

THAT'S ALL GREEK TO ME!

THE COMPREHENSION AND INTERPRETATION OF MODERN GREEK PHRASAL IDIOMS

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Abstract

Idioms are omnipresent in the world's languages. Despite their pervasiveness, idioms are often a stumbling block to second and foreign language learners. Helping learners to progress from the literal to the metaphoric meaning of a phrasal idiom is a challenge. This pilot study takes this challenge as its starting point, presents recent investigations in idiomatic language processing, and advances new foci of research for the comprehension and interpretation of phrasal idioms. Findings reveal that the issue of reading strategies for comprehending and interpreting idioms in second languages looms as an important topic deserving serious attention in linguistic/psychological discussions and instructional practices and that a detailed consideration of them in future SLA idiom research is both feasible and necessary. It is concluded that the development of idiomatic competence can be enhanced by establishing the parameters of the comprehension and interpretation process of L2 phrasal idioms, including determining how lexical and idiomatic mappings are developed between L2 and L1 phrasal idioms, understanding how phrasal idioms are mentally represented and accessed across several second languages and, finally, prescribing specific pedagogical activities for mastering phrasal idioms in the four language skills (listening, reading, writing, and speaking).

All languages in the world make frequent use of idiomatic expressions, most of which have sociocultural, historical, or political origins. Although many similar expressions can be found across languages, many more do not coincide exactly in their linguistic or semantic meaning and use. At the same time idioms are often a stumbling block to second/foreign language and ESL students. With regard to the Greek language and culture, however, there are very few idioms in English and Modern Greek that have the exact same meaning and use. It is therefore of great interest to compare different ways the same metaphoric idea is expressed in these two languages.

This pilot study investigates the underlying cognitive-psycholinguistic reading processes and phenomena by which learners of Modern Greek attach meaning and come to understand cultural idiomatic expressions in authentic reading texts of Greek literature. It presents recent investigations in idiomatic language processing and advances new foci of research for the comprehension and interpretation of phrasal idioms. It is hoped that the results of this research will be translated into effective teaching strategies and learning techniques that will ultimately affect the way second language educators and students approach phrasal idioms in the classroom setting and beyond, while also having broad implications for the development of idiomatic competence in the four language skills (listening, reading, writing, and speaking).

THEORETICAL CONSIDERATIONS

A crucial feature of human communication is the ability on the part of the hearer/reader to determine whether a speaker/writer is speaking/writing literally or nonliterally. Expressed more precisely, the *linguistic meaning* of an expression is simply the meaning(s) an expression has semantically in the culture of the people who speak that language. In contrast, the *speaker/writer meaning* can differ, and often does differ in its communicative intent from the linguistic meaning, depending on whether the speaker is speaking/writing *literally* or *nonliterally* (i.e., figuratively/metaphorically). It can be argued then that when learners of a second or foreign language read or hear a word or a cluster of words as, for example, in the Greek idiomatic expression “του βάζω τα δυο πόδια σ’ ένα παπούτσι [lit. to put someone’s two feet into one shoe; fig. to have someone wrapped around one’s little finger],” they access all its possible meanings in the absence of context precisely because out of context there is access to an extensive list of meanings. However, since language learners neither read nor hear words in isolation, it becomes imperative to see whether context plays a role in the comprehension and interpretation of L2 idioms. Intuitively then, it can be argued further, context should prevent access of irrelevant meanings.

The primary purpose of this pilot study is to describe the mental processes of perceiving and understanding cultural idiomatic expressions in Modern Greek. More specifically, the study tries to quantify the amount of information necessary for meaning-mapping processes between a percept and some stored representation. Thus, it places major emphasis on how learners of Modern Greek access a cluster of words within a speech stream; that is, what is involved in word recognition (written stimuli). An important secondary purpose, however, is to explore the extent to which context can account for observed changes in idiom understanding, i.e., how context affects idiom comprehension and how idiom interpretation during contextualized reading is taking place. Three general questions that remain largely unexplored in SLA theory and research guide the focus of this exploratory inquiry:

- What kind of reading strategies and pragmatic principles of communication do learners of Modern Greek use in searching for an idiomatic phrase and what cognitive-psycholinguistic processes do they employ when examining modification (or extension) of the semantic meaning of already existing words?
- What are the semantic and/or pragmatic constraints that surround the comprehension and interpretation of Modern Greek phrasal idioms when such idioms are presented in and out of context?
- Will context affect positively the way learners of Modern Greek understand phrasal idioms when such idioms are presented with the context that supports their interpretation?

Given the framework of the above inquiry, this study deals primarily with the strategic inferences (i.e., the reading strategies and pragmatic features) that are likely to govern and characterize the comprehension and interpretation process of 47 Greek phrasal idioms during contextualized and acontextualized reading. For the purposes of this discussion, a *phrasal idiom* can be defined as a complex lexical unit whose idiomatic meaning is not equal to the literal meaning of the sum of its parts. In this sense, the “literal meaning” of the phrasal idiom, whenever available, usually has little or nothing to do with the idiomatic meaning. To attempt a syntactic decomposition of a phrasal idiom generally means to lose its idiomatic meaning. This pilot study concerns itself only with such phrasal idioms. Representative examples of such Greek phrasal idioms are given in Table 1.

Table 1. Examples of Greek phrasal idioms

GREEK PHRASAL IDIOM	LITERAL TRANSLATION	EQUIVALENT ENGLISH IDIOM
με τρώει φίδι κολοβό	a snake is eating me	to sit on pins and needles
δίνω τα μαλλιά της κεφαλής μου	I give the hair from my head	to give the shirt from one's back
ζητώ ψύλλους στ' άχυρα	I look for lice in the hay	to look for a needle in a haystack
καρφί δε μου καίγεται	no nail is burning	to not turn a hair, not pay a dime
του βάζω ψύλλους στ' αυτιά	I put lice into his ears	to smell a rat
βάζω όλα τα αυγά σ' ένα καλάθι	I put all the eggs in one basket	to put all the eggs in one basket
βράζουμε όλοι σ' ένα καζάνι	we all boil in one kettle	to be in the same boat
παίρνω τον κακό δρόμο	I take the bad road	to go to the dogs
χτυπάει το κεφάλι του τώρα	he is hitting his head now	to repent, to be very sorry
μετρημένα είναι τα ψωμιά του	his loafs of bread are numbered	to have one's days numbered
δεν τρώω άχυρα	I don't eat hay	to be smart, quick-witted
χάνω τα νερά μου	I lose my water	to lose one's bearings
τρώω ψωμί και αλάτι με αυτόν	I eat bread and salt with him	to be old friends
κάνω μια τρύπα στο νερό	I make a hole in the water	to dig a well in the river
τον αφήνω με το δάχτυλο στο στόμα	I leave him with the finger in the mouth	to leave someone flabbergasted
με το τσιγγέλι του παίρνω τα λόγια	I take the words out of his mouth with a fishing hook	it is like pulling teeth (from a mule)

THE PROCESS OF IDIOM UNDERSTANDING IN SECOND LANGUAGES

During the last 15 or 20 years a number of psycholinguistic studies have been dedicated to the L1 comprehension and interpretation process of idiomatic expressions. Virtually all psycholinguistic studies of idioms (Bobrow & Bell, 1973; Gibbs, 1984; Lakoff & Johnson, 1980; Ortony, Schallert, Reynolds, & Antos, 1978; Stock & Ortony, 1993; Swinney & Cuttler, 1979) have been concerned with such questions as: Does the reader or listener retrieve both the literal and the idiomatic

meaning of an expression or only the idiomatic? If the former, which of the two meanings is computed first?

The questions above presuppose both a familiarity and a prior acquisition and storage of idiomatic expressions in one's mental lexicon. This in turn makes the access, retrieval, and literal/idiomatic computation of such lexemic units possible. Since this pilot study is being carried out exclusively for and with second language learners, these two questions are ignored. Instead, the question that needs to be asked here is not which of the two meanings will the L2 learner access and retrieve first—the literal or the idiomatic meaning—but can the L2 learner locate a phrasal idiom in an authentic cultural text and, if so, how does s/he come to comprehend and interpret it when its literal meaning makes no sense?

Before introducing some experimental work, a few underlying hypotheses about the process of idiom understanding in second languages are proposed. These original hypotheses proposed by this author have guided the individual experiments discussed next in this article.

The Hypotheses

Idiom-matching Hypothesis. If an L2 expression already exists in the learner's native language (L1), the learner will attempt to assign meaning to the L2 expression by referring first to the lexical entries in his L1 (or L3, L4, etc.) mental lexicon. Upon a one-to-one match between the L1 and L2 expression, the learner will then assign meaning to the L2 idiomatic expression. In other words, the learner will make use of his bottom-up processing skills first before assigning meaning to an L2 expression. Transfer of knowledge from L2 to L1 and vice versa is strongly anticipated.

