Vivid Phrasal Idioms and the Lexical-Image Continuum

John I. Liontas
University of Notre Dame

This article discusses problems arising due to lack of scholarly accord regarding the definition of the term idiom. *Following a critical review of several of these definitions, a new category of idiom, which I have termed* vivid phrasal (VP) idiom, *is suggested. The subclassification of VP idioms along a conceptual Lexical-Image Continuum is then presented. I suggest that while there still exist various means of categorizing idioms, agreement among idiomatologists regarding the definition of* idiom *can be reached and that, even more importantly, a common research agenda for second language acquisition researchers and language teachers is possible. Using empirical evidence, markedness factors, and implicational universals for VP idioms, I make recommendations for future idiom research. The article concludes with a discussion of the advantages of a common research agenda for the development of strategies to assure second and foreign language learners' idiomatic competence.*

Splurge, count on, for now, White House, spick and span, blackmail, chair, to throw money out the window, people who live in glass houses shouldn't throw stones. What do these expressions (a one-word verb, two-word verb, adverbial form, lexical compound, conjunct, compound noun, noun, saying, and proverb) have in common? All of them (and thousands more like them) have been classified as and are considered by some idiomatologists and scholars to be "idiomatic," depending on the definition of that term. The problem with idiomaticity today is that there are too many definitions for the cover term *idiom* to be of any practical use to second language acquisition (SLA) researchers and to language-teaching professionals working in second/foreign languages and applied linguistics. More often than not, the distinctions between definitions given by scholars are blurry at best. It suffices to say that today a majority of researchers has reached the consensus that idioms are, by nature, semantically noncompositional (Cacciari, 1993; Chomsky, 1965; Colombo, 1993; Cronk & Schweigert, 1992; Cutler, 1982; Flores d'Arcais, 1993; Gibbs, 1980, 1984; McGlone, Glucksberg, & Cacciari, 1994; Moon, 1997; Nattinger & DeCarrico, 1992; Titone, 1994). In other words, the sum total of the individual meanings of its indivisible parts does not lead one to the figurative meaning of an idiom.

My intention in this article is not to define anew the term *idiom*. Rather, it is to suggest that there can be a common research agenda on which both SLA researchers and language teachers can agree, as long as such an agreement is founded on the study of the same types of idioms under the same conditions of inquiry. To achieve this aim, the article is organized in two parts. The first part outlines problems that arise from the term *idiom* itself. Current definitions of *idiom* as found in

Issues in Applied Linguistics
ISSN 1050-4273
© 2002, Regents of the University of California
Vol. 13 No. 1, 71-109

widely used English dictionaries and applied by different idiomatologists and scholars are presented in an effort to illustrate the diversity of these definitions. Following a critical appraisal of the problems with such diversity, a new trilateral taxonomy of idioms, which I have termed *vivid phrasal (VP) idioms*, is offered. The three types of VP idioms are then described and discussed with reference to the Lexical-Image Continuum and within the context of several languages. The second part discusses the three main hypotheses resulting from the VP idiom classification and presents empirical evidence to provide support for the validity of these hypotheses. This part concludes with a discussion of markedness factors and implicational universals for VP idioms considered to be important to future SLA research into lexical representation, processing, and idiom understanding. Finally, the article concludes with a discussion of the advantages of a common research agenda for the development of *idiomatic competence*—the ability to understand and use idioms appropriately and accurately in a variety of sociocultural contexts, in a manner similar to that of native speakers, and with the least amount of mental effort.

MAKING THE CASE FOR VIVID PHRASAL IDIOMS: THE TERM *IDIOM* AND ITS DEFINITIONS

One of the thorniest issues in idiom research has been the question of how to define *idiom*. Throughout time, *idiom* has been defined differently by different idiomatologists and scholars. It is therefore important to begin this discussion with an understanding of the term. According to *The New Webster's Encyclopedic Dictionary of the English Language* (Thatcher & McQueen, 1980), *idiom* derives from the Greek lexeme *idios*, meaning "proper or peculiar to one's self." The following general entry is given:

> A mode of expression peculiar to a language or to a person; a phrase or expression having a special meaning from usage, or a special grammatical character; the genius or peculiar cast of a language; a peculiar form or variety of language; a dialect. (p. 420)

A similar, although much more detailed, entry can be found in *The American Heritage Dictionary* (Berube, 1985). Only the first entry is relevant to this article:

> 1. A speech form or expression of a given language that is peculiar to itself grammatically or that cannot be understood from the individual meanings of its elements. (p. 639)

Closely mirroring the definition above is that given in the *Oxford English Dictionary* (Murray, 1989), which is regarded by many scholars as the classic one.[1] The relevant entry is provided below:

> 3a. A form of expression, grammatical construction, phrase, etc., peculiar to a language; a peculiarity of phraseology approved by the usage of the language, and often having a significance other than its grammatical or logical one. (p. 624)

An even more precise entry is given in the *Longman Dictionary of English Idioms* (Long, 1990):

> An idiom is a fixed group of words with a special different meaning from the meanings of the separate words. So, **to spill the beans** is not at all connected with beans: it means "to tell something that is secret." (inside front cover)

All of these entries contain one definition that emphasizes the difficulty of inferring the meaning of the idiom as a whole from the meanings of its constituent parts. In addition, some kind of grammatical peculiarity and a predetermined social usage appears to be attached to the idiom. Based on these features alone—meaning, decodability, and institutionalized usage—we can distinguish at least three dimensions to the term *idiom*:

(1) meaning—the *semantic opacity* dimension
(2) decodability—the *structural* dimension
(3) institutionalized usage—the *conventionalized pragmatic* dimension.

One way of looking at an idiom, therefore, is to regard it as a complex tridimensional expression that is not explicable in terms of its individual words. Although individual idiomatologists each have a different take on this matter, the mixing of the dimensions just mentioned is so pervasive in the research literature that a clarification on these grounds is warranted. To begin, a rather extreme version can be found in Hockett's definition of *idiom* in *A Course in Modern Linguistics* (1958):

> Let us momentarily use the term Y for any grammatical form the meaning of which is not deducible from its structure. Any Y, in an occurrence in which it is not a constituent of a larger Y, is an *idiom*. A vast number of composite forms in any language are idioms. If we are to be consistent in our use of the definition, we are forced also to grant every morpheme idiomatic status, save when it is occurring as a constituent of a larger idiom, since a morpheme has no structure from which its meaning could be deduced. (p. 172)

According to this definition, there is no element in language which is not either an idiom or the constituent of an idiom. The implication is that every isolated morpheme is an idiom. It therefore follows that words not reducible to constituent morphemes—such as *look, chair, see, it*—are also idioms. Such a definition, however, runs counter to the generally accepted idea of an idiom as some

kind of "complex expression," as seen in the dictionary definitions cited above.

It might seem preferable, therefore, to follow Makkai (1969) who, at the other extreme, defines an idiom as, among other things, "a linguistic form whose meaning is unclear in spite of the familiar elements it contains" (p. 44). Given this definition, single-morpheme words (such as *look*, *chair, see*, and *it*) do not qualify as idioms since they do not contain other elements. Some expressions that Makkai defines as idioms are *blackmail*, *man-of-war*, *look up to,* and *Don't count your chickens before they're hatched.* Each of these may be, to cite Makkai, "erroneously decoded" (p. 44). In other words, the familiar elements combine in a way that does not result in a predictable meaning. It should also be noted here that the examples given above include a compound noun, a hyphenated compound noun, a phrasal verb plus preposition, and a proverb in the form of sentence; in other words, Makkai excludes single-morpheme items from his particular definition of *idiom.* Furthermore, because his theory is strictly stratificational, he places the upper structural limit of an idiom at sentence level.

Following Hockett (1958), then, an idiom is every isolated morpheme; in contrast, following Makkai (1969), an idiom is a complex (i.e., multimorphemic) lexical unit. These latter units acquire a particular status, in that the complete idiom has a given meaning that is not equal to, or entirely predictable from, the sum of the usual meaning of its parts. In this sense the literal meaning of the idiom usually has little or nothing to do with the idiomatic meaning. In fact, this is how collocations and stock phrases in SLA research have come to be known as *holophrases* (Corder, 1973), *prefabricated routines* and *patterns* (Hakuta, 1974), *formulaic speech* (Wong-Fillmore, 1976), *memorized sentences* and *lexicalized stems* (Pawley & Syder, 1983), *lexical phrases* (Nattinger & DeCarrico, 1992), *formulas* (Ellis, 1994), or *complex lexical units* (Arnaud & Savignon, 1997).

The vast literature on multimorphemic and multiword expressions provides different perspectives on idiomaticity. Such terms as *sayings, proverbs, allusions, similes, dead metaphors, social formulae* (also referred to as *phrasal formulas*) and *habitual fixed collocations* are not uncommon in the literature on the subject, although it must be noted that each of these terms has a somewhat different meaning. Several of these terms are included in the list of idioms in Strässler (1982, p. 15-16), who distinguishes between different perspectives on idiomaticity. Idiomaticity aside, the reader should note that several of the categories provided in Strässler's list (italics added) are not linguistically accurate, as noted in the corresponding endnotes:

> 1a. *sayings* (take the bull by the horns, let the cat out of the bag)
> 1b. *proverbs* (A bird in the hand is worth two in the bush; Half a loaf is better than none)
> 2. *phrasal verbs* (to give in, to take off, to get up, to look up)
> 3. *prepositional verbs* (to look after, to look for, to rely on, to object to)
> 4. *turnure [sic] idioms*[2] (to kick the bucket, to fly off the handle, come hell or high water)

5. *binomials*[3] (hammer and tongs, bags and baggage, spick and span)
6. *frozen similes* (as bold as brass, as cool as a cucumber, as white as snow)
7. *ungrammatical (according to prescriptive normative grammar), but generally accepted and widely used expressions*[4] (it's me, who did you see, to try and go)
8. *logical connective prepositional phrases* (for instance, in fact, on the other hand)
9. *phrasal compounds*[5] (White House, red herring, deadline)
10. *incorporating verb idioms* (to baby-sit, to sightsee)
11. *formula expressions* (at first sight, at least, how do you do, please (=if you please).

Given the blurriness that exists among these categories, it is highly doubtful that either linguistic scholars or idiomatologists would accept all of these categories as "idiomatic" (as Strässler himself points out). Moreover, such categories are of questionable use in coming to an understanding of the nature of idioms.

Although space prevents a comprehensive review of the various idiom types, it is nonetheless helpful to note briefly how scholars have studied and classified idioms in the past. To begin, Weinreich (1969), Fraser (1970), Makkai (1972), and Strässler (1982) focus on lexically and grammatically regular idioms while Smith (1925), Roberts (1944), and Fillmore, Kay, and O'Connor (1988) focus on the idiosyncratic idioms that demonstrate lexical and grammatical irregularities. Cowie and Mackin (1975) and Cowie, Mackin, and McCaig (1983) include both types in their idiom dictionaries. In light of these studies, idioms can be categorized according to (a) the morphemic, phrase, clause, or sentence patterns of which they are composed (Cowie & Mackin, 1975; Cowie et al., 1983), (b) their grammatical categories (Feare, 1980; Gaines, 1986), or (c) their themes (Broukal, 1994). A compilation of various idiom types along with illustrative examples can be found in Appendix A (Tables A1, A2, and A3).

Carter (1987, pp. 63-64), taking a different approach in identifying multiword expressions as idioms, introduces a three-scale categorization covering a plethora of multiword expressions. For the purpose of this discussion, an example (given in italics) follows each category: (a) collocational restriction, from unrestricted (*run a business, run a department, run a show,* etc.) to restricted (*pitch black*); (b) lexicogrammatical structure, from flexible (*break someone's heart*) to irregular (*the more the merrier*); and (c) semantic opacity, from transparent (*long time no see*) to opaque (overt: *OK*; covert: *kick the bucket*).

