed these examples to be able to make the point that we do not claim that *all* the metaphorical linguistic expressions based on conceptual metaphors are idioms. The class of metaphorical expressions generated by conceptual metaphors is larger than that of metaphorical idioms. Nevertheless, as has been seen above, the number of metaphorical idioms produced by conceptual metaphors is quite large.

But the more important point we are trying to make is that, as the wealth of examples above indicates, the conceptual metaphors are not limited to a single linguistic expression, but make themselves manifest in a large number of expressions. This would be unlikely if metaphors were simply isolated linguistic expressions. We seem to have some very basic domains of knowledge such as fire, journeys, people, plants, buildings, containers, and many more that we make extensive use of in understanding more abstract domains of experience.

There is also independent (that is, non-linguistic) evidence to show that conceptual metaphors exist, that they have conceptual reality. The American psycholinguist, Raymond Gibbs, has found that conceptual metaphors have psychological reality and that they motivate idiomatic expressions (Gibbs 1990, Gibbs 1994, Gibbs and O'Brien 1990). The result of Gibbs' studies show that people have tacit knowledge of the metaphorical basis for idioms. This tacit knowledge is easiest to recover if we examine speakers' mental images for idioms in detail. For example, Gibbs and O'Brien (1990) investigated the conventional images and knowledge that people have when asked to form mental images of idioms. They looked at five sets of idioms with similar nonliteral meanings—idioms that have to do with revelation (e.g. *spill the beans*, *let the cat out of the bag*, *blow the whistle*), anger (e.g. *blow your stack*, *flip your lid*, *hit the ceiling*), insanity (e.g. *go off your rocker*, *lose your marbles*, *go to pieces*), secretiveness (e.g. *keep it under your hat*, *button your lips*, *hold your tongue*), and exerting control (e.g. *crack the whip*, *lay down the law*, *call the*

shots) Participants in the experiments were asked to form mental images of idioms and were asked a series of questions about their images. There was a remarkable degree of consistency in people's images and responses to the questions. This consistency in people's understanding of idioms is a result of conceptual metaphors. For example, in the case of anger, it is the MIND IS A CONTAINER (Reddy 1979, Lakoff and Johnson 1980) and the ANGER IS THE HEAT OF A FLUID IN A CONTAINER metaphors (Kovecses 1986, Lakoff 1987, Lakoff and Kovecses 1987) that guarantee the consistency. Gibbs (1990: 434) explains:

When imagining Anger idioms people know that pressure (that is, stress or frustration) causes the action: that one has little control over the pressure once it builds; its violent release is done unintentionally (for example, the blowing of the stack) and that once the release has taken place (i.e. once the ceiling has been hit, the lid flipped, the stack blown) it is difficult to reverse the action. Each of these responses are based on people's conceptions of heated fluid or vapor building up and escaping from containers (ones that our participants most frequently reported to be the size of a person's head). We see that the metaphorical mapping of a source domain (for example, heated fluid in a container) into target domains (for example, the anger emotion) motivates why people have consistent mental images and specific knowledge about these images, for different idioms about anger.

If it were not the case that people's tacit knowledge about idioms is structured by different conceptual metaphors, there would be very little consistency in people's understanding of idioms with similar non-literal meanings. Anger idioms like *blow your stack*, *flip your lid*, *hit the ceiling* (which all have the non-literal meaning 'to get angry') are understood by people in terms of the same general image and specific knowledge (like cause, action, consequence, etc.) because conceptual metaphors like the MIND IS A CONTAINER and ANGER IS THE HEAT OF A FLUID IN A CONTAINER exist in the conceptual system of speakers of English.

So far, we have talked only about the general meaning of idioms. Now we should say something about the more precise meaning of particular idiomatic expressions. This has to do with the structure of the source domain and the corresponding structure of the target domain. We suggest that a conceptual metaphor is a set of mappings, or correspondences between two domains—the source and the target (Lakoff and Kovecses 1987, Lakoff 1993). Many of the fire-metaphors we have seen above, such as ANGER IS FIRE, LOVE IS FIRE, etc., are constituted by the following conceptual mappings, or correspondences:

- the thing burning is the person in a state/process
- the fire is the state (like anger, love, imagination)
- the cause of the fire is the cause of the state
- the beginning of the fire is the beginning of the state
- the existence of the fire is the existence of the state
- the end of the fire is the end of the state
- the intensity of the fire is the intensity of the state

This set of mappings goes a very long way in explaining the more precise meaning of a large number of idioms based on the domain of fire. It will explain why, for example "*setting fire to* one's imagination" means 'causing one's imagination to function', why "*extinguishing the last sparks of* the uprising" means 'ending the uprising', why *sputting fire* and *smoke coming out of your ears* mean 'more intense anger' than merely "*burning with* anger", and why *to carry a torch for someone* has as a large part of its meaning 'for love to exist for someone', or more simply, 'to love someone' (However, this last example also reminds us that the mappings do not explain the complete meaning of an idiom in every case. The fuller meaning of *carry a torch for someone* is something like 'have unrequited love for someone'. The 'unrequited' part of the meaning of this idiom does not seem to be explained or motivated by any of the mappings above.)

But there is even more to the meaning of idioms. In addition to the general meaning and the more specific meaning identified so far, we should also discuss an aspect of (idiomatic) meaning that many scholars would describe under the heading of "connotation". Although, together with Bolinger (1965), we disagree with claims about the usefulness of the "denotation vs. connotation" distinction in general (see also Haiman 1980, Kovecses 1993), the semantic phenomena that the term 'connotation' covers are nevertheless real and have to be accounted for.