Non-matching Idiom Hypothesis. If an L2 expression does *not* exist in the learner's native language, or even if it exists, but is embedded in a totally different thought pattern or image, the learner, after having accessed and found one or more entries in the L1 (or L3, L4, etc.) mental lexicon, will come to rely primarily on contextual cues, e.g., semantic, syntactic, pragmatic, and the like, and draw upon his own 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 bottom-up processing skills, and upon semantic hindrance or ambiguity, he will then attempt to feed back down (top-down processing) to his existing lexicon by solidifying his interpretation(s) of the L2 idiomatic expression on the greater contextual framework for that particular expression.

THE STUDY

The research study presented here was conducted in a second-year Modern Greek class at the University of Arizona during Spring 1997. Eleven third-semester student volunteers (the entire class) of Modern Greek comprised the initial study group. In order to tap into their meaning-assigning processes, participants were asked to engage in a variety of reading tasks ranging from idiom detection to full-context interpretation (Experiments 2, 3, and 4). The participants were also asked

to describe as thoughtfully as possible their affective state during task performance. Prior to conducting these experiments, native speakers of Modern Greek were asked to rate frequently used phrasal idioms (Experiment 1).

EXPERIMENT 1: *Rating Phrasal Idioms*

The purpose of Experiment 1 was to select a wide corpus of Greek phrasal idioms that native speakers of Modern Greek believe to be frequently used in everyday communication. As such, it included a rating experiment designed to obtain information about idiom familiarity and frequency for a large number of idiomatic phrases.

Method

Material. Eight hundred and eight Greek idiomatic phrases taken from authentic texts and various works of contemporary Greek literature were chosen as the base material for this experiment. They were submitted in a 22-page booklet to a total of 13 participants, with the request to perform a *Familiarity Rating Task*.

Participants and Procedures. Experiment 1 was carried out with 13 native Greek speakers (6 female, 7 male) currently studying at the University of Arizona. The subject-selection criteria of these participants were kept intentionally broad in order to ensure a wide representation of Greece's geographic mainland and island regions. The mean age was 24 years, and all had come to the United States within a year prior to this study. Using a scale that ranged from 1 ("very frequently used") to 6 ("don't know the idiom"), participants were asked to estimate the frequency use of a given idiom in the Greek language and culture. This rank-ordered procedure yielded for each idiom an average "subjective frequency" or "familiarity" rating obtained from all participants.

Reports. The ratings provided a number of details about the frequency of an idiom in the Greek language and culture, which were then used as the basis for the following three experiments. Only those 146 idioms that obtained a "very frequently used" rating of 1 (i.e., 18 percent of the total base material) were included for use in the subsequent analysis.

EXPERIMENT 2: *Detecting Phrasal Idioms in Paragraphs and Dialogs*

What kind of reading strategies and pragmatic principles of communication do learners of Modern Greek use in searching for an idiomatic phrase and what cognitive-psycholinguistic processes do they employ when examining modification (or extension) of the semantic meaning of already existing words? This research question was addressed by Experiment 2, which investigated how L2 learners identify and understand idioms in authentic texts of literature and what contextual reading cues and principles of communication they use in searching for an idiomatic phrase.

Method

Material. Eighteen paragraphs (three to six sentences in length) and 13 dialogs (two to seven interactional exchanges) containing idiomatic expressions, chosen at random from the list of 146 phrasal idioms rated ‘1’ (i.e., 21 percent of the remaining base material) as determined in Experiment 1, constituted the material of this experiment. The text excerpts containing the 31 phrasal idioms were printed on a 7-page booklet with appropriate space for participants to provide an answer. Across the experimental texts, the length of the materials varied from three to six sentences (21 to 59 words) and from two to seven dialog (27 to 73 words) exchanges. The order and length of the text excerpts in the booklet was varied to ensure randomization of the material. Two examples of such text excerpts used in this Idiom Detection Task (IDT) experiment are shown in Table 2.

Table 2. Two examples of actual texts used in the IDT

GREEK IDIOMATIC TEXT	ENGLISH EQUIVALENT IDIOMATIC TEXT
<p>Text 1 Ως την ώρα εκείνη ήταν πολύ ψύχραιμος και απαντούσε πολύ άνετα στον ανακριτή. Μόλις, όμως, ο ανακριτής του απόδειξε ότι το αλλοθί του ήταν ψεύτικο, άρχισε να μπερδεύει τα λόγια του και ν’ αλλάζει χρώμα από την ταραχή του. Ήξερε πια καλά ότι δεν μπορούσε να κρυφτεί.</p>	<p>Text 1 Until that time he was very calm and answered the prosecutor’s questions with ease. However, as soon as the prosecutor proved to him that his alibi was fake, he began to confuse his words and to change his tune to the story from his uneasiness. He knew well that he could no longer hide.</p>
<p>Text 2 A – Του δημιούργισες μεγάλη φασαρία μ’ αυτά που είπες στο διευθυντή του. B – Δεν το έκανα σκόπιμα. A – Το ξέρω, αλλά εσύ είσαι η αιτία για τα προβλήματά του. Του άναψες μεγάλη φωτιά. B – Πραγματικά δεν το ήθελα, όμως δεν μπορούσα να κρύψω την αλήθεια.</p>	<p>Text 2 A – You caused him much trouble with what you said to his boss. B – I didn’t do it on purpose. A – I know, but you are the root of his problems. You added fuel to the fire. B – Honestly, I didn’t want to do this, but I couldn’t hide the truth.</p>

Participants and Procedures. Eleven third-semester students of Modern Greek of the University of Arizona (6 female, 5 male) between the ages of 19 and 21 years of age served as non-paid participants in this IDT experiment. Participants were given a 7-page booklet containing the 31 idiom texts. Table 3 presents the 31 Greek phrasal idioms used in the experiment.

Table 3. List of the 31 idiomatic items examined in the IDT

NO	GREEK PHRASAL IDIOM	LITERAL TRANSLATION	EQUIVALENT ENGLISH IDIOM
1	αλλάζω χρώμα	I change color	to change one's tune (to a story)
2	ανάβω φωτιά	I start a fire	to add fuel to the fire
3	ανοίγει η γη να με καταπιεί	the earth opens up to swallow me	I wish the earth would open up and swallow me
4	του ανοίγω την καρδιά μου	I open my heart	to open one's heart to someone
5	πιάνω πουλιά στον αέρα	I catch birds while on flight	to be very clever, quick-witted
6	μένω στον τόπο	I stay on the spot	to kick the bucket, to die
7	βάζω φερμουάρ	I put a zipper on	to put a lid on things
8	από πού βαστάει η σκούφια μου	from where my hat holds	I come from
9	του αλλάζω τα φώτα	I change his lights	to drive someone crazy
10	γίνεται η ζωή μου Μεγάλη Εβδομάδα	my life becomes Holy Week	to torment one's life
11	είμαι το δεξί του χέρι	I am his right hand	to be someone's right hand
12	είμαι καρφί στο μάτι του	I am a nail in his eye	to be a thorn on someone's side
13	είμαι στα μαχαίρια	I am (fighting) with knives	I am at daggers drawn
14	είμαι όλος αυτιά	I am all ears	to be all ears
15	του βάζω τα δυο πόδια σ' ένα παπούτσι	I put his two feet into one shoe	to have someone wrapped around one's little finger
16	τον έχω στο χέρι	I have him in my hand	to have someone in the palm of your hand
17	κάθομαι στο κεφάλι του	I sit on his head	to put pressure on someone
18	κάνω το πρώτο βήμα	I make the first step	to make the first step
19	μ' αυτό το πλευρό να κοιμάσαι	keep on sleeping on that side	Keep on dreaming!
20	έμεινα με το στόμα ανοιχτό	I was left with the mouth open	I was stupefied
21	μιλάω στον αέρα	I talk to the air	to talk to the wind
22	πνίγομαι σε μια κουταλιά νερό	I drown in a spoon of water	to become easily unsettled
23	ρίχνω στο λάδι φωτιά	I throw oil to the fire	to add fuel to the fire
24	εγώ δε χάφτω μύγες	I don't eat flies	to be smart, quick-witted
25	βάζω τη μύτη μου παντού	I put my nose everywhere	to put one's nose everywhere
26	χτύπα ξύλο	knock on wood	Knock on wood!
27	στον ουρανό σε ψάχνω, στη γη σε βρίσκω	I look for you in the sky and find you on earth	to look for someone in all the wrong places
28	κάθομαι σ' αναμμένα κάρβουνα	I sit on burning coals	to sit on pins and needles
29	κολυμπάω στο χρήμα	I swim in money	to roll in money
30	τον παίζω στα δάχτυλά μου	I play him in my fingers	to do with someone as one pleases
31	του ψήνω το ψάρι στα χείλη	I fry the fish on his lips	to torment someone

Participants were tested in two 50-minute sessions. Each participant was presented with a practice trial containing 5 items not used in the actual experiment, followed by a total of 31 experimental items. Participants reported feeling comfortable with the identification procedure after this much practice. Following the practice session, each participant was instructed to underline within the body of the text the words or entire sentence that constituted the idiomatic expression in each text. Once the participants had reached a decision, they had to explain why they thought the

underlined words were an idiomatic phrase. This brief written report was elicited to understand the processes and strategies that guided their selection. Participants were also encouraged to offer any additional information regarding the meaning or interpretation of the idioms. Their retrospective protocols were then analyzed in an effort to isolate the reading strategies and pragmatic principles that the participants used in producing them. It was hypothesized that L2 learners, given the appropriate context opportunity, would be able to “sense” quite successfully in a given paragraph or dialog where the phrasal idiom was “hiding,” using a number of contextual and pragmatic cues.