Similarly, Fernando (1996, pp. 32, 71-72), attempting to capture the degrees of variance in pure idioms, semi-idioms, literal idioms, and collocations (both restricted and unrestricted),[6] offers a twelve-scale categorization for the identification of multiword expressions as idioms. Again, examples follow each category: (a) invariant and non-literal (*spill the beans*), (b) invariant and literal (*be that as it*

may), (c) invariant and both literal and non-literal (*roll out the red carpet*), (d) variant and non-literal (*rain/pour cats and dogs*), (e) variant and both literal and non-literal (*a lone wolf/bird*), (f) invariant with a specialized subsense in one item (***catch*** *one's breath*), (g) variant (restricted) with a specialized subsense in one item (***keep*** *one's cool/temper*), (h) invariant and literal with specialized connotations (*first and foremost*), (i) variant (restricted) and literal (*to be exact/ precise*), (j) collocations: restricted and literal (*shrug one's shoulders*), (k) unrestricted with a specialized subsense (*catch a bus/tram/train/ferry/ plane/boat*, etc.), and, finally, (l) unrestricted and literal (*weak/strong/black/white/sweet/bitter/Turkish, etc. coffee*, etc.).

A much less complicated categorization, and perhaps more useful to the field of SLA, is provided by Moon (1997, pp. 44-47), who considers the elements of (a) institutionalization (i.e., the degree to which a holistic multiword item is conventionalized as a unit in a language community), (b) fixedness (i.e., the degree to which a holistic multiword item is frozen as a sequence of words), and (c) non-compositionality (i.e., the degree to which a holistic multiword item cannot be interpreted on a word-by-word basis) as those most relevant in her definition of the term *idiom*. In turn, these three criteria, as Moon states, are "not absolutes but variables, and they are present in differing degrees in each multi-word unit" (p. 44). Nevertheless, these criteria help distinguish holistic multiword units from other kinds of strings such as compounds (*armchair*, *wildflower*), phrasal verbs (*to look up*, *to hang out*), fixed phrases (*how do you do*, *dry as a bone*), and prefabs (*the point is*, *I'm a great believer in ...*). Consequently, Moon's criteria will prove to be a useful guide in ascertaining the degree of variability displayed by individual multiword units despite the fact that:

> [t]here are many different forms of multi-word item, and the fields of lexicology and idiomatology have generated an unruly collection of names for them, with confusing results... there is no generally agreed set of terms, definitions and categories in use (Moon, p. 43).

Moon's (1997) helpful categorization aside, SLA researchers and language teaching professionals wishing to investigate several of the idiom types given in Appendix A or by Makkai (1972), Fraser (1970), Cowie et al. (1983), Carter (1987), or Fernando (1996) would be hard pressed to state clearly the focus of idiom investigation without lapsing into unnecessary circular arguments regarding the scale of idiomaticity. As Fernando and Flavell (1981) correctly point out:

> ... idiomaticity is a phenomenon too complex to be defined in terms of a single property. Idiomaticity is best defined by multiple criteria, each criterion representing a single property. (p. 19)

To meet this challenge, I propose thr merging of several idiom types into one. This new category of idiom, encompassing multiple criteria, is presented in the next section.

What *Vivid Phrasal Idioms* Are and What They Are Not

As already stated at the outset of this article, the intent here is not to give a new definition of the term *idiom*, but instead to provide a concise working definition of the types of idioms that hold the greatest promise for SLA theory and pedagogy. In providing a working definition for what I call *vivid phrasal (VP) idioms*, I differentiate VP idioms from other types of idioms, without implying that VP idioms are more important than other idiom types. This categorization will inevitably involve some degree of crossover with other categories, since VP idioms, as indicated, are compilations of other types of idioms that share some very specific characteristics. This crossover will inadvertently contribute to the definitional blurriness that plagues idiom research. Nevertheless, this blurriness is necessary so that a clear definition of VP idiom can be offered, and so that a focus on such idiom types in future SLA research and practice can be justified.

Consider now the idioms that I have termed VP idioms: *pulling one's leg* (to fool someone with a humorous account of something; to get someone to accept a ridiculous story as true); *looking for a needle in a haystack* (to look for something that will be very hard to find); *sitting on pins and needles* (to be in a state of excitement and anxiety); *taking the bull by the horns* (to take definite action and not care about risk; to act bravely in a threatening situation); *letting the cat out of the bag* (revealing something that is supposed to be kept secret); *give him an inch, and he'll take a mile* (if you give someone a little of something, he or she will want more and more; some people are never satisfied); and *a bird in the hand is worth two in the bush* (one risks losing something by trying to get something greater). In past research, idioms of this sort have been variously called *sayings*, *proverbial idioms*, *sentence idioms*, *tournures* (from the French meaning "turns of phrase,") or *phraseological idioms*. Regardless of what it might be called, however, any idiom from the above list can be defined as an inseparable phrasal unit whose lexicalized, holistic meaning is not deducible from the individual meanings of its separate words.

VP idioms such as those listed above, however, are in fact a special subtype of phrasal unit. If any given phrasal unit—whether a verb or noun phrase; a nominal, adjectival, adverbial, or prepositional idiom; a saying; a tournure, proverbial or sentence idiom—is to be considered a VP idiom, then it must exemplify the following distinct characteristics:

(1) It is *not* a monomorphemic or polymorphemic expression such as *a pad*, *a flop*, *to splurge*, *to freeload*, *to rely on*, *to object to*, just as it must *not* be an ungrammatical expression, connective prepositional phrase, an incorporating verb idiom, or a social formula expression.

(2) It does *not* readily correlate with a given grammatical part of speech and

more often than not requires a paraphrase longer than a word.

(3) It is *not* decomposable; that is, its conventionalized figurative meaning cannot be readily derived from a linear compositional analysis of the familiar meanings of its separate words.

(4) It is easily visualized in the mind of the learner by evoking a powerful mental image; due to its concrete, "picturesque" (i.e., pictorial) meaning, it is thus *vivid*.

(5) It is a conventionalized complex multilexemic phrasal expression occurring *above word level* and usually of sentence length; hence it is *phrasal*.

(6) It is polysemous and has both a common literal, referential meaning and an institutionalized figurative, metaphorical meaning, with the latter meaning usually not predictable nor logically deducible from the grammatical, syntactic, structural, and semantic character of its individual constituent elements.

A vivid phrasal idiom, as defined here, combines powerful visual imagery (literal, referential semantic meaning) with a memorable, striking expression (nonliteral, metaphoric utterance meaning). Thus, each VP idiom can have two interpretations: a literal, concrete one and an abstract, figurative one. VP idioms are part of the poetry of daily discourse; they are the linguistic tools with which speakers of a language can both create new ways of conveying old meanings, and express fresh imaginative conceptions of the world. Since idioms by nature always mean more than the sum of the lexical items comprising them, the inherent semantic ambiguity present in all VP idioms presents a welcome challenge to those interested in bridging the gap between "what is said" and "what is ultimately communicated" on a particular occasion.

Given these criteria, VP idioms have little or nothing in common with "idioms" such as those listed at the beginning of this article. A separation of VP idioms from other idiom types along the distinct lines suggested here will no doubt lessen the degree of fuzziness afflicting so many idiom taxonomies of the past.

Vivid Phrasal Idioms and Second Language Acquisition

A more precise understanding of VP idioms in the context of second language acquisition can be attained through comprehension of three VP idiom subcategories. For the sake of illustration, VP idioms may be plotted on a *Lexical-Image Continuum* that includes a concept that I have labeled the *Conceptual-Semantic Image (CSI) distance*. The CSI distance denotes how close or how distant a target-language idiom is from its equivalent native-language idiom both *conceptually* (i.e., in terms of the picture it evokes) and *semantically* (i.e., in terms of the literal meanings of its words). The purpose of the continuum is not to provide a definite taxonomy; instead, its purpose is to aid exploration of the significance and implications of VP idioms for SLA research and idiom learning.

At one end of this Lexical-Image Continuum are target-language idioms that exhibit a one-to-one lexical and pictorial match with corresponding native-language idioms; the term *Lexical Level (LL) idioms* will be used to describe this

Table 1: Examples of Idiom Type

IDIOM TYPE	LANGUAGE	IDIOMATIC EXPRESSION	LITERAL TRANSLATION
Lexical Level (LL)	English	to look for a needle in a haystack	N/A
	Russian	iskat' igolku v stoge sena	to look for a needle in a haystack
	French	chercher une aiguille dans une botte de foin	to look for a needle in a haystack
	Spanish	buscar una aguja en un pajar	to look for a needle in a haystack
	German	eine Stecknadel im Heuhaufen suchen	to look for a pin in a haystack
Semi-Lexical Level (SLL)	English	to pull someone's leg	N/A
	Spanish	tomarle el pelo a uno	to pull someone's hair
Post-Lexical Level (PLL)	English	a drop in the bucket/ocean	N/A
	Spanish	como quitarle un pelo a un gato	like the losing (falling, shedding) of a hair of a cat
	German	Wie/nur ein Tropfen auf den/einen heißen Stein	like/only a drop (of water) on the/a hot stone
	Chinese	wu jì yu shì	no help upon matter
	Japanese	yakeishi ni mizu	water on a red-hot stone

type of idiom. At the other end of this continuum are target-language idioms that do not match native-language idioms either lexically or pictorially; these are called *Post-Lexical Level (PLL) idioms*. Somewhere in the middle of this continuum are target-language idioms which, although they exemplify to a large extent the one-to-one lexical and pictoral correspondence of LL idioms, may or may not use all the same individual words as native-language idioms and may differ by only a few or even just one word; these are referred to as *Semi-Lexical Level (SLL) idioms*. Table 1 presents examples from the three VP idiom subcategories described above.

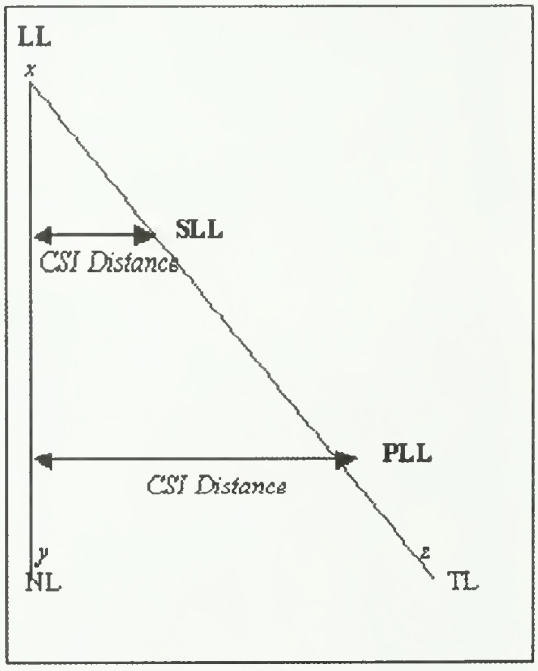
It should be clear from the examples given that while a target-language VP idiom like the German idiom *unter dem Pantoffel stehen* (*to be under someone's thumb*) may be an identical LL idiom in one language (e.g., Russian *byt' u kogo-libo pod bashmakom*), the same idiom may be an SLL idiom in another language (e.g. Spanish *estar bajo la férula de alguien*; literally, *to be under someone's stick*), and a PLL idiom in yet another language (e.g. French *c'est elle qui porte la culotte*; literally, *it's she who wears trousers*). Furthermore, a target-language VP idiom is considered to be an LL, SLL, or PLL idiom only in relation to the corresponding idiom in the learner's native language, and not in relation to idioms in any other language. This is important to note here because, more often than not, a target-language VP idiom may be a PLL idiom across several languages with respect to the learner's native language. In English you say *let the grass grow under*

Figure 1

LL Idioms—TL idiom is identical in concept, number and selection of lexemes, and in image to NL idiom. Meaning is comprehensible out of context. No context necessary.