Let us take the example of the metaphorical idiom *to spit fire* again. Obviously the special idiomatic meaning of *spit fire* is more than 'be very angry'. To account for the additional meaning by means of the apparatus of cognitive semantics, we have to introduce a distinction between two kinds of metaphoric mapping: "ontological" and "epistemic" (see Lakoff and Kovecses 1987, Lakoff 1993). Ontological mappings are correspondences between basic entities and events in the source domain and entities and events in the target domain. The mappings we have considered so far were all of this kind. On the other hand, epistemic mappings carry over knowledge about entities and events in the source domain onto entities and events in the target. In other words, speakers using particular conceptual metaphors will apply inferences from one domain to another. One specific piece of knowledge that people have about, say, the domain of fire is that when the fire is intense and it is not under control, it is dangerous—both for the person having the fire and others nearby. Speakers habitually make the same inference about anger on the basis of fire: when anger is intense and out of control, it is dangerous both for the angry person and others (for more examples of this kind of metaphorical inference, see Lakoff and Kovecses 1987, Lakoff 1993, Kovecses 1990, 1991a, Gibbs 1994). In this fashion, we can account for additional portions of the meaning of many idioms, like *spit fire* (e.g. such "connotative" aspects of its meaning as the anger being intense, being out of control, and dangerous to the angry person and others). It is also this kind of metaphorical inference pattern that helps us explain subtle differences in the meanings of many idioms with similar "denotative" meaning. Thus, for example the idioms *spit fire*, *smoke coming out of your ears*, and *be*

burned up share the meaning 'be very angry', which is based on the *ANGER IS FIRE* metaphor and its ontological correspondences. These idioms, however, impose very different inferences on speakers, in the case of *smoke coming out of your ears*, the inference (the connotation) is that the anger is essentially under control but potentially dangerous, and in the case of *be burned up*, it is that the angry person has completely lost rational control.

The conclusion that we can draw from what we have done so far is that in many cases what determines the general meaning of an idiom (i.e. what concept it has to do with) is the target domain of the conceptual metaphor that is applicable to the idiom at hand and that the more precise meaning of the idiom depends on the particular ontological mapping that applies to the idiom. For example, the general meaning of the idiom *spit fire*, which has to do with anger, depends on the existence of the conceptual metaphor *ANGER IS FIRE*, and its more precise meaning, which is 'be very angry', depends on the conceptual mapping "intensity of fire is intensity of anger" between the source domain (fire) and the target domain (anger). Furthermore, additional connotative aspects of idiomatic meaning seem to depend on what we have called 'epistemic correspondences'.

4 METONYMY AND CONVENTIONAL KNOWLEDGE

As pointed out earlier, conceptual metaphor is not the only cognitive mechanism that can motivate idioms. To see how two further mechanisms—conceptual metonymy and conventional knowledge—are also involved in this process, we turn now to another conceptual domain: that of the human hand.

We have collected a large number of idioms that have to do with the human hand from a variety of sources, especially from some standard dictionaries. Our goal in this section is to present the major cognitive mechanisms that play a role in a cognitivist account of these idiomatic expressions. We have found that, in addition to conceptual metaphor, we also need (often non-metaphorical) conventional knowledge as well as conceptual metonymies in our account. The specific cognitive mechanisms required for an account of the idioms we have collected relating to the human hand include the following:

- general knowledge about the *USE OF THE HAND*
- specific knowledge about the *CONVENTIONAL GESTURES INVOLVING THE HAND*
- the metonymy *THE HAND STANDS FOR THE ACTIVITY*
- the metonymy *THE HAND STANDS FOR THE PERSON*
- the metonymy *THE HAND STANDS FOR THE SKILL*
- the metaphor *FREEDOM TO ACT IS HAVING THE HANDS FREE*
- the metonymy *THE HAND STANDS FOR CONTROL*
- the metaphor *CONTROL IS HOLDING SOMETHING IN THE HAND*
- the metaphor *POSSESSING SOMETHING IS HOLDING SOMETHING IN THE HAND*
- the metaphor *ATTENTION IS HOLDING SOMETHING IN THE HAND*

Some of these conceptual principles are not as clear-cut as to their precise nature as others. For example, one might argue that what we call the *FREEDOM TO*

ACT IS HAVING THE HANDS FREE metaphor could well be conceived as a metonymy HAVING THE HANDS FREE STANDS FOR FREEDOM This is probably right Some of the cases above are "metaphorical metonymies", that is, cases where a conceptual metaphor is based on a conceptual metonymy However, for the sake of simplicity we have decided to use only one cognitive principle (either metaphor or metonymy) in our account

We would like to propose that the cognitive mechanisms listed above and their combinations take us a long way in accounting for, and motivating, the meanings of a large number of idiomatic expressions that have to do with the human hand

By conventional knowledge as a cognitive mechanism, we simply mean the shared information that people in a given culture have concerning a conceptual domain, like the human hand This shared everyday knowledge includes standard information about the parts, shape, size, use, and function of the human hand, as well as the larger hierarchy of which it forms a part (hand as a part of the arm, etc.) This conventional knowledge is variously called an "idealized cognitive model" (Lakoff 1987), "schema" (Langacker 1987), "cultural model" or "folk theory" (Holland and Quinn 1987), or "frame" or "scene" (Fillmore 1982) As Fillmore puts it, scenes are coherent organizations of human experience

Metonymy is distinguished from metaphor in such a way that metonymy is characterized as typically involving one conceptual domain, rather than two distinct ones (as is the case for metaphor) Furthermore, metonymy involves a 'stand for' conceptual relationship between two entities (within a single domain), while metaphor involves an 'is' or "is understood as" relationship between two conceptual domains, such as anger and fire (For a discussion of the differences between conceptual metaphor and metonymy, see Lakoff and Johnson 1980, Lakoff and Turner 1989, Dirven 1993) The discussion of many of the linguistic examples below will make the difference sufficiently clear