Classification of the Responses. The participants’ selections were evaluated first on the basis of their correctness, which reached the seventieth percentile. The retrospective protocols were then classified on the basis of the recurring thematic units present in the responses of the participants, resulting in a number of conceptual categories created by the researcher (and tested for reliability and validity considerations by another native-speaker rater) while sorting the responses into units of information. These units were then pooled, classified into general categories and given one single representative label and, finally, quantified in percentage terms of each category against all responses in a descending order. The different types of unitized categories as well as the results of Experiment 2 are summarized in Table 4 and graphically in Figures 1 and 2. The table captures information on an individual’s choice of contextual aids. The number of instances this particular category was mentioned in a participant’s response follows each category. The numeric values under the headings “Group” and “Success Rate” are expressed in percentage terms. The former indicates the overall average percentage proportion each category occupies within all other conceptual categories, whereas the latter refers to the average group and individual performance score for Experiment 2.

Table 4. IDT data

THEMATIC UNIT	JK	JP	SS	ES	VS	AL	SK	GP	SB	IT	ES	GROUP
Literal meaning does not make sense	24	28	10	7	7	42	25	50	27	25	17	23.81%
Translation	19	28	7	9	14	21	25	20	12	18	14	17.00%
Word arrangement		9	17	52		16	25		7			11.45%
Prior knowledge	26	14	10	3	14	11			12	7		8.81%
Context	15	9	24	3	21					14	3	8.09%
No information	3	9	1	4	15	8	15	7	12	11	1	7.81%
Image too fantastic	7		10	6				10	12	14	24	7.54%
Sounds/Feels like	6		2	15	8	6	12		11		4	5.81%
Metaphorical			3			6		9			24	3.81%
It stands out/Seems	3	4			6	5	12		3			3.00%
Description	3	8	2					13				2.36%
Idioms identified (n)	27	22	29	27	14	19	8	10	25	28	29	22
Success Rate (%)	87	71	94	87	45	61	26	32	81	90	94	70.09

Figure 1. IDT success rate

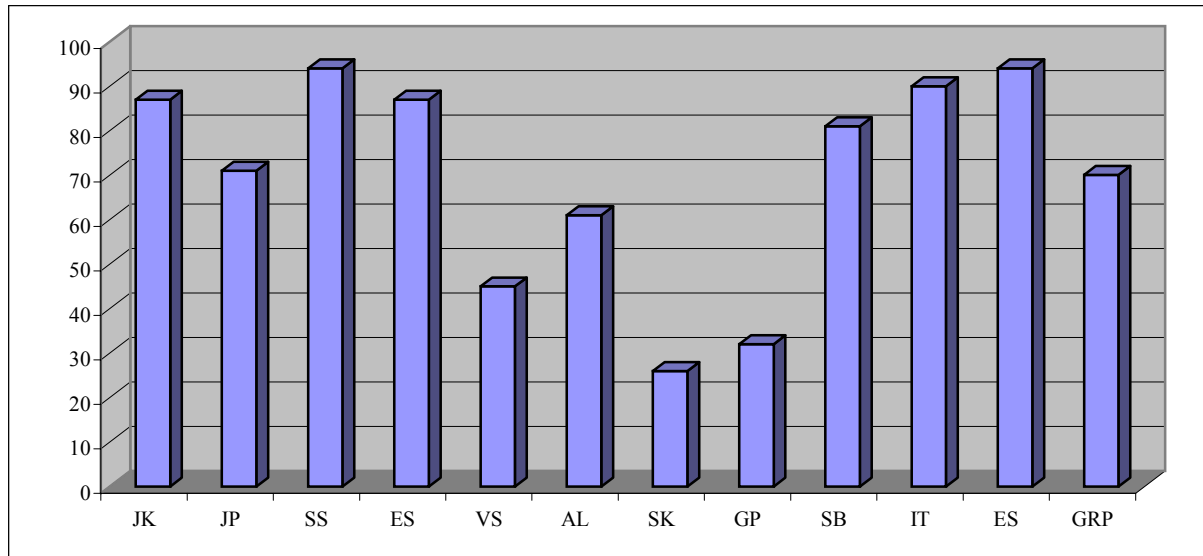
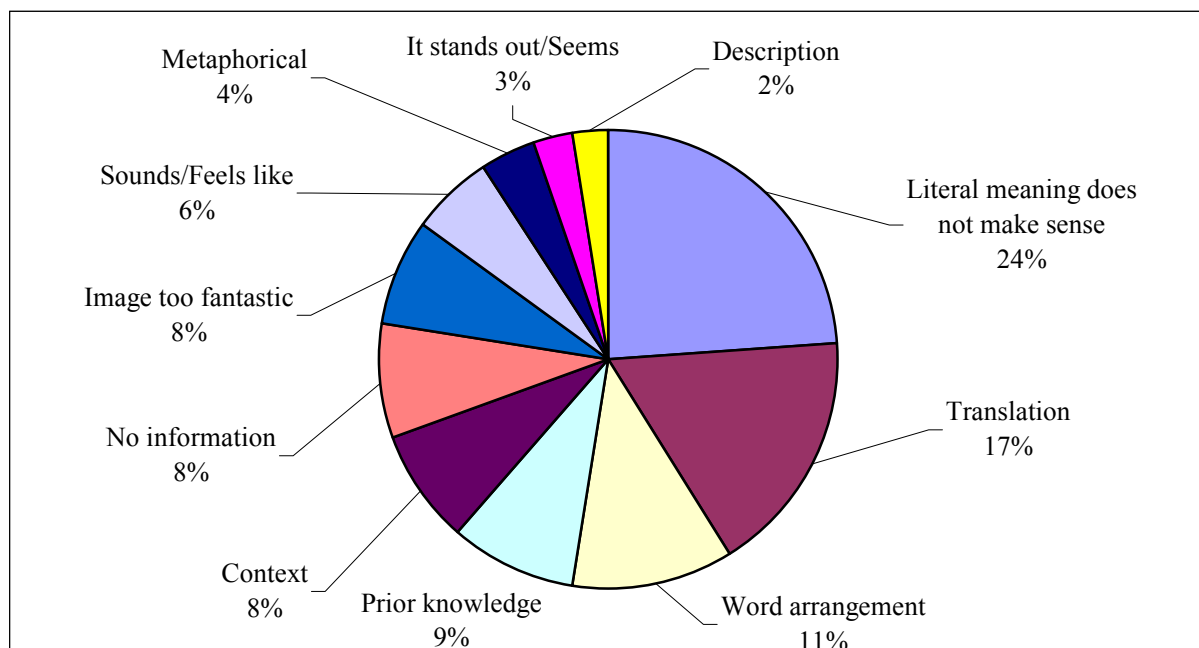


Figure 2: Summary of IDT Strategies

Results and Discussion

The data presented in Table 4 clearly demonstrate that L2 learners are capable of identifying quite successfully phrasal idioms embedded in authentic paragraphs and dialogs, using a variety of reading strategies and pragmatic principles of communication. The number of idioms detected correctly ranged from a low of 8 to a high of 29 idioms. The group average of all idioms detected was 22 out of 31 idioms or two-thirds of all idiomatic items examined in the IDT, resulting in an overall success rate of 70.09 percent. Individually their performance ranged from a low of 26 percent to a high of 94 percent. The second point worth noting based on the data is that while there is variability among learners of Modern Greek in detecting idioms in authentic texts of Greek literature, the majority of them employed predominately the literal meaning of the idiom (23.81 percent), their translation skills from L2 to L1 and vice versa (17 percent), the syntactic and semantic arrangement of the lexical unit (11.45), their prior knowledge of the functions of idioms in context (8.81 percent), and, finally, the context surrounding the phrasal idiom (8.09 percent) as their main guide in reaching a decision.