SLL Idioms—TL idiom is similar in concept, but different in number or selection of key lexemes, and in image to NL idiom. Meaning may be comprehensible out of context. Context maybe necessary.

PLL Idioms—TL idiom is almost similar in concept, but is very different in number and selection of key lexemes, and in image to NL idiom. Meaning may or may not be comprehensible out of context and perhaps even in context. Context is increasingly necessary.



Target-language idioms and their category relation to native-language idioms. CSI Distance = Conceptual-Semantic Image distance; LL= Lexical Level; SLL= Semi-Lexical Level; PPL= Post-Lexical Level; TL= Target Language; NL=Native Language.

Table 2: Overview of VP Idioms and Their Classification Types

IDIOM	TYPE	LITERAL TRANSLATION	IDIOMATIC MEANING
Spanish			
dejar en alto y en seco	LL	to leave someone high and dry	to leave someone high and dry
él que le quede el guante que so lo plante	SLL	if the glove fits, wear it!	if the shoe fits, wear it!
subirse a la parra	PLL	to climb up the grapevine	to hit the ceiling
French			
avoir les yeux plus grands que le ventre	LL	to have eyes bigger than one's stomach	to have eyes bigger than one's stomach
être au bout du rouleau	SLL	to be at the end of the roll	to be at the end of one's rope
casser du sucre sur le dos de quelqu'un	PLL	to break sugar on someone's back	to talk about someone behind his or her back
German			
eine Schraube locker haben	LL	to have a screw loose	to have a screw loose
den Stein ins Rollen bringen	SLL	to get the stone rolling	to get the ball rolling
die Würmer aus der Nase ziehen	PLL	to pull the worms out of the nose	It is like pulling teeth from a mule
Greek			
váhzo ólla ta avgá sénna kaláthee	LL	I put all the eggs in one basket	to put all the eggs in one basket
metreeménna ínne ta psomyá too	SLL	loaves of bread are numbered	to have one's days numbered
too váhzo ta thyó póthya sénna papoótsee	PLL	I put his two feet into one shoe	to have someone wrapped around one's little finger

your feet, but in Russian you say *wait by the sea for the weather* (*zhdat' u moria pogody*), while in French you say *wait till the fried larks fall into your mouth* (*attendre que les alouettes vous tombent toutes roties*). In Spanish you say *expect an elm tree to yield pears* (*esperar que el olmo de péras*), and in German you are content to state the proverbial wisdom that *hope and continual expectations make one a fool* (*hoffen und harren macht manchen zum Narren*). Table 2 presents samples of idioms in each of the three VP idiom categories discussed here. For each idiom, the table lists its idiom type in relation to its English literal translation, and its idiomatic English meaning.

As shown in Figure 1, the CSI distance between target-language and native-language idioms determines into which class of VP idioms a particular target-language idiom will be classified. It can be represented as follows. In this representation of the Lexical-Image Continuum, the native-language idioms are plotted on the xy axis and the target-language idioms on the xz axis. Since LL target-language idioms are identical to native-language idioms, no CSI distance is observable. The distance increases, however, as one moves from LL to PLL idioms, where the distance is most pronounced. This fact is important because the CSI distance between a target-language and a native-language VP idiom, as will be shown subsequently, has been found to greatly affect the overall idiom comprehension and interpretation process during the reading of authentic texts.

Given the above observations, it is evident that much of our current knowledge base regarding matters of idiomaticity cannot be applied blindly to SLA contexts. The clear benefit of a categorization with three categories (identical, similar, and different idioms between the target language and native language) is that such categorization allows the precise investigation of these idiom types across several second or foreign languages, resulting in a number of testable hypotheses. By not collapsing all categories considered idiomatic under the umbrella term *idiom*, SLA researchers and language-teaching professionals can begin to study the same type of idioms under the same conditions of inquiry. Over time, several idiom types can be tested empirically (both quantitatively and qualitatively), thus making the picture of L2 idiom understanding ever more complete. Moreover, SLA researchers and language-teaching professionals can benefit from such a taxonomy because it provides a new vantage point from which to formulate predictions about the degree of difficulty experienced by second language learners during idiom comprehension and interpretation based on the CSI distance between target-language and native-language idioms discussed above. Based on the results of such focused investigations, recommendations for future idiom research and pedagogy can be advanced.

The three hypotheses presented next are a first attempt to provide answers to the puzzle of idiomaticity in the context of second language acquisition. Weinreich (1969) said it best when he wrote, "to a linguist that is preoccupied with productivity in the strongest, Chomskyan sense, idiomaticity represents a basic theoretical stumbling block" (p. 23).

SETTING THE PARAMETERS FOR THE LEXICAL-IMAGE CONTINUUM

The LL, SLL, and PLL Hypotheses

The following hypotheses arose from a two-year pilot study conducted during 1996-1998 with 35 third-, fourth-, and fifth-semester students of Modern Greek (Liontas 1997, 2001). Further empirical evidence for the validity of these hypotheses has been provided in Liontas (1999) for Spanish, French, and German. Taken together, the evidence provides a comprehensive framework for idiom understanding across several foreign languages. For the purposes of this discussion, the empirical evidence will follow the presentation of the three VP idiom hypotheses.

Lexical-Level (LL) Hypothesis. If a target (L2) idiomatic expression already exists in the learner's native (L1) language, the learner will attempt to assign meaning to the L2 expression by referring first to the available lexical entries in his or her L1 (or L3, L4, etc.) mental lexicon. Upon a one-to-one match between the L2 and L1 idiomatic expressions, the learner will then assign meaning to the L2 expression. In other words, the learner will make use of his bottom-up processing skills before assigning meaning to an L2 expression. Transfer of knowledge between L1 and L2 is strongly predicted. No contextual support is needed for the interpretation of such idioms.

Semi-Lexical Level (SLL) Hypothesis. If the L2 idiom is similar, but not identical to the corresponding idiom in the L1, then the learner will undergo the same processes as stated above with the addition that at least one or more lexical items, which may or may not be present in the L1 idiom, will have to be inferred. In other words, recognition of the L2 idiom would still be possible but should require additional processing effort due to the added inferencing. Some contextual support may be needed for the interpretation of such idioms.

Post-Lexical Level (PLL) Hypothesis. If an L2 expression does *not* exist in the learner's L1 language, or if it exists, but is embedded in lexical items that evoke a totally different thought or mental image, then the learner, after having accessed, found, and understood one or more of the lexical entries that make up the L2 idiom, will come to rely primarily on semantic, syntactic, and pragmatic contextual cues and will draw upon his or her own native idiomatic knowledge and previous language and sociocultural experiences before assigning a definite meaning to the L2 idiomatic expression. In other words, the learner will first make use of his or her bottom-up processing skills, and upon semantic hindrance or ambiguity, he or she will then attempt to use the larger discourse context (top-down processing) to interpret the existing target lexicon by solidifying the interpretation(s) of the L2 idiomatic expression based on the greater contextual and pragmatic framework in which that particular expression was used. Without contextual support, the interpretation of such idioms will be difficult.

The empirical evidence discussed in the remainder of this article provides an understanding of the processing mechanisms underlying the comprehension and interpretation process of VP idioms.

Empirical Evidence in Support of the LL, SLL, and PLL Hypotheses

Of specific relevance to the present hypotheses is the research by Irujo (1986, 1993) and Liontas (1997, 2001). Irujo (1986) conducted a study of transfer of native language training and/or interference in learning English idioms. Twelve Venezuelan students in an American university who were advanced learners of English as a second language formed the sample of this study. These subjects were presented with fifteen equivalent and commonly used English and Spanish idioms in four tests: recognition, comprehension, recall, and production. Statistical analysis of the results suggests that the subjects (a) were able to generalize from the idiom's meaning in Spanish to its meaning in English, even when the form was slightly different, and (b) could correctly produce many more identical idioms (i.e., LL idioms) than idioms of other types. Combined, these results were seen as an indication of positive transfer. As expected, the two production tests showed interference (negative transfer) occurring more for similar (i.e., SLL) than for totally different (i.e., PLL) idioms. In other words, idioms that are identical in the L1 and L2 are the easiest to comprehend and produce, followed by idioms that are partially similar in the L1 and L2. On the other hand, idioms that are completely different in both languages are the most difficult to comprehend and produce, and show little evidence of either positive or negative transfer. In addition, the results of this study reveal that advanced second language learners whose first language is closely related to the second can use knowledge of idioms in their first language to comprehend and produce idioms in the second. They do so by using target-language related strategies such as mixing idioms and providing an incomplete idiom. Irjuo suggests that language similarities may encourage interference and that idioms are not always nontransferable.

Irujo's (1993) study looked at advanced English learners' use or avoidance of English idioms. The goal in this study was to ascertain whether 12 fluent bilingual Spanish/English speakers who had learned English as a second language as adults (but whose conversation showed very few grammatical or lexical errors) would attempt to use English idioms in a translation task, or would instead avoid them by using non-idiomatic synonyms or paraphrases. The task given to the subjects was to translate passages containing idioms into everyday conversational English. Again, the results showed that the best-known English idioms were the ones with identical Spanish equivalents, and the least-known were those that were totally different in the two languages. Moreover, results confirmed the use of English knowledge more in the production of idioms that were identical in both languages than those that were different, those that were commonly used, or those that were semantically transparent. Given these results, Irujo concluded that semantic transparency appears not to be as important as similarity to a first-language idiom.

To examine the ways in which L2 learners process, comprehend, and interpret idiomatic expressions, Liontas (1997, 2001) tested 35 third-, fourth-, and fifth-semester students of Modern Greek over a two-year period (1996-1998). Subjects

were asked to provide interpretations for 46 matching idioms (LL idioms, identical in both languages) and non-matching idioms (PLL idioms, different in each language) taken from authentic texts of Modern Greek literature. Idioms were presented to the subjects in two experimental conditions: out of context and in context. In the latter condition, idioms were embedded in narrative or dialogic contexts 5 to 8 sentences in length. Results confirmed that idiom comprehension performance in Modern Greek significantly improved if contextual information was present for both idiom types.[7] In the non-context condition, analysis of data indicated idiom comprehension performance to be seriously impaired, especially for the non-matching PLL idioms, thus corroborating the earlier results found by Irujo (1986, 1993), Colombo (1993), and McGlone, Glucksberg, & Cacciari (1994).

Liontas's (1999) study expanded upon the two idiom types used in the previous study by introducing SLL idioms or similar idioms in both languages, and included 60 adult third-year university English-speaking foreign language learners. Thirty were students of Spanish, 15 of French, and 15 of German. Thirty identical (LL), similar (SLL), and different (PLL) idioms per language group (90 VP idioms total or 10 idioms per type) were used in experimental tasks of idiom detection (Idiom Detection Task), idiom isolation (Zero Context Task), and idiom processing in context (Full Context Task). In addition to identifying or interpreting the idioms, participants were asked to explain their choice by writing a brief report on the cognitive-psycholinguistic processes, reading strategies, and inferencing techniques that guided their selection, including a discussion of the difficulties of detecting the given VP idiom and how they attempted to resolve those difficulties. They were also instructed to report on the feelings they had experienced during the task. (For a sample of the tasks given to the subjects of this study, see Appendix B.)