Let us begin with general conventional knowledge Take the idiom *handful* when it means 'a small number' How can the words, or rather morphemes, *hand* and *ful* (etymologically *full*) mean 'a small number'? One piece of knowledge we have about the hand is that the hand is too small to hold many basic-level objects easily in it at the same time (On the notion of basic-level objects, see Lakoff 1987) We can only hold a small number of objects in the hand if the objects are bigger than a certain size Think of, say apples (as opposed to, say, coins) We can only hold two, three, or four of them easily in one hand We can, however, carry a lot more in a basket or in a wheel-barrow Although the hand is full of apples, the number is *relatively* small as compared to the number that a basket or a wheel-barrow can hold It should be noticed, however, that when *handful* occurs in sentences like "He picked up a *handful* of mud", the word is not used in an extended sense, that is, it does not have implications of size, and is thus not an idiom at all

Very similar to *handful* is the expression *have one's hands full* ('to be busy'), but the explanation for the meaning of this idiom is very different If we hold

things in the hand already, we cannot easily pick up other things with it and use the hand for another activity. We are busy with things already in the hand and we have no capacity to do anything else. The point here is not that this is the only explanation one can come up with for the idiom, but that whatever we come up with is likely to be very different from the one given (or that could be given) for *handful*. Although the linguistic forms are very similar, the conventional knowledge underlying the different meanings is likely to be very different (perhaps along the lines suggested).

Consider now the expression *with an open hand* meaning 'generously', as in "She gives her love to people *with an open hand*". The image of a person physically giving objects to another with an open hand implies the knowledge that nothing is held back and everything can be taken. This stands in marked contrast to the knowledge about the image of a person who gives with his fist held tight. As a matter of fact, it is hard to imagine how this person can hand over anything at all. Indeed, the expression *tight-fisted* indicates just the opposite of giving *with an open hand*. The latter suggests willingness and the former reluctance in giving.

The meaning of the idiom *with both hands* (as in 'accept something *with both hands*') is something like 'eagerly'. This again derives from our knowledge about the use of the human hands. When we (and especially babies) want something very much, we reach for the thing with both hands, when we want it less, we reach out with one hand, and when we do not want it at all, the hand does not reach forward at all. As a result of this highly stereotyped series of hand movements and the knowledge associated with them, we find the meaning 'eagerly' perfectly natural for the idiom *with both hands*. Other examples of this kind include *at hand* ('near'), *left-handed* ('awkward'), and more.

A special case of general conventional knowledge is involved when our knowledge relates to certain conventionalized gestures involving the human hand(s). What is special about these cases is that the motivation for the meaning of an idiomatic expression comes from what we know of the gesture itself, and not from the meaning of the expression. Consider, for example, hand-shaking. Hand-shaking is a conventionalized gesture of greeting in Anglo-American culture. The linguistic expression describing it—*shake hands*—means 'to greet someone'. We feel that the meaning of the expression is somehow appropriate and natural (i.e. motivated) because we know how and why hand-shaking as a gesture is used in Anglo-American culture. This knowledge is independent of our knowledge of English. The idiom *shake hands* is a description of a conventionalized gesture. It means 'to greet someone' because the gesture as such is used to greet someone. There are many additional cases like this:

raise one's hand ('identify oneself')

put one's hands up ('surrender, as when someone is arrested')

wring one's hands ('express despair')

go down on one's hands and knees ('with great humility ask a favor of a person')

throw up one's hands ('express disgust' or 'give up')
 lift/raise a hand against somebody ('threaten somebody')
 give one's hand on a bargain ('seal a bargain')

The motivation for idioms rarely comes from a single source (i.e. from a single cognitive mechanism). In most cases, motivation comes from a combination of two or even more sources. In the examples we will discuss below, both conventional knowledge and metonymy seem to be at work. To say which is more "powerful" is often difficult and a matter of individual taste. We feel that in the cases below, conceptual metonymy is the dominant force and cognitive source.

The particular metonymy that seems to provide motivation for the following idiomatic expressions is *THE HAND STANDS FOR THE ACTIVITY*. We believe that the basis for this conceptual metonymy is that many prototypical human activities are performed with the hands. (This metonymy may be a special case of the more general metonymy *THE INSTRUMENT USED IN AN ACTIVITY STANDS FOR THE ACTIVITY*. Thus, the hand may be viewed as an instrument.) Consider, as an example, the idiom *hold one's hand* meaning 'wait and see'. This particular meaning arises in large measure as a result of the metonymy *THE HAND STANDS FOR THE ACTIVITY*. We can guess that the expression is about an activity because of this metonymy. But we also appear to have further knowledge associated with holding one's hand. When we hold our hands (i.e. when we arrest the movement of the hand) we have temporarily stopped an activity. We are waiting to see whether to continue or how to continue the activity we have been engaged in. Thus, the metonymy *THE HAND STANDS FOR THE ACTIVITY* and some further conventional knowledge jointly produce a large part of the motivation for the idiomatic meaning of the expression *hold one's hand*. Other idioms that behave in a similar way include

sit on one's hands ('deliberately do nothing')
 put one's hands in one's pockets ('deliberately do nothing')
 turn one's hand to something ('tackle some project')
 be able to do something with one hand behind one's back ('be able to do something very easily')
 join hands with somebody ('co-operate with a person')

While all of these cases have to do with activities in general, there are several expressions that denote a specific activity. For example, *hand* in the idiom *by hand* indicates 'handwriting'. It is usually the context that makes it clear that the activity in question is handwriting and not something else. We say "Please write it *by hand*" or "She has a legible *hand*". That is, the metonymy *THE HAND STANDS FOR THE ACTIVITY* motivates the use of the concept of *HAND*, but does not tell us what specific activity is involved. Similar examples include

play one more hand ('play one more round (of cards)')
 give somebody a big hand ('applause')
 be in good hands ('be well cared for')

These examples specifically denote card-playing, applause, and caring, respectively, and not activities in general. In these cases, there is less motivation for the meaning of the expressions than in the ones we have seen above. But the context and the general *THE HAND STANDS FOR THE ACTIVITY* metonymy takes us a long way in understanding why the idioms have the meaning they do.