Of greatest interest in the present context is the observation that these five reading strategies alone account for more than three times of all reader activity than the remaining five strategies (excluding the “No information” category) listed in Table 4. The combined reader activity observed is 69.16 percent and 22.52 percent respectively. A representative sample of the participants’ reading

strategies and inferencing techniques used and metacognitive comments made in support of such analyses is given in Table 5 below. (For a more complete profile of their reading strategies and inferencing techniques used in this task, see Appendix A.)

Table 5. Representative strategies used and metacognitive comments made in the IDT

STRATEGY	SUPPORTING METACOGNITIVE COMMENT
Literal meaning does not make sense	I picked this because literally it did not belong with the rest of the context. Another clue is the word ‘μύτη’ [nose], because often body parts, or irrelevant objects are used in the expressions. By irrelevant objects I mean those that do not fit in the context.
Translation	Because the translation ‘had put two feet in one shoe’ is figurative. Also, it comes at the end, which is an indicator because the speaker is more likely to sum up the whole situation with an appropriate quote.
Word arrangement	The position and words lead me to believe this is the expression.
Prior knowledge	We have a similar expression in English: <i>Adding fuel to the fire</i> .
Context	I chose this because of context. It comes after the exclamation ‘πως’ [how], so it would be logical for an idiomatic expression to follow in order to emphasize the speaker’s emotion.
Image too fantastic	It points to an image in my mind of things shooting out. Because the literal meaning is too fantastic.
Metaphorical	I picked this because it seems figurative. Also, it comes at the end of the paragraph, so it can be used to comment on the situation.
Sounds/Feels like	It sounds like an idiomatic expression. It just feels right... drowning in a spoon of water: Πνίγεται σε μια κουταλιά νερό.
It stands out/ Seems like an idiom	I picked this phrase because it seemed like it could be classified as an idiomatic expression. For example, it mentions the word ‘eye’, which has nothing to do with the rest of the context, so the phrase seems abstract.
Description	Figurative phrase because the speaker is obviously not dead but emphasizing his emotions for the flashback. Also came at the end of passage.

While the list of strategies uncovered in the IDT is by no means exhaustive, nevertheless, the emerging reading pattern is important in that it seems to suggest that learner variability is systematic in the ways in which L2 learners overcome processing constraints, reflecting their overall orientation to the comprehension and interpretation process of phrasal idioms. Analysis of participants’ post-task evaluations revealed similar results. Participants’ responses ranged from a sense of accomplishment to complete frustration. In particular, a great many of them expressed their frustration with the vocabulary and the passages, while others pointed to the positive challenges of the total experience. The following are some representative points of view from selected class participants. Seven of the eleven participants gave permission to use their qualitative data and all quotes are used here with their explicit permission. To protect their anonymity, initials and any other identifying details have been changed.

JK: Context helped my comprehension a lot. It helped me understand the meanings a little better and gave me a better idea of what they were trying to say.

SK: The majority of the time that I spent performing the task was spent on deciphering the Greek. I wasn't familiar with nearly enough vocabulary to complete many of the passages. My decisions to cite idiomatic expressions were based more on intuition and inference, as well as clues in sentence structure and general context, than on a complete understanding of the Greek. At the beginning, I felt overwhelmed by all of the Greek that I did not know.

SS: It was hard for me to explain why they were expressions. I knew they were because they were sarcastic or had some humor in them. In some cases the word arrangements were a bit awkward and that gave it away. I was frustrated because I could not pinpoint why I felt they were expressions, I just knew.

ES: During the task, I felt good when I found an expression. I had some difficulties when I didn't know what a word meant. I felt discouraged when I couldn't find an expression. It challenged me to realize how important comprehending phrases really is. It challenged me to read the sentences over and over again.

VS: The expressions themselves were good, but I had trouble understanding the vocabulary on some of them. The task challenged my comprehension process. I felt upset because I could not figure out what made the expression in most of the phrases given. I would have done better if I understood the vocabulary.

IT: The ones I didn't know could be detected simply by the surrounding context, the topic of the paragraph. Any phrase that seemed off base was likely to be an idiomatic expression.

JP: The most challenging part of the task was understanding all that was said in the excerpts, which contained idiomatic expressions. Many times I would understand one sentence but not the next. Another problem arose when I did recognize a phrase. Sometimes I couldn't explain well enough why I knew that it was an idiomatic expression, and very often I did not know what it meant or said.

Upon closer scrutiny, it becomes clear that a major obstacle in the accomplishment of the IDT was lack of a familiarity with vocabulary. This is particularly true for those students who felt they were weak in this area or had limited vocabulary, leading, not surprisingly, to feelings of discouragement and frustration. In this context, it must be noted that many of them did manage to see through such feelings and allowed the surrounding context to come to their aid and understanding of the idiomatic expression by employing specific contextual strategies and schematic inferences.

Using for the most part the "literal meaning of the idiom," "translation," and "word arrangement and placement" in the text, the participants of this idiom detection experiment were in most cases capable of selecting the correct phrasal unit. The fact that a great many phrasal idioms were identified successfully (22 out of 31) suggests that learners of Modern Greek are capable of using many kinds of reading strategies: forward inferencing; schema accommodation, assimilation, and adaptation; process of elimination; and contextual lexical, grammatical, and syntactic cues to

name but the most important ones, in order to describe strategies such as improbability, literal translation, word arrangement and placement in text, context, and fantastic/metaphorical images. These findings have interesting theoretical and pedagogical ramifications. However, a full understanding of all the factors (i.e., word and idiom recognition, lexical access and retrieval, prior background and world knowledge, formal schemata, and strategy use) which govern the processing, comprehension, and interpretation of phrasal idioms while reading authentic texts, will have to await additional experimentation before plausible theory-driven arguments can be made in the field of second language acquisition and applied solutions to classroom teaching practices suggested.

In sum, the results of Experiment 2, coupled with the many valuable insights gained from the participants' retrospective accounts and post-task evaluations, provided ample evidence that L2 learners do compute literal and idiomatic meanings separately, yielding two alternative interpretations. The "idiomatic" sense becomes available *only* after the literal interpretation has been considered and rejected. Beyond that, the insightful answers participants offered in this experiment illuminate the many challenges learners of Modern Greek encounter when attempting to capture the meaning of a phrasal idiom as well as their affective state of learning during the process of idiom identification and understanding. Even more importantly, their retrospective protocols revealed that they are indeed much more sophisticated linguistically and strategically than surmised by their instructors. In light of the findings of Experiment 2, one final general question of interest concerns whether the same pattern of idiom strategizing is also observed in participants from a variety of second languages before it can be concluded definitively that there is a universal *modus operandi* in identifying and understanding phrasal idioms.

EXPERIMENT 3: *Understanding Phrasal Idioms in Zero Context*

If L1 idiomatic phrases are stored in memory as multiword lexical units, as Bobrow and Bell's (1973) *idiom list hypothesis* claims, also known as the *literal first hypothesis*, then analysis of the phrasal unit should not be necessary for comprehending the idiom. Experiment 3 tested the assumption that for second language learners analysis of a phrasal idiom, when presented without a supporting context, is an obligatory, automatic process. If a phrasal idiom is recognized at an early point because of the one-to-one translation match of single lexemes between the Modern Greek and English idiom, as the proposed *Idiom-matching Hypothesis* predicts, further analysis of the L2 idiomatic phrase will be, in principle, no longer necessary in order to understand the metaphoric meaning of the phrase. Conversely, a non-matching phrasal idiom could be understood, if at all, only after a full linguistic

analysis, i.e., a combined phonological, syntactic, and semantic analysis. To be clear, understanding of matching idioms will require minimum processing effort on the part of the learner whereas non-matching idioms will require additional mental processing beyond mere translation of the lexical units that make up the phrasal idiom, leading to a lower idiom performance.

Method

Material. Sixteen entries containing idiomatic phrases constituted the material of the present Zero Context Task (ZCT) experiment. Six phrasal idioms with word-for-word counterparts in English and 10 non-matching phrasal idioms were randomly selected by the researcher from the remaining 115 idioms rated '1' (i.e., 14 percent of the final remaining base material). Table 6 presents the 16 Greek phrasal idioms chosen for Experiments 3 and 4.