This study involved repeated measures of data for each participant and included both quantitative and qualitative analyses of 30 computerized idiomatic texts from each language group. Each task had 15 idioms. There were 15 different idioms for the Idiom Detection Task and the Zero Context Task; the Full Context Task used the same 15 idioms as the Zero Context Task. A score of 2 was given for those idioms that were correctly detected (in the Idiom Detection Task) or defined and interpreted (in the Zero Context Task and Full Context Task), for a total potential score of 30 points for each task. A score of 1 was given for those idioms that were only partially detected, defined, and interpreted. Those idioms that were not detected, defined, and interpreted at all or contained no answer received a score of 0. In addition, latency data (i.e., the latency time between seeing an idiom on screen and the onset of typing, measured in seconds) were also measured in the Zero Context Task. Total idiom performance was calculated for each participant, for each VP idiom subtype, and for each language group.

Table 3 presents a summary of VP idiom data collected from all experimental tasks. In each experimental task, performance scores were calculated by dividing the actual number of points earned by the maximum number of points possible

Table 3: Summary of VP Idiom Data

IDIOM DETECTION	SPANISH	FRENCH	GERMAN	ALL LANGUAGES
LL	89.64	76.67	87.69	84.67
SLL	83.93	75.00	90.77	83.82
PLL	96.43	85.83	89.23	90.50
Group Total	90.00	79.17	89.23	86.33

ZERO CONTEXT	SPANISH	FRENCH	GERMAN	ALL LANGUAGES
LL	69.29	73.33	83.08	75.23
SLL	43.57	35.00	64.62	47.73
PLL	17.14	9.17	50.00	25.44
Group Total	43.33	39.17	65.90	49.46

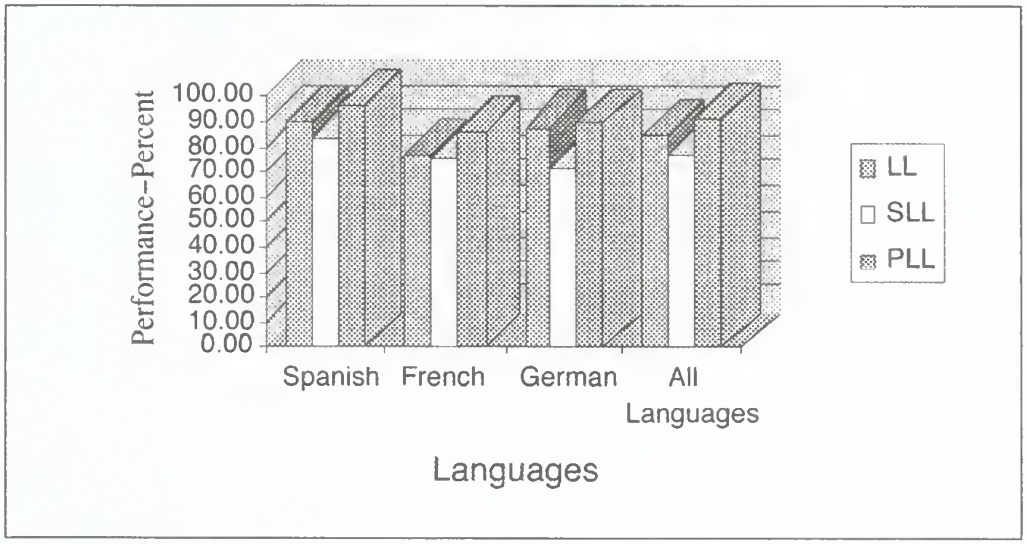
ZERO CONTEXT TASK TIME	SPANISH	FRENCH	GERMAN	ALL LANGUAGES
LL	25.08	28.49	31.81	28.46
SLL	36.78	36.15	32.96	35.30
PLL	38.14	35.36	35.23	36.24
Group Total	100.00	100.00	100.00	100.00

FULL CONTEXT	SPANISH	FRENCH	GERMAN	ALL LANGUAGES
LL	85.71	89.17	97.69	90.86
SLL	67.86	63.33	95.38	75.52
PLL	60.00	55.00	88.46	67.82
Group Total	71.19	69.17	93.85	78.07

in each of the three VP idiom types. All data are expressed in percentage terms representing performance scores for each task (i.e., the Idiom Detection Task, the Zero Context Task, and the Full Context Task) and the average percentage of time required to process each idiom type in the Zero Context Task (i.e., ZCT Time).[8]

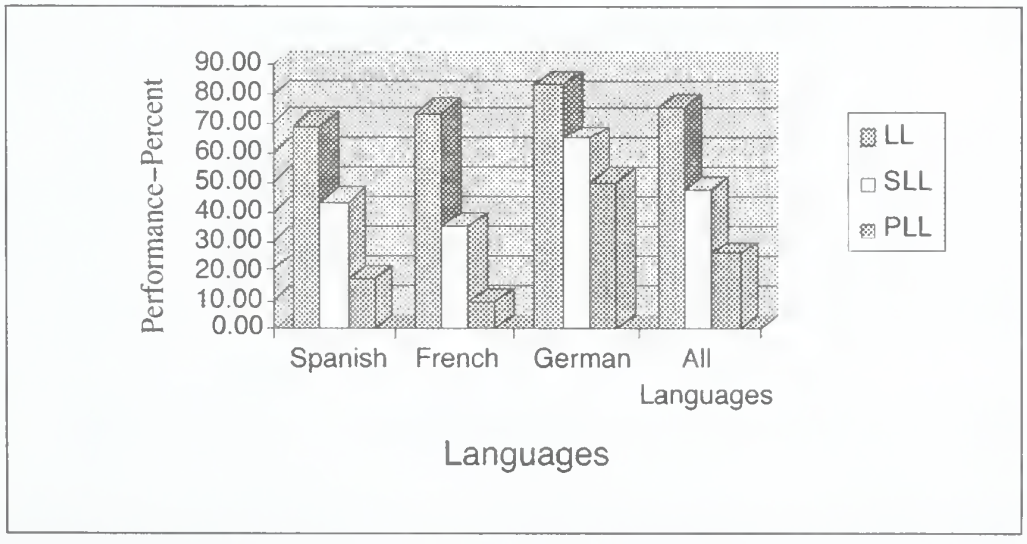
Columns in Table 3 identify the particular task under investigation, the individual languages investigated and, finally, the summary of data for all languages combined. Rows present the collective performance for each of the three subtypes of VP idioms across all languages and, finally, the row marked "Group Total" summarizes task performance for the languages as a whole. The final performance

Figure 2



Summary of Idiom Detection Task data. LL = Lexical Level; SLL = Semi-Lexical Level; PLL = Post-Lexical Level

Figure 3

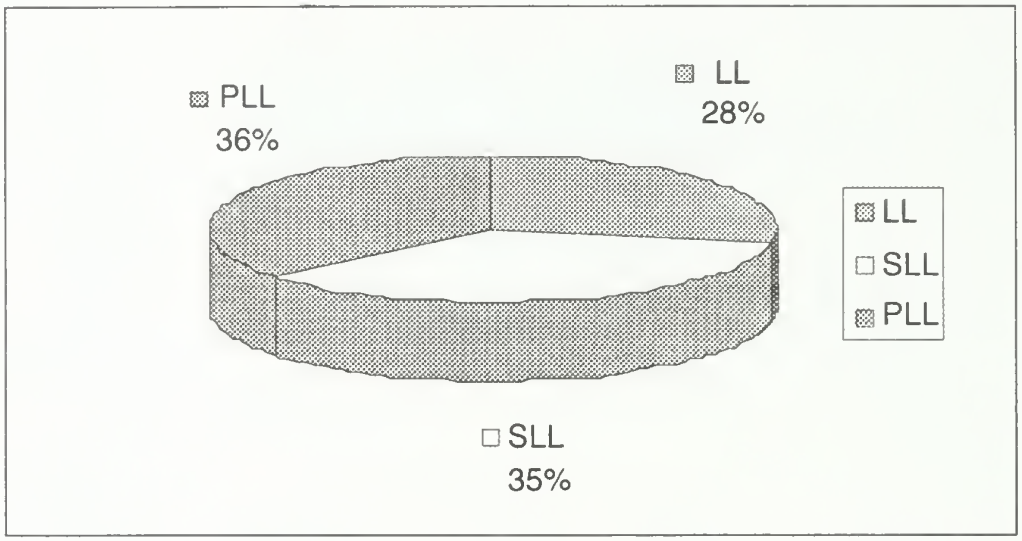


Summary of Zero Context Task data. LL = Lexical Level; SLL = Semi-Lexical Level; PLL = Post-Lexical Level

value is highlighted in bold print.

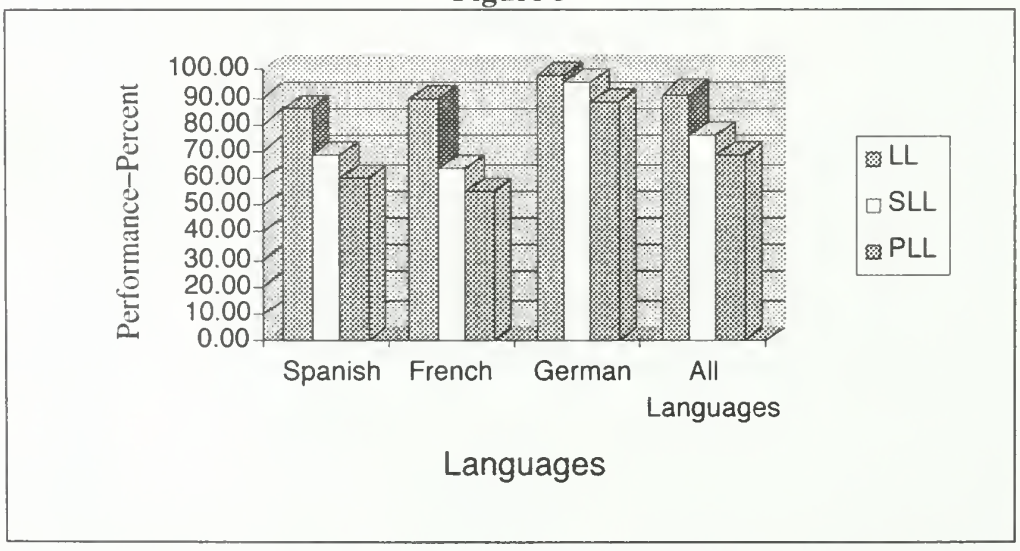
Statistical analysis (ANOVA and Tukey analyses)[9] of the results confirmed, first of all, that second language learners, regardless of target language studied, are quite capable of successfully detecting VP idioms in authentic texts (86.33% combined performance score for all languages) using a variety of contextual cues and reading strategies, including, but not limited to, word and idiom recognition, lexical access and retrieval, contextual and pragmatic support, background and world knowledge, formal schemata, and strategy use (see Idiom Detection Task data in Table 3 and Figure 2).

Figure 4



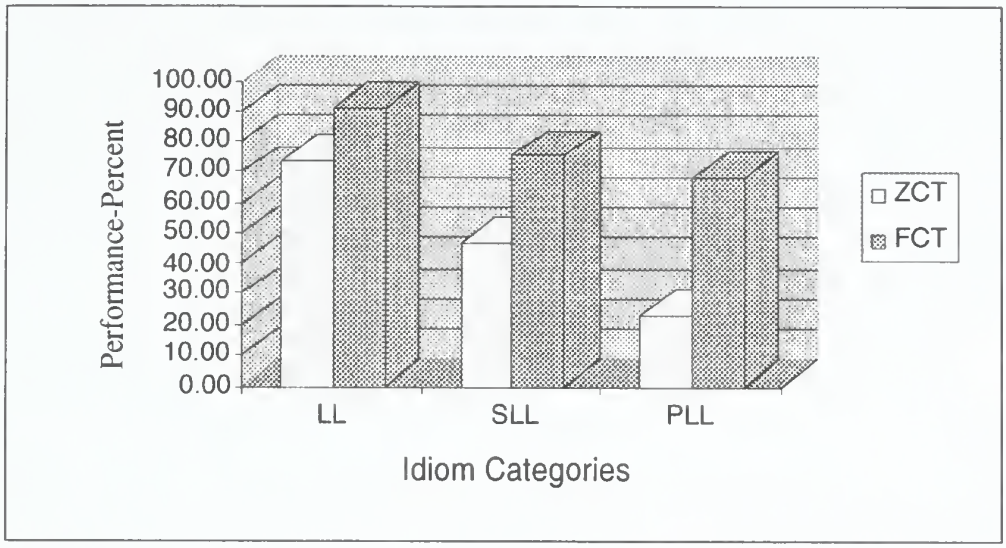
Summary of Zero Context Task time data. LL = Lexical Level; SLL = Semi-Lexical Level; PLL = Post-Lexical Level

Figure 5



Summary of Full Context Task data. LL = Lexical Level; SLL = Semi-Lexical Level; PLL = Post-Lexical Level

Figure 6



Increase in performance from Zero Context Task (ZCT) to Full Context Task (FCT). LL = Lexical Level; SLL = Semi-Lexical Level; PLL = Post-Lexical Level.