One of the best known metonymies in English is *THE HAND STANDS FOR THE PERSON* (an instantiation of the more general metonymy *THE PART STANDS FOR THE WHOLE*). In a sentence like 'We need more *hands*', the word *hands* refers to persons. Disregarding the possibility of cannibalism, speakers of English would take the meaning of the sentence to be 'we need more people'. The same metonymy can be used to account for the meaning of some additional expressions

a factory hand (a factory worker)

from hand to hand ('directly' from one person to another')

all hands on deck (everybody ready for action, duty, etc.)

THE HAND STANDS FOR THE PERSON metonymy seems to be based on the metonymy *THE HAND STANDS FOR THE ACTIVITY*. The prototypical person is an active person, and since we have *THE HAND STANDS FOR THE ACTIVITY*, it is natural that we also have *THE HAND STANDS FOR THE PERSON*.

Interestingly, the *HAND FOR THE PERSON* metonymy also has at least one specific case. It occurs in the idiom *ask for somebody's hand* meaning 'ask somebody to marry one'. Here the meaning is not 'a person' in general, but a person one wishes to marry. Actually, the meaning of this idiom may be seen as having double motivation. One source of motivation can be *THE HAND FOR THE PERSON* metonymy, and another the knowledge we have of what we do (or used to do) with the hands in a marriage ceremony. It might also be the case that the two work jointly. The act of taking somebody's hand (in a marriage ceremony) might be a manifestation of the metonymy *THE HAND FOR THE PERSON*.

Not only the activity but also the skill required to perform it appears in several metonymical expressions, such as the following

keep one's hand(s) in ('practice a skill in order to retain it')

his hand is out ('he has lost his skill')

have a hand in something (to be gifted to do something)

These metonymic expressions may not be current or may sound odd in these meanings to many speakers. Nevertheless, the *conceptual* metonymy we postulate for these cases must have existed at some time, and at least for some speakers it exists even today. This problem underlines the need for the investigation of figurative language in foreign language teaching along the lines suggested by McCarthy and Carter (1994).

The underlying conceptual metonymy in these cases seems to be *THE HAND STANDS FOR THE SKILL*. The source of the metonymy is likely to be the idea that the activities that require the use of the human hand usually also require skill.

and sophistication in the use of the hand. There is also a very general metaphor involved in the examples: ACTIVITIES ARE CONTAINERS (for examples, see Lakoff and Johnson 1980). This explains the use of the prepositions *in* and *out*. Furthermore, some general knowledge is also involved. Practicing an activity maintains the required skill, while not practicing it does not.

The metonymy THE HAND STANDS FOR THE ACTIVITY may be seen as giving rise to a conceptual metaphor as well. The following examples all have to do with freedom to act:

- give somebody a free hand (authorize a person to act as he sees fit)
- strengthen somebody's hand (give a person additional authority)
- tie somebody's hands (prevent a person from acting as he sees fit)
- tie someone's hands behind his/her back (make it impossible for a person to act at all)
- bind somebody hand and foot ('to completely limit a person's freedom to act')

Here the notion of freedom to act (physically, intellectually, socially, or whatever) is comprehended via the idea of having the hands free for action. That is, the cognitive mechanism at work here appears to be the conceptual metaphor FREEDOM (TO ACT) IS HAVING THE HANDS FREE (FOR ACTION). Since THE HAND STANDS FOR THE ACTIVITY and since freedom is largely conceptualized as freedom TO ACT, it is felt to be natural that freedom is metaphorically understood in terms of the free use of the hands. As the examples indicate, some conventional knowledge is also involved in the process of motivation. In particular, we know that when the hands are free, we can easily use them, but when they are tied (especially behind the back) their movement is greatly inhibited. This knowledge figures importantly in the meaning of several of the idiomatic expressions. Thus, the idioms above represent a particularly complex cognitive situation, one in which a metonymy (THE HAND STANDS FOR THE ACTIVITY), a metaphor (FREEDOM IS HAVING THE HANDS FREE), and conventional knowledge all play a role in rendering the meaning of the expression natural, that is, motivated. Just how natural could be gauged by the degree of surprise we would cause if we were to tell someone that, for example, *tie someone's hands* meant, say, 'to be very happy' or 'to dream'.

Several of the idioms that involve the human hand have to do with the notion of control. We find some form of control or authority in all of the following examples:

- gain the upper hand ('attain an advantage over another person')
- rule with an iron hand ('keep strict discipline')
- with a heavy hand ('in an oppressive fashion')
- with an iron hand in a velvet glove ('with a hard attitude made to seem soft')
- keep a strict hand upon a person ('keep under total control')

The meaning of all these examples somehow involves control. Thus, it seems sensible to suggest that the conceptual metonymy that underlies, and thus

provides the basis for, all of the expressions IS THE HAND STANDS FOR CONTROL. A more general metonymy that underlies this may be THE INSTRUMENT STANDS FOR CONTROL.

In the previous examples the notion of control is indicated via a metonymy. Control is also understood metaphorically, as shown by the examples below.

- hold the power to do something in the hollow of one's hands (have the right to make crucial decisions)
- be in hand (be under control)
- be out of one's hands (be out of one's control)
- be in someone's hands (be being dealt with by someone with the necessary authority)
- take something in hand (assume control over something)
- get out of hand (get out of control)
- have the situation well in hand (have the situation well under control)
- fall into the hands of somebody (unintentionally come under the control of somebody)

The idioms all have to do with control and employ the act of holding something in the hand. This suggests the conceptual metaphor CONTROL IS HOLDING IN THE HAND. If we hold an object in the hand, we can do whatever we wish to do with it. Thus, the ability or possibility of directly manipulating an object as we wish can be regarded as the basis for this metaphor.