Table 6. List of the 6 matching and 10 non-matching phrasal idioms used in ZCT and FCT

	GREEK PHRASAL IDIOM	LITERAL TRANSLATION	EQUIVALENT ENGLISH IDIOM
Matching Idioms	βάζω ιδέες στο κεφάλι του	I put ideas in his head	to put ideas in someone's head
	κάνω τα γλυκά μάτια	I make sweat eyes	to make sweat eyes
	τα πάνε σαν το σκύλο με τη γάτα	they go at it like a dog and a cat	to fight like cats and dogs
	δαγκώνω τη γλώσσα μου	I bite my tongue	Bite your tongue!
	το κάνω με κλειστά μάτια	I do it with eyes closed	to do it with eyes closed
	γίνομαι πετσί και κόκαλο	I become skin and bones	to become skin and bones
Non-matching Idioms	κάποιο λάκο έχει η φάβα	the trap has a hole	to smell a rat
	βγάζω λεφτά με ουρά	I earn money with a tail	to roll in money
	σκάω το μυστικό	I blow up the secret	to let the cat out of the bag
	όπως σε βλέπω και με βλέπεις	as I see you and you see me	as sure as eggs are eggs
	του ψήνω το ψάρι στα χείλη	I fry the fish on his lips	to torment someone
	κάποιος έχει γερές πλάτες	someone has strong shoulders	to pull strings
	έχει μεγάλο στομάχι	he has a big stomach	to be tolerant
	του τρώω τ' αυτιά	I eat his ears	to talk a person's ears off
	αυτός κόβει και ράβει	he cuts and sows	to pull strings
	ρίχνω στάχτη στα μάτια του	I throw ashes into his eyes	to pull the wool over one's eyes

Participants and Procedure. Seven third-semester students (4 female, 3 male) from the original group of eleven at the University of Arizona took part in the experiment as volunteer non-paid participants. All phrasal idioms were presented in their *zero context* (i.e., without supporting context), followed by three lines in which participants were asked to first define the meaning of each of the 16 phrasal idioms before providing their equivalent English idioms. It was hypothesized that lack of context would affect the way second language learners understand phrasal idioms. The evaluation consisted of matching their interpretations with the corresponding L1 idiomatic counterparts. The

idiomatic definitions given were then evaluated on a 2-point scale as (1) correctly defined and (2) incorrectly defined. The average percent values of the idioms computed over all participants gave a strong indication of the role of the *Idiom-matching Hypothesis* in computing the meaning of the 16 phrasal idioms. The summary of these results is presented in Tables 7 and 8 and graphically in Figures 3 and 4. In both tables, all data are expressed in percentage terms for both individual participants and the group as a whole. The numeric values in parentheses indicate the average number of phrasal idioms out of the 16 test items that were defined (in)correctly within each category.

Table 7. ZCT data

DEFINITIONS	JK	SK	SS	ES	VS	IT	JP	GROUP
Correctly defined	75.00 (12)	68.75 (11)	62.50 (10)	43.75 (7)	25.00 (4)	87.50 (14)	50.00 (8)	58.93 (9)
Incorrectly defined	25.00 (4)	31.25 (5)	37.50 (6)	56.25 (9)	75.00 (12)	12.50 (2)	50.00 (8)	41.07 (7)
Success Rate	75.00	68.75	62.50	43.75	25.00	87.50	50.00	58.93

Table 8. ZCT idiom type data

IDIOM TYPE	JK	SK	SS	ES	VS	IT	JP	GROUP
Matching idioms	100 (6)	83 (5)	100 (6)	100 (6)	67 (4)	100 (6)	83 (5)	90.42 (5)
Non-matching idioms	60 (6)	60 (6)	40 (4)	10 (1)	0 (0)	80 (8)	30 (3)	40.00 (4)

Figure 3. ZCT data

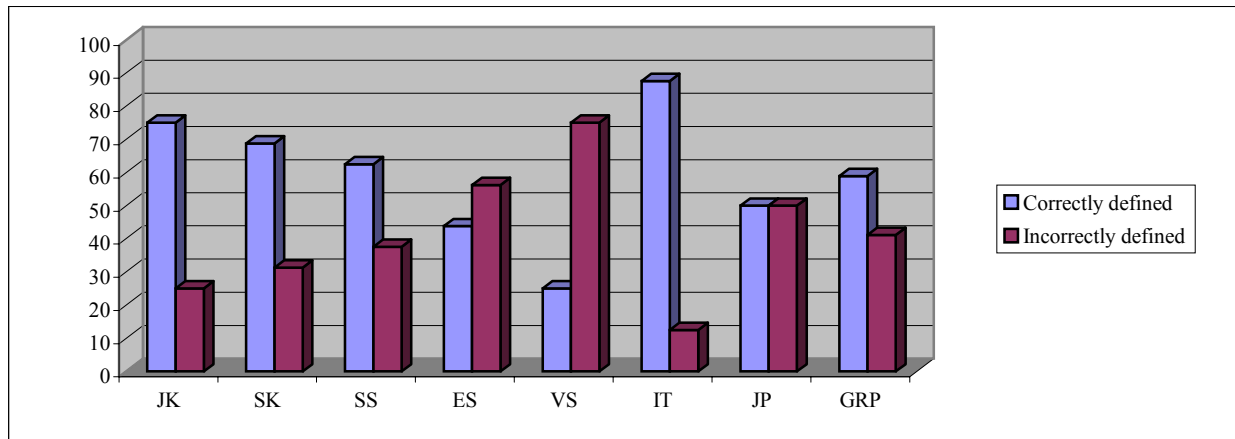
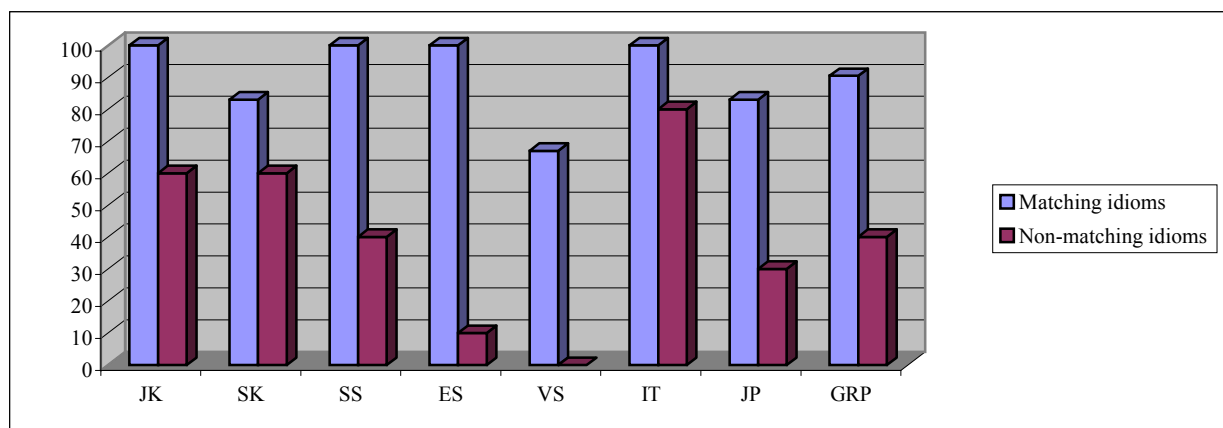


Figure 4. ZCT idiom type data

Results and Discussion

At the outset of this study it was hypothesized that the absence of context would present learners with processing constraints on the interpretation of the 16 Greek phrasal idioms and, furthermore, that it would be reasonable to expect a lower number of correct interpretations for the phrasal idioms that do not have word-for-word lexical matches. A quick scanning of the data presented in Table 7 reveals several important findings. Of the 16 phrasal idioms here examined, 7 idioms (41.07 percent) on average were incorrectly defined. The number of phrasal idioms incorrectly defined ranged from a low of 2 (12.5 percent) to a high of 12 (75 percent), whereas those that were correctly defined ranged from a low of 4 (25 percent) to a high of 12 (75 percent), resulting in an overall success rate of 58.93 percent or 9 out of 16 phrasal idioms. Individually, participants' performance ranged from a low of 25 percent to a high of 87.5 percent.

At first look, despite learner variability, the proportion of correct definitions versus incorrect definitions is higher by 17.86 percent. As seen in Table 8, however, upon closer scrutiny within the two idiom phrasal types—matching idioms and non-matching idioms—it emerges that matching idioms were correctly defined more than twice as often (a more than 2:1 ratio); while nearly all of the matching idioms were correctly defined (90.42 percent or 5 out of 6 idioms), out of the 10 non-matching idioms only 4 on average (40 percent) were found to be correct. Accordingly, the number of phrasal idioms correctly defined within each idiom type ranged from a low of 4 to a high of 6 and 0 and 8 respectively. Combined these findings suggest that matching phrasal idioms are processed much easier than non-matching phrasal idioms. On the other hand, non-matching phrasal idioms,

especially when semantically opaque, do offer some processing problems. That is, they required additional processing effort beyond mere translation of the lexical units. This is due to the need to compute first a literal and then an idiomatic representation, resulting more often than not in incorrect idiomatic definitions, interpretative hypotheses, wild guesses, and indecisions. It seems, therefore, reasonable to postulate that such idioms are comprehended in their literal sense up to the point where comprehension is no longer feasible. This, in turn, suggests that some extra computation is required beyond the comprehension of the literal meaning of a phrasal idiom.