Second, in the absence of context, LL idioms (identical idioms between the native and target languages) are processed, comprehended, and interpreted more successfully (a combined performance score of 75.23% for all languages) than SLL (similar) idioms (47.73% for all languages) or PLL (different) idioms (25.44% for all languages). This result is consistent for all languages. (See the Zero Context Task data in Table 3 and Figure 3.)

Third, similar to the Zero Context Task idiom performance data above, in the absence of context LL idioms are processed more quickly (28.46% for all languages) than SLL idioms (35.30% for all languages) and PLL idioms (36.24% for all languages; see Zero Context Task Time data in Table 3 and Figure 4). Both the Zero Context Task idiom performance data and the Zero Context Task time data support the claim that in the absence of context, VP idiom type significantly affects the speed and ease of VP idiom understanding (i.e., the combined comprehension and interpretation process of idioms).

Finally increased context seems to have an effect on the comprehension and interpretation process of all VP idioms, especially those of the PLL type, with performance score of 90.86% for LL idioms, 75.52% for SLL idioms, and 67.82% for PLL idioms, totaling 78.07% for all languages combined (see the Full Context Task data in Table 3 and Figure 5).[10] The increase in idiom performance was most pronounced in the PLL category, followed by the SLL category, and the LL category (see Figure 6). Again, this result is consistent for all languages.

Taken as a whole, the increase in idiom performance from the Zero Context Task (49.46%) to the Full Context Task (78.07%) for the three languages combined indicates the facilitative effect that context has on overall VP idiom understanding. Combined, these results provide strong support for the findings of the other three studies already reported (Irujo, 1986, 1993; Liontas, 1997).

Moreover, a qualitative analysis of reading strategies reported by participants across the three experimental tasks reported here supports the notion that there is indeed a universal process of comprehending and interpreting VP idioms in foreign languages with respect to the languages investigated, and which was also found in my earlier study on Modern Greek (Liontas, 2001). Finally, the study revealed a strong agreement among learners on wanting idioms to be an integral part of their language and culture training within the context of meaningful authentic use.

Investigating VP Idiom Understanding in Second and Foreign Languages

The ways in which the idiomatic meaning of a VP idiom is computed are highlighted in the three hypotheses presented earlier. Underlying all of these hypotheses is the notion that, out of context, the difficulty of idiom understanding depends on an idiom's degree of markedness.[11] A target-language idiom is either unmarked (i.e., easy by way of lexical comparison of translation equivalents) or marked (i.e., difficult by way of lexical comparison of translation equivalents). Thus, LL idioms are unmarked (i.e., equivalent lexical items are present in both the target- and native- language idiom, evoking the same mental image) whereas SLL and PLL idioms are semi-marked and marked respectively (i.e., some or all of the lexical items are specific to a particular language and evoke different mental images).

In particular, the difference in lexical makeup of the idioms is an important indication of difficulty over the whole range of VP idioms. A learner will have the most difficulty understanding a given L2 idiom when there is no lexical/image similarity between it and any corresponding L1 idiom, whereas he or she will have less difficulty when there is a complete word-for-word correspondence of lexical items and images in the two languages, provided of course that the individual L2 lexical items comprising the idiom are known to the learner. The level of difference between an L1 and an L2 idiom, which corresponds to the degree of difficulty that the learner will have understanding the latter, is directly related to the degree of semantic/image distance between the target-language and native-language idiom.

In addition, it has been suggested that the degree of difficulty in understanding a target-language idiom may also be affected by how close the metaphoric meaning of the idiom is to the literal one. For example, the image created by the English idiom *to rain cats and dogs* bears no obvious relationship to its meaning *to rain heavily* and so would no doubt be difficult for learners to understand. But the corresponding idioms (they are actually similes) in Russian *dozhd' l'et kak iz vedra* (*rain pours as if from a bucket*), French *il pleut à seaux* (*it pours from pails*), Spanish *llover a cántaros* (*to rain from jugs*), and German *es gießt wie aus Kannen* (*it pours as if from jugs*) each create an image close to that of heavy rain and therefore would presumably be less difficult to interpret in context or even out of context.

However, quantitative evidence collected in the Liontas (1999) study suggests that when these idioms are presented in context, idiom interpretation pro-

ceeds uninfluenced by similarity or difference between metaphoric and literal meaning. Let us consider the same English idiom *to rain cats and dogs* with yet another corresponding idiom, in Spanish (*¡Caer chuzos de punta!*; literally, *to fall sharp-pointed spears*), and German (*es regnet junge Hunde*; literally, *it's raining young dogs*). In Liontas's study, most L2 learners pointed to the similarity and difference in lexical makeup and in the image being invoked between the target-language idiom given and the corresponding native language idiom *to rain cats and dogs*. While the concept of *to rain heavily* was clearly evident in the context in which these target-language idioms were embedded, a discussion of the differences in metaphoric and literal meaning was not pronounced in the learners' idiom interpretations. Lexemic and image similarity, however, were prominent.

This is not to suggest that lexical similarity is more important than metaphoric interpretability. It does suggest, however, that context may have a greater effect on idiom interpretation than differences between metaphorical and literal meaning, which explains why the Spanish and German idioms were accurately interpreted in context despite variations in lexemic composition and the distance between the metaphorical meaning and the literal one.

Specifically, in the case of the Spanish idiom, *¡Caer chuzos de punta!*, out-of-context performance failed to reach even 20% (17.86% to be precise). With the introduction of context, however, performance scores reached 67.86%. In the case of the German idiom, *es regnet junge Hunde*, the performance score level reached 100% in context from a 92.31% score out of context. Whereas the CSI distance from the German idiom *es regnet junge Hunde* to the English idiom *it's raining cats and dogs* is relatively small (the difference in this phrase is in fact only one key lexeme: *cats*), the Spanish idiom, *¡Caen chuzos de punta!*, evokes an image that is difficult to connect to an English idiom resembling this idiom's conceptualization. Hence the low success rate with this idiom's metaphoric interpretability out of context.

However, it is true that metaphoric interpretability, along with lexical similarity, familiarity, compositionality, predictability, and literality, are all relevant dimensions in the processing of both target-language and native-language idioms. For example, Titone (1994), testing 226 native speakers of English who were asked to rate the descriptive norms (i.e., degree of decomposability and analyzability) for 171 English idiomatic expressions, established that the dimension of predictability correlates significantly with alternative ratings of familiarity, whereas literality correlates negatively with abnormal decomposability or analyzability. This clearly suggests that the more easily an idiom is *decomposable*, the easier its figurative meaning can be attained. As Gibbs (1984) has stated, "When an idiom is decomposable, readers can assign independent meanings to its individual parts and will quickly recognize how these meaningful parts combine to form the overall figurative interpretation of the phrase" (p. 285).

It follows that when there is a one-to-one correspondence between the literal meaning stated (sentence meaning) and the figurative meaning implied (intended meaning), the degree of decomposability or analyzability exerts significant influ-

ence on idiom interpretation. Gibbs (1994) put forth a model—the *idiom decomposition model*—that accounts for these observations. According to this model (first proposed by Gibbs, Nayak, & Cutting, 1989), some idioms are more decomposable than others and are processed as any other phrase or sentence that is subjected to a full compositional analysis (i.e., graphophonic, syntactic, and semantic analysis). A similar position has also been advocated by Van de Voort & Vonk (1995), who suggested that:

> During processing people try to analyze an idiomatic expression compositionally, much like they analyze a literal expression. They try to assign independent idiomatic meanings to the individual parts of the idiom, which then can be combined to form the overall figurative interpretation of the phrase. This assumption implies that access to the meaning of an idiom is dependent on the extent to which an idiom can be compositionally analyzed; that is, meaning access is dependent on the compositionality of an idiom. (p.284)

Unfortunately, not all idioms are decomposable, and in such cases no analysis of the grammatical structure of the phrase, the accessing, retrieval, and comprehension of its individual lexemes, or the semantic analysis of the entire phrase can offer clues for the computation of the figurative meaning.

Given the above, it is clear that the CSI distance between target-language and native-language idioms advanced here provides only a basis for making *predictions* about the degree of difficulty experienced by learners and does not, in itself, provide *explanations* for this difficulty. What can be stated with confidence, however, is that difficulties in idiom comprehension and interpretation can be predicted on the basis of the differences found in the CSI distance between target-language and native-language idioms: The greater the distance, the more difficult the understanding of a particular target-language VP idiom subtype. As seen in Table 3 above, understanding of VP idioms was most challenging in the PLL subtype across all languages (both out of context and in context). The learner's native language and knowledge of idioms in the native language will be the major determinants of the degree of difficulty experienced during the comprehension and interpretation of a target-language idiom. Consequently, the difficulty that a second or foreign language learner will have comprehending and interpreting a given target-language VP idiom, especially when given without contextual support, can be predicted by comparing the lexical similarity and metaphoric interpretability of the target-language and native-language idioms in question (i.e., the CSI distance between them), although it must be noted that contextual support would be used by the learner in real-world circumstances. Even in context, however, the predictions below hold true:

(1) A target-language idiom that is unmarked (i.e., an LL idiom) will not be difficult to understand;

(2) A target-language idiom that differs from the corresponding native-language idiom but that is semi-marked (i.e., an SLL idiom) will be less difficult to understand than one that is more marked (i.e., a PLL idiom);
(3) A target-language idiom that both differs from the corresponding native-language idiom and is marked (i.e., a PLL idiom) will be the most difficult to understand;
(4) The degree of difficulty associated with the comprehension and interpretation of a target-language idiom corresponds to the CSI distance between it and its corresponding native-language idiom. Regardless of VP idiom type, however, a major determinant of difficulty is knowledge of vocabulary (i.e., inferring the meaning of vocabulary from grammatical and situational knowledge) and one's own idiomatic competence in the native language.

The markedness factor, as used here, explains not only when differences between target-language and native-language idioms will result in comprehension and interpretation difficulties, but also the relative degree of difficulty that a learner will likely experience in a given situation. Nevertheless, it is wise to exercise caution about equating "translatability" with "difficulty" or "distance" between the native and the target language. The actual distance between a target-language and a native-language idiom merely acts as a constraint on idiomatic knowledge transfer: The starting point for the comprehension and interpretation of a target-language idiom is the learner's knowledge of his or her L1. Specifically, if the learner is not familiar with a particular idiom in his or her native language, the lexical items of the target-language idiom risk remaining enigmatic, and the image to be evoked by the idiom risks losing potential associations or connections in the learner's mind. Any resulting interpretations will be speculative at best; they will therefore require the renewed development of idiomatic associations, connections, and interpretations when presented with supporting context.