A prototypical case of possessing an object is a situation where we hold something in the hand. An apple in my hand is *my apple*. This may have given rise to a further conceptual metaphor that employs the act of holding something in the hand. Take idiomatic expressions such as the following:

- change hands (pass to another owner)
- pass through many hands (change owners often)
- lay one's hand on something (acquire something)

What these examples indicate is that possessing something is conceptualized as holding something in the hand. This can be given as the POSSESSION IS HOLDING IN THE HAND conceptual metaphor.

Finally, a further conceptual metaphor may be mentioned. Consider the following example:

- the matter at hand (the matter receiving attention)

Here attention seems to be conceptualized as holding something in the hand. The conceptual metaphor underlying this example is ATTENTION IS HOLDING IN THE HAND. This metaphor is likely to be a submetaphor of the more general metaphor according to which the mind is regarded as some kind of workshop and mental activities as direct physical manipulation (see Jakel 1993).

We have seen throughout the discussion that not just one, but several cognitive mechanisms can contribute to the motivation of an idiomatic expression. For example, we saw that there is a class of idioms whose motivation

derives from three cognitive mechanisms. Idioms such as *tie one's hand* were shown to be motivated by the metonymy THE HAND STANDS FOR THE ACTIVITY, the metaphor FREEDOM IS HAVING THE HANDS FREE, and some conventional knowledge concerning the use of the hands.

These and similar mechanisms appear to account for large parts of the meaning of idioms that have to do with the human hand. What has not been explained so far is how parts of expressions that are not directly related to the hand receive their conceptual motivation. Let us begin with the expression *gain the upper hand*. As we have seen, the use of the word *hand* is motivated by the metonymy THE HAND STANDS FOR CONTROL. But what of the word *upper*? The most likely motivation for this word seems to be the CONTROL IS UP conceptual metaphor (which is also manifest in other examples like "I'm *on top of* the situation", 'He's the *underdog*', etc.) Thus, we have an idiomatic expression that consists of a word (*hand*), motivated by a conceptual metonymy relating the hand to the notion of control, and another word (*upper*) based on the conceptual metaphor CONTROL IS UP that is completely independent of the system constituted by the concept of hand (CONTROL IS UP is an "orientational metaphor" in Lakoff and Johnson's system.) Another example could be the expression *to do something in an underhanded way*. In this case, the word *under* is motivated by the ETHICAL/MORAL IS UP and UNETHICAL/AMORAL IS DOWN metaphor complex.

We have also briefly noted the presence of the ACTIVITIES ARE CONTAINERS metaphor in connection with the metonymy THE HAND STANDS FOR THE SKILL. These two metaphors jointly produce expressions like *keep one's hand(s) in* in the sense of 'practice a skill in order to retain it'. The ACTIVITIES ARE CONTAINERS metaphor is what Lakoff and Johnson (1980) call an "ontological metaphor".

In addition to orientational and ontological metaphors, what Lakoff and Johnson (1980) call 'structural metaphors' also interact with conceptual metaphors and metonymies that make use of the human hand. Take the idiom *have clean hands*. The expression means 'be innocent or act ethically' and this meaning is partly based on the metonymy THE HANDS STAND FOR THE ACTIVITY. Another part of the meaning is motivated by the structural metaphor ETHICAL IS CLEAN (which also shows up in a number of other linguistic expressions such as "he got his hands *dirty*") When the word *blood*, an "unclean" substance on the hand, appears in conjunction with the hand in an idiom, we have another example of a cognitively complex situation. This is because in addition to the metonymy THE HAND STANDS FOR THE ACTIVITY and the metaphor MORAL/ETHICAL IS CLEAN, we also make use of some conventional knowledge concerning the blood and the human hand. Idioms based on the joint functioning of these cognitive mechanisms also include *catch somebody red-handed* ('apprehend a person in the course of committing a crime') and *have blood on one's hands* ('be the person responsible for someone else's death').

Perhaps we have said enough to make a case for a cognitivist treatment of idioms. What needs to be done at this point is to show that the approach to idioms presented and demonstrated above produces better results than the tra-

ditional view in the teaching/learning of idioms in the classroom. This is the task to which we now turn.

5 THE TEACHING/LEARNING OF IDIOMS: AN EXPERIMENTAL STUDY

The pedagogical implications of the line of research we have described in this paper are obvious. Metaphorical conceptualization is an intrinsic feature of discourse. In addition to, and underlying, what Danesi (1993) calls 'conceptual fluency', people have a 'metaphorical competence'. Danesi (ibid. 493) explains: '... the programming of discourse in metaphorical ways is a basic feature of native-speaker competence. It underlies what I have designated conceptual fluency. As a competence, it can be thought about pedagogically in ways that are parallel to the other competencies that SLT has traditionally focused on (grammatical and communicative)'. Below we will describe an informal experiment that might give us one way of building up metaphorical competence in learners of English as a foreign language. The metaphorical competence at issue here involves idioms that are based on a special type of metaphor.

The question that we asked ourselves was this: Can we actually facilitate the learning of idioms in the classroom if we use the cognitivist framework as described in this paper? As we mentioned earlier, our main hypothesis concerning this issue was that motivation (for the meaning of idioms) should produce better results than a lack of motivation in the learning of idioms. This is a commonsensical view, which is also shared by Irujo (1993: 217), who states:

Teaching students strategies for dealing with figurative language will help them to take advantage of the semantic transparency of some idioms. If they can figure out the meaning of an idiom by themselves, they will have a link from the idiomatic meaning to the literal words, which will help them learn the idiom.