Analysis of participants' metacognitive comments revealed similar results. The interpretation of the meaning of phrasal idioms was more successful and, according to their retrospective protocols, required less time and mental effort, when processing highly matching word-for-word phrasal idioms than non-matching phrasal idioms. Again, vocabulary appears to play a key role. Lack of any supporting context forced many participants to make use of their imagination and critical-thinking skills. Feelings ranged from anger and uneasiness to enjoyment and a sense of accomplishment. The voices of the participants support these observations and interpretations:

JK: I understood most of them, but a few of them I couldn't understand, because there were words that I didn't know what they meant.

SK: This task was more enjoyable because I felt like I knew more. Because there was no context, I think my answers resulted from a lot of imagination on my part, because I created my own contexts to make sense of the expressions.

SS: The words were very hard to comprehend and put together. The vocabulary was especially difficult. To translate the expressions it took some thought, but I wasn't comfortable with my answers.

ES: The feelings I felt during the task were anger, when I didn't understand a word. Because my comprehension of standard Greek is limited, my understanding of idiomatic expressions without context was further limited.

VS: This task was much, much harder than the first one. It was harder to determine what the phrases meant without supporting context and that made it even more difficult.

IT: The task was pretty simple on these expressions. I knew most of the vocabulary and was able to get most of the expressions.

JP: I found these expressions very hard to understand. Even when I asked for a definition of a word, I could not make sense of the sentence or relate it in any way to an English expression.

Thus, it is clear that while lack of context affects idiom performance, more than half of them (9 out of 16 idioms), generally speaking, can still be interpreted correctly, precisely because some of the phrasal idioms have a one-to-one match with their L1 counterparts. To be more precise, 6 out of the 16 phrasal idioms were matching idioms of which 5 were interpreted correctly, resulting in a 90.42

group success rate. In addition, the notion of matching and non-matching phrasal idioms as a theoretical construct also lends strong support to the results already reported in Experiment 2.

EXPERIMENT 4: *Understanding Phrasal Idioms in Full Context*

The primary question addressed by Experiment 4 was whether context would affect positively the way learners of Modern Greek understand phrasal idioms when such idioms are presented with the context that supports their interpretation. It is hypothesized that when the context constrains the idiomatic meaning, a non-matching phrasal idiom is understood considerably better than when it is isolated from its surrounding context, but is still more difficult to interpret than a matching phrasal idiom even in the presence of context with text cues supporting the idiomatic meaning. Consequently, the success rate in the *full-context* task should be higher than that of the *zero-context* task.

Method

Material. Sixteen phrasal idioms (6 matching, 10 non-matching phrasal idioms as indexed by the results of Experiment 3 previously recorded) constituted the material of the present Full Context Task (FCT) experiment. Each item containing the idiomatic expression was made up of either short paragraphs three to six sentences in length (31 to 47 words) or short dialogs consisting of one to three interactional exchanges (33 to 80 words). Four paragraphs and 12 dialogs containing the idioms reported in Experiment 3 were randomly selected. The order of presentation of the experimental items was again varied to ensure randomization of material.

Participants and Procedure. Experiment 4 used the same participants and phrasal idioms as in Experiment 3 and was conducted immediately following the conclusion of Experiment 3. However, whereas in Experiment 3 phrasal idioms were presented without supporting context, in Experiment 4 all phrasal idioms were given in their *full context*, followed by three lines in which participants were asked to define anew the meaning of each of the 16 phrasal idioms. Again, it was hypothesized that participants should be much more successful in this task than in the ZCT in deciphering the meaning of phrasal idioms, especially non-matching ones, due to the rich contextual cues present in the experimental paragraphs and dialogs. That is, participants should be able to bridge with some degree of difficulty the idiom gap between meaning and use in both Modern Greek and English. The new idiomatic definitions given were then evaluated on a 2-point scale as (1) correctly defined or (2) incorrectly defined. The data is summarized in Tables 9 and 10 below and graphically in

Figures 5 and 6. Once again, in Tables 9 and 10 all data are expressed in percentage terms for both individual participants and the group as a whole. The numeric values in parentheses indicate the average number of phrasal idioms that were defined (in)correctly within each category. Conversely, Table 11 shows the percentage increase of idiom performance (i.e., comprehension gain) from ZCT to FCT. Graphically this increase is shown in Figure 7.

Table 9. FCT data

DEFINITIONS	JK	SK	SS	ES	VS	IT	JP	GROUP
Correctly defined	87.50 (14)	81.25 (13)	81.25 (13)	87.50 (14)	75.00 (12)	93.75 (15)	75.00 (12)	83.03 (13)
Incorrectly defined	12.50 (2)	18.75 (3)	18.75 (3)	12.50 (2)	25.00 (4)	6.25 (1)	25.00 (4)	16.96 (3)
Success Rate	87.50	81.25	81.25	87.50	75.00	93.75	75.00	83.03

Table 10. FCT idiom type data

IDIOM TYPE	JK	SK	SS	ES	VS	IT	JP	GROUP
Matching idioms	100 (6)	100 (6)	100 (6)	100 (6)	100 (6)	100 (6)	100 (6)	100 (6)
Non-matching idioms	80 (8)	70 (7)	70 (7)	80 (8)	60 (6)	90 (9)	60 (6)	72.85 (7)

Table 11. Increase of idiom performance from ZCT to FCT

ZCT/FCT INCREASE	JK	SK	SS	ES	VS	IT	JP	GROUP
Matching idioms	00.00	17.00	00.00	00.00	33.00	00.00	17.00	9.58
Non-matching idioms	20.00	10.00	30.00	70.00	60.00	10.00	30.00	32.86
Comprehension Gain	12.50	12.50	18.75	43.75	50.00	6.25	25.00	24.11