An important issue for language pedagogy, therefore, is whether second language learners need to be taught LL idioms, or if they can be expected to transfer them from their L1 in the absence of contextual support. As already reported in the two studies by Irujo (1986, 1993), those idioms that are identical in the L1 and L2 are the easiest to transfer. The validity of this finding notwithstanding, learners of second and foreign languages should be told that idiom meanings are the same in both languages in cases where the target-language idiom falls into the LL category.

The LL, SLL, and PLL hypotheses offered above have descriptive, explanatory, and predictive power, for reasons already discussed. A word of caution is in order, however: Such theories must not be considered in isolation from discourse features. In other words, one cannot hope to formulate meaningful conclusions about the efficacy of these hypotheses by studying VP idioms apart from the contexts that support their meaning. These theories do provide a basis for predicting difficulties in understanding VP idioms, but only when such idioms are also pre-

Table 4: "If/Then" Statements For L2 VP Idioms

LL IDIOMS		
IF...	**THEN...**	**EVIDENCE**
the individual lexemes of an idiom are known and the idiom is an LL idiom,	recognition of idiomatic meaning will be immediate.	"To let the cat out of the bag—It is the same as the English expression." (G4: *die Katze aus dem Sack lassen*; lit. *to let the cat out of the bag*)
the individual lexemes of an idiom are not known and the idiom is an LL idiom,	guessing will be entertained.	"This is a total guess. I have no idea." (S13: *faltarle a uno un tornillo*; lit. *to lack a screw*; English: *to have a screw missing*)
a key lexeme of an idiom is known and the idiom is an LL idiom,	L1 idioms containing the key word will be recalled from memory.	"The literal meaning doesn't help at all!, lost until the shirt, lost in the sauce?" (S4: *perder hasta la camisa*; lit. *to lose [everything] except the shirt*; English *to lose one's shirt*)
two key lexemes of an idiom are known and the idiom is an LL idiom,	L1 idioms containing the two key words will be recalled from memory.	"I used cuernos y toro as clues and made up the rest." (S10: *agarrar al torro por los cuernos*; lit. *to take the bull by the horns*)

Table 4: "If/Then" Statements For L2 VP Idioms (Continued)

SLL IDIOMS		
IF...	**THEN...**	**EVIDENCE**
the individual lexemes of an idiom are known and the idiom is an SLL idiom,	recognition of idiomatic meaning will be delayed.	"Don't know. Oh! It's raining cats and dogs? The only thing I can think of." (G14: *es regnet junge Hunde*; lit. *It is raining young dogs*; English *it's raining cats and dogs*)
the individual lexemes of an idiom are not known and the idiom is an SLL idiom,	guessing will be entertained.	"I'm thinking that it's like "adding grease to the fire" sounds good... [sic] where are the answers to these?" (S8: *echar leña al fuego*; lit. *to throw wood on the fire*; English *to add fuel to the fire*)
a key lexeme of an idiom is known and the idiom is an SLL idiom,	L1 idioms containing the key word will be recalled from memory, followed by a comparison/contrast of NL with TL idioms.	"To bite the bullet —biting something unpleasant which led me to biting, then I thought about what idioms use biting and I got biting the bullet." (G8: *in den sauren Apfel beißen*; lit. *To bite into a sour apple*; English *to bite the bullet*)
two key lexemes of an idiom are known and the idiom is a SLL idiom,	L1 idioms containing the two key words will be recalled from memory, followed by a comparison/ contrast of NL with TL idioms.	"I believe this is to throw fat in the fire, which means to do something to heat up a situation that is already tense. I don't know what lena is but I know throw and fire, so I guessed. (S8: *echar leña al fuego*; lit. *to throw wood on the fire*; English *to add fuel to the fire*)

Table 4: "If/Then" Statements For L2 VP Idioms (Continued)

PLL IDIOMS		
IF...	**THEN...**	**EVIDENCE**
the individual lexemes of an idiom are known and the idiom is a PLL idiom,	recognition of idiomatic meaning is questionable due to the infinite possibilities.	"They are looking for hairs on the egg? I am stumped." (S12: *buscarle pelos al huevo*; lit *to look for hair on the egg*; English *to nitpick, to find fault with everything*)
the individual lexemes of an idiom are not known and the idiom is a PLL idiom,	complete guessing will take place, similar to "wandering around in the dark."	"I don't know. I'm feeling frustrated now, because I've done so many already and I'm not getting any of them." (S9: *sacar las castañas del fuego a alguien*; lit *to pull chestnuts out of the fire for someone*; English *to save someone's neck*)
a key lexeme of an idiom is known and the idiom is a PLL idiom,	guessing will be more refined based on the image the key lexeme evokes in memory.	"I am kind of taking a wild guess on this one only because of the word carne." (S3: *poner toda la carne en el asador*; lit *to put all the meat on the spit*; English *to put all your eggs in one basket*)
two key lexemes of an idiom are known and the idiom is a PLL idiom,	guessing will be more strictly refined to the images the key lexemes evoke in memory, either individually or in combination.	"They were looking for the hair on the egg. They were looking for a needle in a haystack. I guessed because there is no hair on an egg, one would look forever to find hair on an egg as would one looking for a needle in a haystack. I again used word clues." (S12: *buscarle pelos al huevo*; lit *to look for hair on the egg*; English *to nitpick, to find fault with everything*)

sented in context.

In sum, the *sine qua non* of the above hypotheses is that VP idiom understanding depends on an idiom's degree of markedness (i.e., the CSI distance between target-language and native-language idioms), a fact that makes target-language and native-language idioms amenable to crosslinguistic comparison. By analyzing samples of the world's idioms collected experimentally, implicational universals taking the form of "if/then" statements can be postulated. Table 4 presents the most compelling "if/then" statements for each of the three VP idiom types discussed thus far in this article, as these statements are based on real data (tendencies), and are not just hypotheses.[12]

The markedness factors discussed (and summarized in Table 4) have been shown to hold constant both statistically and qualitatively (Liontas, 1999, p. 252 and p. 298) across Spanish, French, and German, yielding the following mathematical relationship, (i.e., that LL idioms are processed faster and are interpreted more easily than SLL idioms which, in turn, are processed faster and interpreted more easily than PLL idioms):

$$\mathbf{LL > SLL} \text{ and } \mathbf{SLL > PLL} \rightarrow \mathbf{LL > PLL}$$

or

$$\mathbf{LL > SLL > PLL} \rightarrow \mathbf{LL > PLL}$$

This relationship may well be of considerable importance for future SLA research and practice since it was ascertained both with and without contextual support for VP idiom understanding (see Table 3 and Figures 3-5). However, there remains the question of whether this relationship holds across second and foreign languages other than Spanish, French, and German (and also Modern Greek in the Liontas [1997, 2001] study).

CONCLUSION

Recommendations for Future Idiom Research

This article began with a discussion of the ill-defined term *idiom* and the problems that arise because of lack of clarity regarding what exactly is meant by the term. Following a critical review of definitions of *idiom* applied by different idiomatologists and scholars, I then suggested a new category of idioms with respect to the acquisition of second languages, which I have termed *vivid phrasal (VP) idioms*. The nature of VP idiom classification along a conceptual Lexical-Image Continuum was then presented, including descriptions of what VP idioms are and what they are not. The ensuing discussion showed that while there still exist various means of categorizing idioms, agreement among idiomatologists regarding the definition of *idiom* can be reached and, even more importantly, a common research agenda for SLA researchers and language teachers alike is possible.

One way in which diverging definitions of *idiom* can be harmonized is through

researchers and language teachers investigating the same types of idioms under the same conditions. By studying the same types of idioms under the same conditions of inquiry, the SLA profession can contribute to an open yet focused discussion that will greatly enhance present knowledge of idiomaticity, especially with regard to second and foreign languages, where research is almost nonexistent in either theoretical or methodological publications. Indeed, after more than 25 years of intensive research dealing with a wide variety of SLA issues—from defining second language acquisition to assessing language ability in the classroom—idioms have not yet received the linguistic and pragmatic attention that they so clearly require. For example, in two of the most widely-used textbooks on SLA for graduate study—*The Study of Second Language Acquisition* by Rod Ellis (1994) and *Linguistics and Second Language Acquisition* by Vivian Cook (1993)—which together total over eleven hundred pages, the subject of idiomaticity does not even appear in their glossaries nor in their subject indexes.

A second way in which problems stemming from differing definitions of *idiom* can be ameliorated is to adopt a taxonomy such as the taxonomy for VP idioms presented in this article. Regardless of which second or foreign language is the focus of investigation, the subcategorization of VP idioms into Lexical Level (LL), Semi-Lexical Level (SLL), and Post-Lexical Level (PLL) idioms can provide a common point of departure for further L2 idiom study. A common research agenda can be established in the years ahead by designing research studies that investigate the applicability of the main hypotheses posited by L1 researchers regarding the processing, comprehension, and interpretation of idioms—Bobrow and Bell's (1973) *literal first hypothesis*, Swinney and Cutler's (1979) *simultaneous processing hypothesis*, Gibbs' (1980) *figurative first hypothesis*, Gibbs' (1994, 1995) *idiom decomposition model*, and Giora and Fein's (1999) *graded salience hypothesis*—in L2 learning situations..

The results of such studies can then be compared and contrasted with propositions advanced in L2 models of idiom processing, such as those in the *SL Comprehension and Interpretation Model of VP Idioms* proposed by Liontas (1999, pp. 377-389). This model, termed the *Idiom Diffusion Model*, is different from the L1 models cited above in that it does not predict the computation of the literal meaning over the idiomatic meaning, as is the case with the literal first hypothesis (also known as the *idiom list hypothesis*, Bobrow & Bell, 1973), nor does it predict the computation of the idiomatic meaning over the literal meaning, as is the case with the figurative first or *direct access hypothesis* (Gibbs, 1980). Further, the Idiom Diffusion Model does not claim that both meanings are simultaneously computed in parallel by a single phrase processor when the first word of an idiom string is encountered, as in Swinney and Cutler's (1979) simultaneous processing hypothesis (also referred to as the *lexical representation model*) or that lexicalized meanings are retrieved directly from the mental lexicon rather than from the context, as Giora and Fein's (1999) graded salience hypothesis puts forth.

The fundamental difference between the L1 models described here and the Idiom Diffusion Model lies in the fact that most L2 learners do not have access to

fixed institutionalized idiomatic expressions, as do L1 learners. For L2 learners, it is not a question of which meaning to access and retrieve first—the literal or the figurative—or whether both meanings are computed simultaneously. It is, instead, a question of whether or not they can sense a phrasal unit to be an idiom. This sense is activated anew every time a reader comes across a fixed group of words that do not make much sense if taken literally. The fact that the literal meaning precedes the figurative meaning (as clearly evidenced in Liontas 1997, 1999, 2001) should not be taken to confirm Bobrow and Bell's (1973) *literal first hypothesis,* as L2 learners cannot possibly access an idiom string that they do not possess from their mental lexicon. In contrast to L1 learners, L2 learners must create a new idiomatic meaning in their mind and juxtapose that meaning against one from their native language. It is through comparison and contrast that the L2 idiomatic meaning is created (in many cases for the very first time) in parallel to the text the learner reads. Based on the learner's personal background and world knowledge, and his or her familiarity with L1 idioms, mental connections between L1 and L2 idioms are established.