We have used the term "motivation" for what Irujo calls "semantic transparency" throughout this paper. What Irujo does not discuss, however, is what the precise nature of semantic transparency is in the case of idioms. Our proposal is that the transparency, or motivation of idioms, arises from knowledge of the cognitive mechanisms (metaphor, metonymy, conventional knowledge) we have described in the previous sections and that these link idiomatic meanings to literal ones. We believe that this more specific concept of semantic transparency has important implications for teaching idioms.

To investigate the hypothesis that motivation produces better results in the teaching/learning of idioms, we designed an informal experiment. Perhaps the major way in which it is informal is that we did not perform a rigorous statistical analysis, and, therefore, we can make no claims about statistical significance. Nevertheless, we found the results interesting enough for the purposes of this paper and thus decided to report them.

The study dealt with some phrasal verbs in English. Phrasal verbs were selected because they are a notoriously difficult group of idioms for both teachers and learners of English to handle. The definition of phrasal verbs we

decided to work with was the following. If a multi-word verb consists of a verbal stem and a detached adverb, it is a phrasal verb. The most common adverbs occurring in phrasal verbs include *across, around, away, down, in, off, on, out, over, up*. Unlike prepositional verbs (which, according to most definitions, are exclusively transitive), some phrasal verbs may be used both transitively and intransitively (sometimes with differences in meaning), others only transitively, and still others only intransitively. Unlike prepositional verbs (which normally have the stress on the "base" verb as in *account for*), phrasal verbs normally have primary stress on the adverb as in *hold up, make out*, etc. Correspondingly, in phrasal verbs the more important element as regards meaning is usually the adverbial constituent.

The number of phrasal verbs that have an idiomatic meaning is very large in English. Although several hundred phrasal verbs exist in English, we decided to deal with only those that have the adverbial particles *up* and *down* in them.

The subjects of the study were 30 Hungarian learners of English at the intermediate level. They were all adults. The subjects were divided into two groups: class A and class B, each with 15 students. The task involved filling in the missing adverbial particles of 20 phrasal verbs in the context of a sentence. The phrasal verbs were all unknown to both classes before the study was conducted. The phrasal verbs used in the study were:

- 1 bow down / 2 cheer up / 3 bring up / 4 chew up / 5 run down / 6 use up / 7 hold up / 8 put down / 9 turn up / 10 look up / 11 cast down / 12 make up / 13 break down / 14 make up / 15 sell up / 16 set down / 17 keep down / 18 wind up / 19 pick up / 20 turn up

These 20 phrasal verbs were placed in the context of a sentence. The adverbial particles *up* and *down* were left out of the resulting 20 sentences. Following are the sentences that were given to the students for completion (most of the sentences were taken from *Longman Dictionary of Contemporary English* (1987), *Longman Dictionary of Phrasal Verbs* (1986), *Oxford Advanced Learner's Dictionary* (1989)).

- 1 The people of Russia before 1917 were bowed _____ by the cruelty of the ruling powers
- 2 Cheer _____, all the troubles are over now
- 3 I want to bring _____ the question of abortion now
- 4 The dog has chewed _____ my new shoes. I cannot wear them any more
- 5 The coal industry is running _____ (6) as coal supplies are used _____
- 6 (see above)
- 7 We were held _____ on the road by a nasty traffic accident
- 8 Make sure that you put _____ every word she says
- 9 Please turn the radio _____ I would like to hear the news
- 10 Fortunately things are looking _____ again
- 11 Mary was cast _____ by the bad news about her ill mother
- 12 I couldn't remember a fairy-story to tell to the children, so I made one _____ as I went along

- 13 My car broke _____ again—I will have to sell it I am afraid
- 14 These 10 articles make _____ the whole book
- 15 I am thinking of selling _____ and leaving the country—it is impossible to make a living here
- 16 We had to set _____ the rules for the members
- 17 It was all I could do to keep my temper _____ when I saw the boys treating the dog badly
- 18 I think it s time to wind _____ this meeting—we are all tired now
- 19 Mother soon began picking _____ after her operation
- 20 It's no good waiting for something to turn _____ you have to take action

In the case of class A, the procedure was as follows. Ten phrasal verbs with *up* and *down* (the ones in sentences 1 to 10) were written on the blackboard together with their Hungarian equivalents. The meanings of these 10 phrasal verbs were explained. Students were instructed to memorize the 10 phrasal verbs. The entire procedure including explanation by the teacher/researcher and memorization by students lasted 15 minutes. We then asked them to fill in the missing adverbial particles in all 20 sentences. Students were given 20 minutes to do so. The phrasal verbs in sentences 11 to 20 were not taught to the students in class. The rationale for giving students sentences 11 to 20 was to see whether, and how, students can cope with a more creative task in which the adverbial particle of previously untaught phrasal verbs had to be provided.

In class B, the procedure was the same with one major exception. Many of the several hundred phrasal verbs we collected were grouped according to the conceptual metaphors that the phrasal verbs manifest. As a result, more than 20 orientational metaphors were identified. For example, the concept of being finished or COMPLETION, is commonly understood in English in terms of an upward orientation, that is, in terms of the concept UP. This gives us the orientational metaphor COMPLETION IS UP. The metaphor is exemplified by phrasal verbs such as *eat up*, *chew up*, *wind up*, *give up*, and many others. Another orientational metaphor IS HAPPY IS UP. Phrasal verbs like *feel up*, *cheer up*, *buck up* etc. are linguistic examples. A third and fourth orientational metaphor, frequently discussed in the work of Lakoff and Johnson (Lakoff and Johnson 1980, Johnson 1987, Lakoff 1987), is MORE IS UP (e.g. *speak up*, *turn up*, *go up*, etc.), which has LESS IS DOWN as its counterpart (e.g. *run down*, *cut down*, *turn down*, *go down*). A fifth and sixth orientational metaphor is CONTROL IS UP and LACK OF CONTROL IS DOWN. These can be found in examples like *bow down*, *knock down*, etc. A seventh orientational metaphor is UNKNOWN IS UP. Examples include *bring up*, *crop up*, and *pop up*. An eighth orientational metaphor is OBSTRUCTION IS UP, as in *hold up*, *catch up*, and *tie up*. A ninth orientational metaphor is WRITTEN OR RECORDED IS DOWN with examples like *put down*, *run down*, *write down*. These are the nine orientational metaphors that seem to underlie the 10 phrasal verbs that occur in sentences 1 to 10. (Further metaphors will be given below.)