Figure 5. FCT data

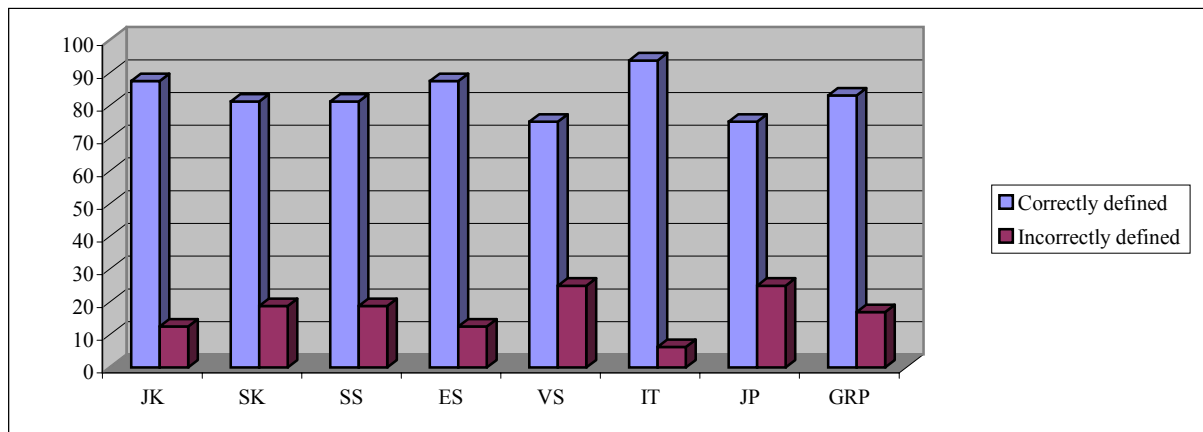


Figure 6. FCT idiom type data

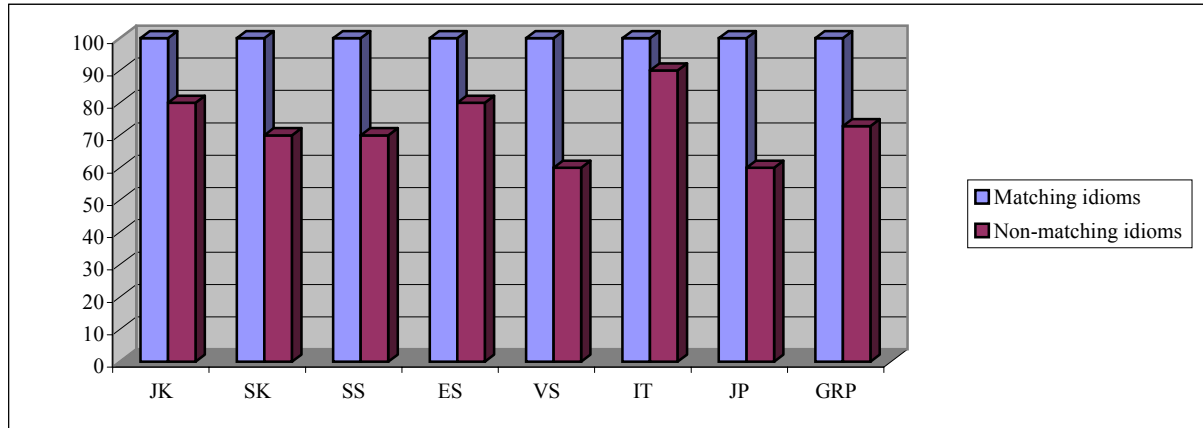
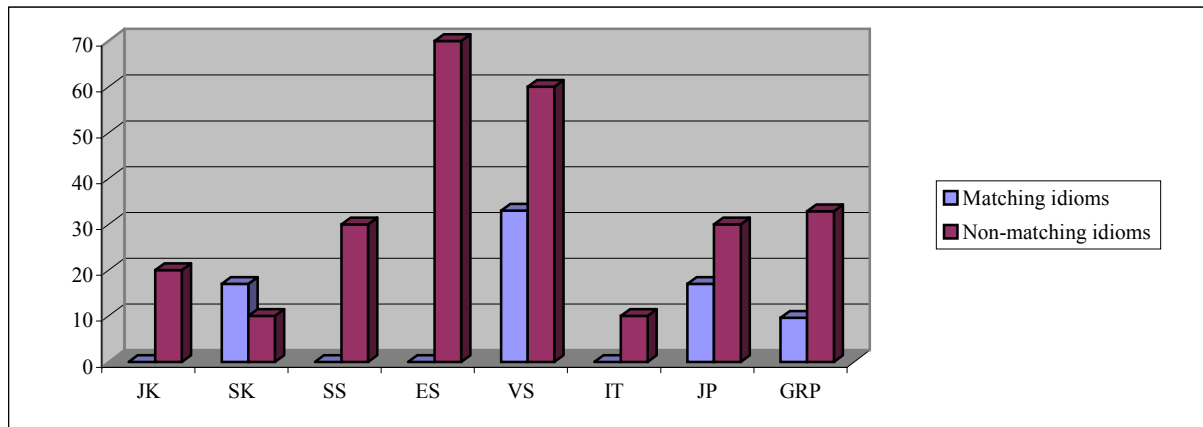


Figure 7. Increase of idiom performance from ZCT to FCT



Results and Discussion

As hypothesized, the results of Experiment 4, when juxtaposed against those obtained in Experiment 3 (see Tables 7 and 8), strongly support the argument that context positively influences the metaphorical extension of the linguistic meaning of phrasal idioms into new realms of metaphoric experiences, leading to the correct interpretation of phrasal idioms. As can be seen in Table 9, of the 16 phrasal idioms examined in context, only 3 idioms (16.96 percent) on average were incorrectly defined or 24.11 percent difference in decrease of error interpretation from the previous ZCT. The number of phrasal idioms incorrectly defined ranged from a low of 1 (6.25 percent) to a high of 4 (25 percent), whereas those that were correctly defined ranged from a low of 12 (75 percent) to a high of 14 (87.5 percent), resulting in an overall success rate of 83.03 percent or

13 out of 16 phrasal idioms. Individually, participants' performance ranged from a low of 75 percent to a high of 87.5 percent.

Upon closer inspection of the FCT idiom type data presented in Table 10, it emerges again that the participants correctly defined more matching idioms (100 percent or 6 out of 6 idioms) than non-matching idioms (72.85 percent or 7 out of 10 idioms), a result which is consistent with the *Idiom-matching Hypothesis* posited at the outset of this preliminary pilot study. Without exception, all participants showed considerable progress from the previous ZCT experiment in the comprehension and interpretation of Greek phrasal idioms (see Table 11). The increase in idiom performance (i.e., comprehension gain), when compared to the gain achieved in the ZCT, was as little as 6.25 percent and as much as 50 percent, leading to an overall increase in group performance of 24.11 percent. This increase was more pronounced with the non-matching idioms (32.86 percent) than with the matching idioms (9.58 percent) given the fact that the participants had already achieved a high level of success with such idioms in the ZCT. For two participants in particular, ES and VS, the presence of context had a profound effect, 70 and 60 percent performance increase respectively, on their non-matching phrasal idiom understanding.

As expected, none of the participants produced results that negate the importance of context for both matching and non-matching phrasal idioms. The fact that very few of the responses were incorrectly defined (16.96 percent or 3 out of 16 idioms) suggests the facilitative effect context can exert, albeit not always, on idiom understanding. Such findings clearly coincide with the author's original hypotheses made earlier in this study. Moreover, the analysis of participants' retrospective reports lend further support to the FCT findings reported here in showing that context does influence idiom comprehension and interpretation importantly.

JK: My feelings are the same. The vocabulary was difficult. Some of my answers changed from the *Zero Context Task*. I went over the passages many times, and I eventually figured out enough of it to at least attempt to answer a few of them. I was proud of that accomplishment that came as a result of my hard work.

SK: The context helped me understand the expressions because the images helped me pictured them. The first image I had during the Zero Context Task changed because reading the text helped me to picture the image of the expression.

SS: The context did not really help me much. The definitions of the words I did not know, I could not get from the texts.

ES: The context helped me to determine what the idiomatic expressions meant only if I understood most, if not all, of the words in the passage. In passages where I didn't understand many of the

surrounding words, it was much more difficult to figure out what the expressions meant, but still easier when there was no context at all.

VS: Context did really make a big difference to me. It helped me understand the full ideas of the expression.

IT: It was a little easier to determine what the idiomatic phrases meant because of the clues the surrounding syntax gave. Most of the images stayed the same, while others changed slightly, but the context definitely helped me figure out what many of the phrases I didn't know at all before meant. It was hard, however, to state the same expression in English.

JP: Context only helped me understand when I knew the vocabulary. When I would see an expression mixed in with words that I did not know, then I found it difficult to find its meaning.

It is clear from the range of opinions offered here that context *does* affect notably the decision part of the idiom comprehension and interpretation process. Upon closer inspection, however, it becomes increasingly apparent that the surrounding syntax and the idioms' literal image extension lend an equally facilitative support to the interpretation process of an idiom's metaphoric meaning. One important observation is that the range of opinions lend qualified support to the notion that during idiom understanding L2 learners make use of both bottom-up and top-down processing, since the idiomatic expressions induced them to guess, hypothesize, solve the problem, and predict the right meaning mapping. Although caution is in order, since firm facts are still scarce, the data seem mostly compatible with the *Non-matching Idiom Hypothesis*. This is not an unreasonable inference to draw, at least as an interim conclusion pending more such experiments in the future.

In sum, the participants' opinions on the importance of context for the comprehension and interpretation of phrasal idioms is theoretically interesting because they reveal a host of other issues surrounding idiom understanding for SLA theory and practice. A recurring theme that emerges from their insights is the key role vocabulary plays in understanding authentic literary texts and the phrasal idioms contained in them. As such, it underscores the importance of language teachers to maximize opportunities for learners to expand upon the vocabulary base, including their figurative knowledge of idioms, proverbs, metaphors, and similes. For present purposes, however, the important result is that Greek phrasal idioms, especially non-matching phrasal idioms, are best understood when presented in a contextual framework that supports their interpretation.

GENERAL DISCUSSION

The aim of this pilot study was to determine the reading strategies and pragmatic features that are likely to govern and characterize the comprehension and interpretation process of Greek phrasal

idioms during contextualized and acontextualized reading. That is, how second language learners locate idioms in authentic texts, what they do with idioms once they encounter them, how they go about constructing idiomatic meaning and, finally, on what textual cues or principles of communication they base their pragmatic and semantic interpretations regarding the meaning of a phrasal idiom. Using descriptive statistics (percentages) and qualitative data (participants' supporting metacognitive comments), the experiments presented in this study investigated such inferences about predictable and unpredictable idiomatic expressions and the conditions under which these inferences can be observed, catalogued, and analyzed.

As suggested by the data, whether a reader makes a successful inference (i.e., graphophonic, semantic, cultural, pragmatic, etc.) or not depends both on how closely an L2 idiom matches its L1 counterpart and on the condition of encoding (in-context or out-of-context) for that particular inference. More specifically, in Experiments 2 and 4 the evidence strongly suggests that the process of constructing idiomatic meaning does not proceed uninfluenced by context. That is, idiom understanding involves more than simply recognizing a lexemic string as an idiom; it implies the syntactic and semantic processing and metaphorical extension of the lexemes forming the idiom, which can then be used concomitantly with the surrounding context to generate further interpretations. For some idioms, the internal semantics of the idiom and the transparency of the figurative structure can play a relevant role both in comprehension and in discourse use.