These connections are only as strong as the textual framework in which the L2 idiom is embedded allows them to be. At times, L2 learners, influenced by the lexemic make-up of an idiomatic string, make the wrong connections in their mind and, convinced of the accuracy of their connection, proceed with an interpretation even though the context supports another interpretation. At other times, L2 learners adapt, assimilate, or accommodate L1 idioms bearing close resemblance to L2 idioms and make them fit the context. At still other times they find themselves unable to make any connections between an L2 idiom and an L1 idiom from their mental lexicon. It is in such instances that frustration sets in for some learners. For the majority of L2 learners, however, context becomes the vehicle by which VP idiom understanding is ultimately achieved. The difference in overall idiom performance (and across idiom types) from the Zero Context Task to the Full Context Task offers support to this finding (see Table 3), and participants' (meta)cognitive comments lend further support. Consider the following representative comments:

> I figured out most of the idioms once the context was given. Without it, my direct translations tended to come up with something close to the right answer but not quite. Also, it helped me to run through a list of idioms in my head. Still, a few of the German idioms I missed totally. But now having seen them, I will recognize them in the future.

> The in-context part was very helpful. Once I understood the situation, it was easier to understand the idiom.

> I did not know all the vocabulary in the idioms. The context helped me to figure out what the idiom meant.

> In the Full Context Task, I was not familiar with these [idioms] so the text did help to interpret the idioms. The context also enabled a better understanding of these idioms, which was for my own benefit.
>
> [Idioms] are fairly easy when they are in the Full Context [Task] because I used the story to give me a hint.

Above all, the few representative comments given here make clear the important role that context plays in VP idiom understanding, especially in the comprehension and interpretation of PLL idioms. (For a more comprehensive review of such comments, see Liontas, 1999, pp. 263-264, 311-312, 343-344, and 566-569.)

The clear advantage of having a common research agenda is that focused investigations of the sort envisaged here can pave the way for idiom research and theory that avoids the confusion present in the L1 psycholinguistic models mentioned above. Even more importantly, such focused investigations can examine critically how second and foreign language learners in particular transact idiomatic meaning in and out of context. The three hypotheses—the LL, SLL, and PLL Hypotheses—and the empirical evidence in support of these hypotheses presented in this article provide a descriptive, explanatory, and predictive framework for investigating VP idiom understanding in a variety of experimental conditions. As a result, the SLA profession can reach a more coherent body of conclusions on the nature of VP idiom comprehension and interpretation in second and foreign languages, and advance theoretical arguments in favor of specific pedagogical practices that will assure second and foreign language learners' development of idiomatic competence.

Pedagogical Implications

To date, while the precise conditions that are most likely to facilitate the development of idiomatic competence in second and foreign languages remain largely unknown and will doubtless be the subject of future investigation, it can be stated with confidence that repeated and systematic exposure to frequent and useful idioms and the contexts in which they are used positively influences idiom learning. In addition, focused, meaning-based activities and training in receptive/interpretative strategies focusing on how native speakers and hearers share their linguistic (i.e., grammar, morphology, syntax), semantic (i.e., lexicon and etymology), and pragmatic (i.e., cultural beliefs about how language is used in communication) knowledge without lapsing into unnecessary ambiguity can be useful. Such activities can help second and foreign language learners discover the interplay between the context-independent linguistic knowledge expressed (i.e., what is said literally) and context-dependent extralinguistic knowledge implied (i.e., what is being communicated figuratively), in short, how speakers and hearers observe the rules that govern extended discourse against the background of shared knowledge—namely, cultural, social, and historical beliefs—among speakers from the

same linguistic and cultural community. Authentic materials (both print and audio) from the target culture can exemplify the rhetorical conventions of idiom usage and practices, including the social and cultural matters of idiomaticity such as occasion, purpose, and means.

Consequently, the discovery of the relationship between the idiomatic utterances used and the propositions asserted from one conversational turn to the next is key to rendering idiomatic interpretations successfully. Coupled with specific idiom teaching practices promoting idiom understanding, acquisition, and production, authentic texts from a range of media (e.g., the Internet, newspapers, magazines, movies, recordings, and the like) depicting real-life use of idioms or plays on idiomatic knowledge (a common feature in advertising language) can hasten the development, and ultimately the attainment, of idiomatic competence within contextualized environments both in the reception (listening and reading) and production (speaking and writing) of idiomatic language. The proposals in this paper regarding vivid phrasal idioms and the Lexical-Image Continuum are a first step in that direction.

APPENDIX A: IDIOM TYPES

Table A1: Clause, Phrase, and Sentence Idioms

TYPE OF IDIOM	EXAMPLE
Clause Patterns	
Verb + Complement	go berserk
Verb + Direct Object	ease somebody's conscience/mind
Verb + Direct Object + Complement	paint the town red
Verb + Indirect Object + Direct Object	do somebody credit
Phrase Patterns	
Noun Phrase	a crashing bore
Adjective Phrase	free with one's money
Prepositional Phrase	in the nick of time
Adverbial Phrase	as often as not
Sentence Patterns	
	one swallow does not make a summer
	give somebody an inch and he'll take a mile

Table A2: Grammatical Categories of Idioms

TYPE OF IDIOM	EXAMPLE
Noun Idioms	
a) Simple Nouns	a pad, a flop
b) Modified Nouns	eager beaver, backseat driver
c) Noun Phrases	apple of my eye, short end of the stick
Verb Idioms	
a) One-word Verbs	splurge, freeload
b) Two-word Verbs	rip off, count on
c) Verb Phrases	throw in the towel, face the music
Intransitive Verbal Idioms	
a) Intransitive Verbs with Particles	die down, come about, break down, settle down
b) Intransitive Verbs with Prepositions	believe in, run over, turn into, get over, part with
c) Intransitive Verbs with Particles and Prepositions	put up with, do away with, look forward to, look back on
Transitive Verbal Idioms	
a) Transitive Verbs with Movable Particles	make up, call off, look up, point out, talk over
b) Transitive Verbs with Prepositions	hold against, pull through, lose track of, play by ear
c) Transitive Verbs with Particles and Prepositions	bring around to, let in on, set aside for, talk over with
Nominal, Adjectival, and Adverbial Idioms	
a) Nominal Forms: Pairs of Nouns	flesh and blood, heart and soul, wear and tear
b) Nominal Forms: Adjective + Noun Combinations	last straw, close call, hot air, big shot, white lie, old hand
c) Adjectival Forms: Pairs of Adjectives	cut and dried, fair and square, touch and go
d) Adjectival Forms: Various Compounds	clear-cut, easy-going, man-to-man, level-headed
e) Various Adverbial Forms	time and again, for good, for now, high and low

Table A2: Grammatical Categories of Idioms (Continued)

TYPE OF IDIOM	EXAMPLE
Adjective Idioms	cool, swamped, gung-ho, half-baked
Adverb Idioms	on easy street, in a nutshell, once in a blue moon
Sentence Idioms	the coast is clear, let bygones be bygones

Table A3: Theme Idioms

THEME	EXAMPLE
Color	out of the blue, red tape, in the red, green light
Food	in a pickle, going bananas, a piece of cake
Numbers	in seventh heaven, forty winks, first sight
Parts of the Body	big mouth, sweet tooth, by heart, eye to eye
People	the real McCoy, a wise guy, go Dutch
Animals	blind as a bat, bookworm, smell a rat, chicken
Geography	over the hill, down-to-earth, tip of the iceberg
Recreation	a good sport, on the ball, no dice, off base
Household Items and Tools	a wet blanket, sharp as a tack, pins and needles
Medicine	a bitter pill, to hold one's breath, to have a lot of nerve
Plants	a bed of roses, a nutshell, up a tree, the last straw
Clothes	dressed to kill, hot under the collar, on a shoestring
Time	high time, kill time, call it a day, in no time
Weather	break the ice, a breeze, rain cats and dogs
House (inside/outside)	on the fence, under the table, down the drain
Repetition	fuddy-duddy, tip-top, wishy-washy

APPENDIX B: EXPERIMENTAL TASKS

The experimental tasks (Liontas, 1999) were described to the participants as follows:

Idiom Detection Task (IDT): You will be given a total of 15 short texts containing idiomatic expressions. Using the mouse, highlight the phrase you believe is the idiomatic expression. Then report on the specific processes and strategies you used in "locating" this phrase. Also report on your feelings during the task, any difficulties you had, how you overcame potential difficulties, and anything else you think might be important to report. The *Idiom Detection Task* is designed to challenge your overall comprehension process and to determine which text cues, learning strategies or reading techniques you employed for making sense of the idiom in general and its interpretation in particular.

Zero Context Task (ZCT): You will be given a total of 15 idioms without any supporting context. You are asked to guess their meanings. On your screen you will see one idiom at a time. Since this is a speed test, as soon as you believe you know the meaning of the idiom or a paraphrase, press any key on your keyboard and type the meaning in English. If you are unsure of the "equivalent expression," offer a paraphrase or describe the meaning as best you can in your own words. After completion, please report on the specific processes and strategies you used in "accessing" the meaning of the phrase given. Also report on the feelings you experienced during the task, any difficulties you had, and anything else you think might be important to report. The *Zero Context Task* is designed to determine how the "idiom in isolation" has challenged your overall comprehension process and what images you created or thought of to interpret each idiom.

Full Context Task (FCT): You will be given the same 15 idioms as in the previous *Zero Context Task*, but this time you may take as much time as needed. The idioms will appear in bold one at a time on your screen, and each will be given in its broader context. Read the text carefully, and when you feel ready to interpret the idiom, press any key on your keyboard and type the meaning in English. If you cannot infer the meaning, please speculate on the most plausible possibility based on the overall context. After completion, please report on the specific processes and reading strategies you used in "accessing" the meaning of the phrase given. Also report on the feelings you had, and anything else you think might be important to report. The *Full Context Task* is designed to find out how the "idiom in context" helped your overall comprehension, whether syntax and word meaning played a role in your understanding, and what images, if any, you created or thought of during this task. It is also important to know whether the meaning/image you had during the *Zero Context Task* has changed, along with your best explanation as to why or why not. Finally, in the space marked **Eureka**, offer the best equivalent English idiom. Even if the idiom is the same one offered above, please retype your answer here as well.

NOTES

[1] This definition of idiom has been cited by many scholars (Fernando, 1996; Fraser, 1970; Healey, 1968; Katz & Postal, 1963; Makkai, 1972; Partridge, 1935; Smith, 1925; Strässler, 1982) as it also encompasses a great variety of multiword expressions that exemplify idiomaticity, such as pure idioms, semi-idioms, and literal idioms, as well as habitual restricted and unrestricted collocations (see also Footnote 5 below).

[2] Actually, *tournures* (from the French meaning "turns of phrase").

[3] These are really conjuncts, not "binomials." Nom = noun (e.g., nominalizations), but *spick and span* are adjectives. It is suggested that in an "X and X" expression, the X can be any part of speech.

[4] This is a very questionable idiom category. English grammar is undergoing change in these cases.

[5] This idiom category is best described as "lexical" compounds, not "phrasal," as the examples given

are not phrasal in the grammatical sense.

[6] As Fernando (1996) uses them, these categories refer to the semantics of idioms, i.e., *pure idioms* are completely non-literal, whereas *semi-idioms* are only partly so. *Collocations*, on the other hand, exemplify fixed habitual recurrence of words in groups in a specific order and lexical form that conform to grammatical and semantic usage, as in *in the-not-too-distant future*.

[7] With the introduction of context, accuracy in LL idiom interpretation increased from 90.42% to 100% (a 9.58% increase) and from 40% to 72.85% (a 32.85% increase) for the PLL idioms, thus clearly suggesting that context affects understanding of PLL idioms.

[8] This average was calculated by dividing the total latency time for each idiom type (LL, SLL, PLL) by the total time spent on all 15 idioms. For example, the figure for LL Spanish idioms (25.08%) was calculated by dividing the total latency time for all participants for LL Spanish idioms (1594 seconds) by the total latency time spent on all the Spanish idioms (6356 seconds).

[9] For a full account of the statistical analyses performed on these data, see Liontas (2002a, 2002b, 2003).