The nine orientational metaphors with illustrative linguistic examples were put on the blackboard and explained briefly to class B. The phrasal verbs

presented and put on the blackboard included the ones that occur in sentences 1 to 10 (10 phrasal verbs altogether). None of the phrasal verbs that occur in sentences 11 to 20 were presented to class B. The explanation and memorization procedure lasted 15 minutes. The same completion task that was given to class A was administered to class B. Students had 20 minutes to complete the 20 sentences.

We then measured the effectiveness with which the completion task was performed in terms of the number of correct responses to the 20 sentences in both classes A and B. Since the students' background to the task was different in the first 10 and the second 10 sentences in both classes A and B (i.e. phrasal verbs taught in class as opposed to phrasal verbs not taught in class prior to completion), sentences 1 to 10 and 11 to 20 were treated separately in evaluating the results. In other words, we distinguish the following two basic cases in our experiment:

Case 1 both classes A and B, sentences 1 to 10, learning of phrasal verbs *through memorization* prior to performing the completion task.

Case 2 both classes A and B, sentences 11 to 20, *no* learning through memorization prior to performing the completion task.

The following hypotheses were proposed:

Case 1 Regarding sentences 1 to 10 (where there is learning through memorization for both classes A and B)

- a If *only* memorization plays a positive role in aiding the completion of the sentences, then the effectiveness with which both class A and B participants complete the sentences *will be fairly high and roughly the same for both classes A and B*.
- b If, however, metaphorical motivation also plays a positive role, *class B will perform better than class A*.

Case 2 regarding sentences 11 to 20 (where the possibility of learning through memorization for both classes A and B is excluded)

- a If *only* memorization plays a positive role in aiding the completion of the sentences (and with these sentences memorization is excluded), then the effectiveness with which participants complete the sentences *will be low and near random for both classes A and B*.
- b If, however, metaphorical motivation also plays a role (and with these sentences, it is only available to class B), *class B will perform better* (i.e. will score higher) *than class A*.

Table 1 shows the results obtained for Case 1. Out of the maximum number of 150 correct responses, class A produced 110, which is 73.33 per cent. Class B produced 123 correct responses, which is 82 per cent. Table 2 shows the results obtained for Case 2, in which the difference between classes A and B was much

Table 1 (Case 1)

| Sentence | Number of correct responses for | |
|----------|---------------------------------|--------------|
| | Class A | Class B |
| 1 | 10 | 12 |
| 2 | 15 | 15 |
| 3 | 11 | 13 |
| 4 | 12 | 10 |
| 5 | 8 | 9 |
| 6 | 7 | 13 |
| 7 | 12 | 14 |
| 8 | 8 | 11 |
| 9 | 14 | 15 |
| 10 | 13 | 11 |
| Total | 110 (73.33%) | 123 (82%) |

Table 2 (Case 2)

| Sentence | Number of correct responses for | |
|----------|---------------------------------|-----------------|
| | Class A | Class B |
| 11 | 8 | 12 |
| 12 | 10 | 14 |
| 13 | 7 | 13 |
| 14 | 6 | 10 |
| 15 | 9 | 8 |
| 16 | 4 | 10 |
| 17 | 10 | 10 |
| 18 | 7 | 13 |
| 19 | 8 | 12 |
| 20 | 10 | 14 |
| Total | 79 (52.66%) | 116 (77.33%) |

Table 3 Summary

| | Class A % | Class B % |
|--------|--------------|--------------|
| Case 1 | 73.33 | 82 |
| Case 2 | 52.66 | 77.33 |

greater. Class A scored 79 correct responses, which is 52.66 per cent of the possible 150 correct responses. Class B produced 116 correct responses, which is 77.33 per cent. Table 3 gives a summary of the percentages.

Let us now look at the four hypotheses. Concerning the hypotheses pertaining to Case 1 (a) and (b), we may note that in a way neither is completely falsified. The 110 correct responses for class A is 73.33 per cent of all possible correct responses. This is considerably higher than chance. The 82 per cent we obtained for class B is also considerably higher than chance. However, the result for class B (82 per cent) is not much higher than that for class A (73.33 per cent). These results seem to confirm our hypothesis for Case 1 (a). Nevertheless, the score is higher by almost 10 per cent. This appears to support our hypothesis for Case 1 (b). In other words, given the limitations of this study, it would be difficult to decide which of the two hypotheses pertaining to Case 1 was confirmed. This means that on the basis of sentences 1 to 10 we are not in a position to say with certainty whether metaphorical motivation aids or does not aid learners of English in tasks such as the completion task we described above.

However, if we look at the results obtained in connection with sentences 11 to 20, we get a much clearer picture. According to hypothesis Case 2 (a), if *only* memorization plays a positive role in aiding the completion of the sentences, then the effectiveness with which participants complete the sentences will be low and near random for both classes A and B. This was not borne out at all. Class A scored only 52.66 per cent—barely above chance. By contrast, class B achieved 77.33 per cent correct responses, which is considerably higher than chance. (The difference would have been even higher, had there not been some confusion about the meaning of sentence 15, as a result of which class A produced 9 and class B produced only 8 correct responses.) This gives us some evidence in favor of the view that metaphorical motivation also plays a role in the performance of the completion task. If memorization is not (because it cannot be) responsible for the great difference in the effectiveness with which subjects in class A and class B performed the task, it can only be metaphorical motivation. This was the only element that was not shared by classes A and B in the task of responding to sentences 11 to 20. Apparently, students in class B must have used metaphorical motivation not only in sentences 1 to 10 but also in sentences 11 to 20. The details are rather interesting.