[10] While using the same idioms for the Zero Context Task and the subsequent Full Context Task kept the idioms constant, it introduced the danger that improvement on the Full Context Task was partly due to prior exposure to the idioms. The lack of time pressure in the Full Context Task might also have contributed to performance. However, this should not have affected the difference in performance on the different types of idioms, which is the main focus of the present study.

[11] The term *markedness*, unlike the common definition given in linguistics as a linguistic structure that is "special" or "less natural" in some way than others during L2 acquisition, refers here to the idea that some L2 idioms are transferred more easily than others and that the learner's L1 can also facilitate L2 idiom learning. For example, the German idiom *das Kriegsbeil begraben* (literally, *to bury the hatchet*) is transferred more easily than the German idiom *die Würmer aus der Nase ziehen* (literally *to pull the worms out of the nose*) because the latter is more marked (i.e., different in lexemic makeup and highly metaphorical) in relation to its L1 English equivalent *to pull teeth from a mule*, leading to sampling of hypotheses and testing them out against the available input by means of inductive and/or deductive inferencing.

[12] Given space constraints, the evidence provided in Table 4 comes solely from the Zero Context Task experiment, which indicates how adult third-year university learners of foreign languages process, comprehend, and interpret VP idioms out of context. The evidence becomes even stronger as soon as one consults the retrospective comments made during the completion of the Full Context Task. For a list of such Full Context Task comments, see Liontas (1999, p. 311-312 and 560-563). The entry given in parentheses at the end of a retrospective comment indicates the target language and the VP idiom in question. A complete list of all 90 VP idioms used in the three experiments—Idiom Detection Task, Zero Context Task, and Full Context Task—can be found in Liontas (1999, p. 126-129).

REFERENCES

Arnaud, P. J., & Savignon, S. J. (1997). Rare words, complex lexical units and the advanced learner. In J. Coady & T. Huckin (Eds.), *Second language vocabulary acquisition* (pp. 157-173). Cambridge: Cambridge University Press.

Berube, M. S. (Ed.) (1985). *The American heritage dictionary*. Boston: Houghton Mifflin Company.

Bobrow, S. A., & Bell, S. M. (1973). On catching on to idiomatic expressions. *Memory and Cognition, 1,* 343-346.

Broukal, M. (1994). *Idioms for everyday use*. Lincolnwood, IL: National Textbook Company.

Cacciari, C. (1993). The place of idioms in a literal and metaphorical world. In C. Cacciari & P. Tabossi (Eds.), *Idioms: Processing, structure, and interpretation* (pp.

27-55). Hillsdale, NJ: Erlbaum.
Carter, R. A. (1987). *Vocabulary: Applied linguistic perspectives*. London: Routledge.
Chomsky, N. (1965). *Aspects of the theory of syntax*. Cambridge, MA: MIT Press.
Colombo, L. (1993). The comprehension of ambiguous idioms in context. In C. Cacciari & P. Tabossi (Eds.), *Idioms: Processing, structure, and interpretation* (pp. 163-200). Hillsdale, NJ: Erlbaum.
Cook, V. (1993). *Linguistics and second language acquisition*. New York: St. Martin's Press.
Corder, S. P. (1973). *Introducing applied linguistics*. Harmondsworth, England: Penguin Books.
Cowie, A. P., & Mackin, R. (Eds.) (1975). *Oxford dictionary of current idiomatic English* (Vol. 1). London: Oxford University Press.
Cowie, A. P., Mackin, R., & McCaig, I. R. (Eds.). (1983). *Oxford dictionary of current idiomatic English* (Vol. 2). London: Oxford University Press.
Cronk, B. C., & Schweigert, W. A. (1992). The comprehension of idioms: The effects of familiarity, literalness, and usage. *Applied Linguistics, 13* (2), 131-146.
Cutler, A. (1982). Idioms: The older the colder. *Linguistics Inquiry, 13* (2), 317-320.
Ellis, R. (1994). *The study of second language acquisition*. Oxford: Oxford University Press.
Feare, R. E. (1980). *Practice with idioms*. Oxford: Oxford University Press.
Fernando, C. (1996). *Idioms and idiomaticity*. Oxford: Oxford University Press.
Fernando, C., & Flavell, R. (1981). *Exeter Linguistic Studies 5: On idiom: Critical views and perspectives*. Exeter: University of Exeter.
Fillmore, C. J., Kay, P., & O'Connor, K. C. (1988). Regularity and idiomaticity in grammatical constructions: The case of 'let alone.' *Language, 64* (3), 501-538.
Flores d'Arcais, G. B. (1993). The comprehension and semantic interpretation of idioms. In C. Cacciari & P. Tabossi (Eds.), *Idioms: Processing, structure, and interpretation* (pp. 79-98). Hillsdale, NJ: Erlbaum.
Fraser, B. (1970). Idioms within a transformational grammar. *Foundations of Language, 6,* 22-42.
Gaines, B. K. (1986). *Idiomatic American English: A step-by-step workbook for learning everyday American expressions*. New York: Kodansha America, Inc.
Gibbs, R. W., Jr. (1980). Spilling the beans on understanding and memory for idioms in conversation. *Memory and Cognition, 8,* 149-156.
Gibbs, R. W., Jr. (1984). Literal meaning and psychological theory. *Cognitive Science, 8,* 275-304.
Gibbs, R. W., Jr. (1994). *The poetics of mind, figurative thought, language, and understanding*. Cambridge: Cambridge University Press.
Gibbs, R. W., Jr. (1995). Idiomaticity and human cognition. In M. Everaert, E. van der Linden, A. Schenk, & R. Schreuder (Eds.), *Idioms: Structural and psychological perspectives* (pp. 97-116). Hillsdale, NJ: Erlbaum.
Gibbs, R. W. Jr., Nayak, N. P., & Cutting, C. (1989). How to kick the bucket and not decompose: Analyzability and idiom processing. *Journal of Memory and Language, 28,* 576-593.
Giora R., & Fein, O. (1999). On understanding familiar and less-familiar figurative language. *Journal of Pragmatics, 31* (12), 1601-1618.
Hakuta, K. (1974). Prefabricated patterns and the emergence of structure in second language acquisition. *Language Learning, 24,* 287-298.

Healey, A. (1968). English idioms. *Kivung Journal of the Linguistic Society of the University of Papua New Guinea, 1* (2), 71-108.

Hockett, C. F. (1958). *A course in modern linguistics.* New York: MacMillian.

Irujo, S. (1986). Don't put your leg in your mouth: Transfer in the acquisition of idioms in a second language. *TESOL Quarterly, 20*, 287-304.

Irujo, S. (1993). Steering clear: Avoidance in the production of idioms. *IRAL, 31*(3), 205-219.

Katz, J. J., & Postal, P. (1963). The semantic interpretation of idioms and sentences containing them. *MIT Research Laboratory of Electronics Quarterly Progress Report, 70*, 275-282.

Liontas, J. I. (1997). "Building castles in the air": The comprehension processes of modern Greek idioms. Paper presented at the 15th International Symposium on Modern Greece, Kent State University, Kent, OH, November 9, 1997.

Liontas, J. I. (1999). *Developing a pragmatic methodology of idiomaticity: The comprehension and interpretation of SL vivid phrasal idioms during reading.* Unpublished doctoral dissertation, The University of Arizona, Tucson, AZ.

Liontas, J. I. (2001). That's all Greek to me! The comprehension and interpretation of modern Greek phrasal idioms. *The Reading Matrix: An International Online Journal, 1* (1), 1-32. Available: http://www.readingmatrix.com/articles/john_liontas/article.pdf

Liontas, J. I. (2002a). Context and idiom understanding in second languages, In S. H. Foster-Cohen, T. Ruthenberg, & M. L. Poschen (Eds.), *2002 EUROSLA Yearbook: Annual conference of the European second language association* (Vol. 2, pp. 155-185). Proceedings of the 2002 Annual Conference of the European Second Language Association. Amsterdam/Philadelphia: John Benjamin Publishing Company.

Liontas, J. I. (2002b). Reading between the lines: Detecting, decoding, and understanding idioms in second languages. In J. Hammadou Sullivan (Ed.), *Literacy and the second language learner: Vol. 1. Research in second language learning* (pp. 177-216). Greenwich, CT: Information Age Publishing Inc.

Liontas, J. I. (in press). Killing two birds with one stone: Understanding Spanish VP idioms in and out of context. *Hispania, 86* (2), 289-301.

Long, T. H. (Ed.) (1990). *Longman dictionary of English idioms.* London: Longman Publishing Group.

Makkai, A. (1969). The two idiomaticity areas in English and their membership: A stratificational view. *Linguistics, 50*, 44-58.

Makkai, A. (1972). *Idiom structure in English.* The Hague: Mouton.

McGlone, M. S., Glucksberg, S., & Cacciari, C. (1994). Semantic productivity and idiom comprehension. *Discourse Processes, 17* (2), 167-190.

Moon, R. (1997). Vocabulary connections: Multi-word items in English. In N. Schmitt & M. McCarthy (Eds.), *Vocabulary: Description, acquisition and pedagogy* (pp. 40-63). Cambridge: Cambridge University Press.

Murray, J. A. H. (Ed.) (1989). *Oxford English dictionary.* Oxford, England: Clarendon.

Nattinger, J. R., & DeCarrico, J. S. (1992). *Lexical phrases and language teaching.* Oxford: Oxford University Press.

Partridge, E. (1935). *Slang today and yesterday.* London: Routledge & Kegan Paul.

Pawley, A., & Syder, F. H. (1983). Two puzzles for linguistic theory: Nativelike selection and nativelike fluency. In J. C. Richards & R. W. Schmidt (Eds.), *Language and communication.* London: Longman Publishing Group.

Roberts, M. H. (1944). The science of idiom: A method of inquiry into the cognitive

design of language. *Modern Language Association of America, 69*, 291-306.
Smith, L. P. (1925). *Words and idioms*. London: Constable.
Strässler, J. (1982). *Idioms in English: A pragmatic analysis*. Tübingen, Germany: Gunter Narr Verlag.
Swinney, D. A., & Cutler, A. (1979). The access and processing of idiomatic expressions. *Journal of Verbal Learning and Verbal Behavior, 18,* 523-534.
Thatcher, V. S., & McQueen, A. (Eds.) (1980). *The new Webster's encyclopedic dictionary of the English language*. New York, NY: Avenel Books.
Titone, D. A. (1994). Descriptive norms for 171 idiomatic expressions: Familiarity, compositionality, predictability, and literality. *Metaphor and Symbolic Activity, 9* (4), 247-270.
Van de Voort, M. E. C., & Vonk, W. (1995). You don't die immediately when you kick an empty bucket: A processing view on semantic and syntactic characteristics of idioms. In M. Everart, E. van der Linden, A. Schenk & R. Schreuder (Eds.), *Idioms: Structural and psychological perspectives* (pp. 283-299). Hillsdale, NJ: Erlbaum.
Weinreich, U. (1969). Problems in the analysis of idioms. In J. Puhvel (Ed.), *The substance and structure of language* (pp. 23-81). Berkeley, CA: University of California Press.
Wong-Fillmore, L. (1976). *The second time around*. Unpublished doctoral dissertation, Stanford University, CA.

John I. Liontas (Ph.D., Second Language Acquisition and Teaching and Program Administration, University of Arizona) is Assistant Professor of German and Director of the German Language Program at the University of Notre Dame, performing research and development in second language teaching methodology, figurative competence, pragmatics, curriculum and program design, and multimedia-based learning. He has a long-standing interest in idiomaticity and in its application in the second language classroom. He is presently involved in the design and production of a multimedia computer software for learning idioms called *That's All Greek to Me!* He has published textbooks and articles in the area of curriculum design and development, on writing and reading, on idiomaticity, on technology-based language instruction, and on interactive games and game approaches. E-mail: jliontas@nd.edu