It is tempting to think that in Case 2 class B did much better than class A because they made use of the same orientational metaphors that they were introduced to in Case 1 (sentences 1 to 10). This cannot by itself explain the superior performance of members of class B. The reason is that only three orientational metaphors that were used in Case 1 were also used in Case 2. These are LACK OF CONTROL IS DOWN, COMPLETION IS UP, and WRITTEN/RECORDED IS DOWN. They account for four of the sentences: sentences 15 and 18 (COMPLETION IS UP), sentence 16 (WRITTEN/RECORDED IS DOWN), and sentence 17 (LACK OF CONTROL IS DOWN). One orientational metaphor underlying one of the sentences 11 to 20 was the opposite of one of the metaphors also found in sentences 1 to 10: HAPPY IS UP, whose opposite is SAD IS DOWN. This underlies sentence 11.

What is most interesting, however, is the fact that five of the sentences in 11 to 20 reflect orientational metaphors that were *not* used in sentences 1 to 10 at all. This raises the question of how class B participants could do as well as they did in the case of these sentences (sentences 12, 13, 14, 19, and 20). What is it that they drew on? It makes sense to suggest that, since they were not able to rely on already familiar orientational metaphors, they continued to use the *strategy* of thinking in terms of conceptual metaphors. They did not have specific orientational metaphors to bring to the task, but the strategy of employing metaphorical thought was available to them. The use of the strategy to employ metaphor seems to be an extension, or special case, of what we have called metaphorical motivation.

It is worth noting that most of the new orientational metaphors participants employed are fairly common and deeply entrenched in the conceptual system of English. They are: INVENTION OF CREATION IS UP (sentence 12), DYSFUNCTIONAL IS DOWN (sentence 13), CONSTITUTION IS UP (sentence 14), HEALTH IS UP (sentence 19), and PRESENCE OF OCCURRENCE OR AVAILABILITY IS UP (sentence 20). Most of them also apply to Hungarian, like INVENTION IS UP, DYSFUNCTIONAL IS DOWN, and HEALTH IS UP. It could thus be suggested that transfer might explain the high performance of class B. But if this is so, then we are faced with the question of why class A did not use the transfer as well. The answer might be that people *need to be made aware* of the metaphor-approach before they can put it to use. The passive existence of metaphorical motivation, that is, the mere presence of conceptual metaphors in the mind, does not seem to be sufficient for their active use in the learning of a foreign language. Students might need to be taught about the notion of conceptual metaphors in an explicit way, before they can use the strategy of employing metaphors and discovering new ones in the foreign language.

This study raises several questions. First, how do our findings relate to those of Kellerman (1977, 1983) as regards the strategy of transfer from L1? Second, since many of our orientational metaphors used in the study are also present in Hungarian and may even turn out to be (near-)universal, the question remains: What results would we have obtained in the case of more culture-specific conceptual metaphors? Issues such as these and numerous others are grounds for stimulating much future research.

6 CONCLUSION

We hope to have demonstrated that cognitive linguistics in general, and cognitive semantics in particular, may offer us a new and potentially useful view of idioms. In this view, idioms are conceptual, and not linguistic, in nature. Idioms are systematic, as we showed in the case of idioms involving the concepts of fire and hand. Further, the meaning of many idioms appears to be motivated rather than arbitrary in the sense that there are cognitive mechanisms, such as metaphor, metonymy, and conventional knowledge, that link literal meanings to figurative idiomatic meanings. This idea gives us a more precise sense of semantic transparency than is commonly used in the (applied) linguistics

literature. Moreover, as was shown in the case of fire-related idioms, the meaning of many idioms seems to depend on at least three factors, a source-target relationship that is applicable to a word (or words) in an idiomatic expression, the systematic correspondences or mappings between the source and the target domains, and the particular knowledge structures or inferences associated with the source domain. Finally, as was pointed out in connection with the idioms related to the human hand, a single idiomatic expression may be simultaneously motivated by several cognitive devices, including metaphors, metonymies, and conventional knowledge.

This new view seems to be potentially useful in the teaching/learning of idioms as well. However, an obvious weakness of the study we conducted to show this was that of its informal nature. Indeed, the entire study could be redesigned and redone, perhaps along the lines of Irujo (1986) and Yorio (1989). Specifically, the issue of the relevance of transfer in our experimental set-up would have to be addressed, which would entail, among other things, that students be systematically interviewed about their choices of the particles after the administration of the test. Finally, real idioms in real contexts of use will have to be collected and studied, as McCarthy and Carter (1994) have begun to do.

The weaknesses and limitations of our study notwithstanding, we feel that the view of idioms we have offered in this paper may have a liberating effect on the study of idioms—both for practical and theoretical purposes. Equipped with a more precise notion of semantic transparency and that of the emergence of idiomatic meaning (resulting from conceptual mappings of two kinds), we can begin to describe in a more systematic way the figurative idiomatic structure of English and other languages. A major, and expected, complication is that the figurative idiomatic structure of one language will not coincide with that of another. Which metaphors and metonymies and which aspects of conventional knowledge are universal and which are not? We believe that, given the approach we have outlined above, a systematic answer to this question can eventually be given (for initial attempts, see Lakoff 1993, Kovecses 1995a, b). Not until we have at least a rough idea of how this works, can we claim to really understand the idiomatic structure of a language and thus to design large-scale teaching programs (in whatever form) concerning idioms. To achieve this may be difficult, but we can move ahead step-by-step, taking one domain at a time. There is an entire conceptual universe waiting to be explored, and the journey, as we can testify, will be anything but easy.

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APPENDIX

Dictionaries

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