Said another way, the individual lexemes comprising the L2 idiom, if known, do contribute to the overall meaning of the idiom itself in that their interpretation makes clear to second language learners that the sum meaning of the parts composing the lexical unit cannot be taken either seriously or literally. It is precisely this syntactic and lexical/semantic analysis that allows L2 learners to engage in what can be characterized, based on the participants' canny commentary cited in this study, as transcending moments of "image creation." While the idiomatic meaning is not directly stipulated in their mental lexicon, as is the case with L1 learners (this is argued in many of the L1 psycholinguistic studies cited at the outset of this article), it can be nonetheless discovered. More often than not participants were guided by the surrounding context to build up a new entry in their mental lexicon.

Taken together, these observations support the notion that context considerably affects the decision part of the comprehension and interpretation process. The results of Experiments 2 and 4 confirm the author's hypotheses made earlier, namely that contextual, syntactic, and semantic cues, all working together within the organizing principle of pragmatics allow second language learners to

go beyond the literal meaning of a phrasal idiom. It is, therefore, logical to postulate that when context constrains the idiomatic meaning, a phrasal idiom is understood significantly better than when such an idiom is presented in isolation and, even more importantly, that L2 learners are able to deal successfully with the semantic make up of a phrasal idiom, i.e., the underlying metaphorical relationship between individual lexemes. This extension and modification of meaning, from the *linguistic meaning* expressed to the *speaker/writer meaning* intended, whenever successful, becomes part of the conventional linguistic meaning of the lexemes composing the idiom phrase since the “meaning” of an expression is always determined by its sociocultural context and use in the language community. Moreover, the data obtained in Experiment 3 provide further preliminary evidence that the latter observation may well be a tenable conclusion to draw here in the absence of findings to the contrary. As seen in Table 8, highly familiar L1 idioms were recognized easily in L2 and vice versa due to their translation match from the L2 to the L1, whereas non-matching L2 idioms required additional computational work beyond mere translation of the single lexemes that make up the phrasal idiom.

It was further hypothesized that the rate of success will be much greater at the IDT (Experiment 2) and FCT (Experiment 4) than at the ZCT (Experiment 3). The data clearly show that readers of Modern Greek, not surprisingly, had more difficulty in interpreting phrasal idioms in isolation (ZCT: 58.93 percent success rate), whereas they did not seem to have any difficulty identifying them or in interpreting them within a contextual framework (IDT: 70.09 percent; FCT: 83.03 percent) given the provision that they are already familiar with the lexemes that make up the idiomatic string. It is important to underscore here that the limited number of participants available for each experiment make absolute comparisons across experiments difficult. First of all, the data for Experiment 2 and the data for Experiments 3 and 4 were derived from only a small group of 11 and 7 volunteers respectively, who may not be representative of other learners of Modern Greek. Moreover, the present findings may not generalize to other populations of L2 learners. For that, replication studies will be needed.

Finally, and most importantly, given the results obtained in Experiments 3 and 4, it is conceivable that context may stand in a reciprocal causal relationship with idiom performance. Notwithstanding such possible predictive power, it would be, nonetheless, premature to conclude from the findings presented here that context alone is the confounding variable affecting significantly the way second language learners process and come to understand phrasal idioms. One reason to question this assumption is that while there was a notable increase in idiom performance

from the ZCT to FCT (24.11 percent), there was nonetheless disparate variation among learners, none of whom reached the one hundred percentile with non-matching phrasal idioms (see Table 10). Another reason one might question the foregoing assumption is that overall group performance in FCT only reached the eighty-third percentile (Table 9), leaving seventeen percent unaccounted for. The findings of this pilot study, therefore, must be interpreted with caution. Perhaps it might be argued, by way of defense against these experimental conclusions, that a larger sample of participants would have affected significantly the results obtained in Experiments 2, 3, and 4. Further research will therefore be needed before a definitive conclusion can be reached regarding the influence of context on idiom understanding. A future investigation aside, the overall pattern of results provides preliminary support for the author's two original hypotheses made in this pilot study.

CONCLUSION

It has been the tradition within L1 linguistic and psychological discussions to assume that all idioms are noncompositional; that is, the individual words composing an idiom contribute nothing to the meaning of the idiom itself. If it can be assumed then that idioms are nothing more than “long words” whose figurative meanings are directly stipulated in the mental lexicon, by extension it must also be assumed that idioms are devoid of an internal syntactic or semantic structure. Such a view would be compatible with the traditional view of idioms as “phrases” whose meanings are simply retrieved from the mental lexicon (e.g., Bobrow, & Bell, 1973; Gibbs, 1984; Swinney, & Cutler, 1979). With regard to L2 learners, however, it appears that they undergo the exact opposite process than L1 learners do. That is, in interacting with those “long words” to create meaning within a pragmatic context, they first discover the literal meaning before engaging in “meaning-expansion” processes that allow them to capture, albeit not always successfully, the intended speaker/writer meaning of the phrasal idiom. Only then do they begin to create an “entry” in their mental lexicon for future accessing of the idiom. The experiments here reported support this conclusion.

Moreover, idiom understanding does not come easily to L2 learners, just as it is not an easy process for very young speakers of the L1 language (see, for example, Brinton, Fujiki, & Mackey, 1985; Cacciari & Levorato, 1989; Douglas & Peel, 1979; Gibbs, 1987; Levorato & Cacciari, 1992; 1995; Lodge & Leach, 1975; Nippold & Rudzinski, 1993). While adult L2 learners have fully developed abstract reasoning capabilities, nevertheless, they still struggle to capture the idiomatic meaning of phrasal idioms in their second language. This is partly due to the

“conscious/unconscious” inefficiency they are experiencing with what this author calls their *mental language-translator device* that does not allow them to process the idiomatic meaning directly. Only after coming to a *dead end* with the translated literal meaning of the individual lexemes do L2 learners begin to explore the idiomatic meaning of the lexical unit in question. Expressed differently, first a literal meaning is constructed, followed by a possible idiomatic meaning that is interpreted in context and within semantic/pragmatic constraints. Successful interpretation of idiomatic meaning is varied at best despite the inferred context motivating an idiom’s usage. This finding was clearly demonstrated in Experiments 2 and 4.

Given the foregoing analyses, it can be argued that the variables governing the comprehension and meaning-making process of idiomatic phrases during reading in L2 are not identical to those in the L1. Inferences made about predictable and unpredictable idiomatic expressions and the conditions under which these inferences can be observed and explained are as different as the idioms themselves in different languages (see Hakuta, 1974; Karkkainen, 1991; Laufer, 2000). This is why it is posited here that the mental representation and mental process of perceiving and understanding cultural idiomatic expressions in second languages undergo different operations. Expressed more precisely, it is not easy to quantify the amount of information necessary for meaning-mapping processes between the inferred meaning of the L2 idiom and its literal counterpart. Drawing on data from a variety of sources, such attempts must aim at analyzing the cognitive-psycholinguistic processes by which learners of second and foreign languages attach meaning to and come to understand idiomatic expressions both in contextualized and acontextualized environments.

The study of how context with pragmatic cues indicating the presence of an idiomatic meaning positively affects word and idiom recognition and how idiom interpretation occurs while input of sentences is taking place must be studied further if the SLA research and teaching community is to understand more fully the differing processes second language learners undergo in their quest to comprehend and master phrasal idioms. The challenge for researchers and language educators alike is to focus future SLA research and pedagogy on the interplay between teacher competency and idiom language acquisition, figurative language control and reading, before definitive claims regarding the efficacy of a particular instructional method can be made.

Researchers and language teachers continue to disagree on the best teaching method to meet the linguistic and figurative needs of second language learners (see, for example, Allen, 1995; Cacciari, 1993; Ezell & Goldstein, 1992; Nuessel & Cicogna, 1994; Rittenhouse & Kenyon, 1990).

Nevertheless, an important direction for future idiom research will be to determine at what point during second language acquisition and under what conditions lexical and idiomatic mappings are developed between L2 and L1 idioms. In turn, such initiatives may further benefit from examining more closely specific research questions and pedagogical issues that loom prominently in the SLA idiom arena, the most important of which are given below in no particular order:

- Will the hypotheses made in this pilot study also hold across several second languages? What other hypotheses or assumptions can be posited regarding the lexical representation, processing, and understanding of phrasal idioms?
- Is there a universal *modus operandi* in identifying and understanding phrasal idioms in second languages? That is, is the process of comprehending and interpreting phrasal idioms in second languages during reading, universal in nature?
- How is understanding of phrasal idioms achieved in second languages and what are the organizational principles that operate in idiom performance? How are these principles best applied to the teaching and learning of idioms in the second language classroom?
- What are the (para)linguistic and (meta)cognitive factors that influence or constrain the processing, comprehension, and interpretation of phrasal idioms while reading authentic texts?
- What knowledge is considered in the interpretation of a phrasal idiom and what are the processes and skills required for fluent idiom recognition and interpretation in second languages?
- How dynamic in nature is the interaction between L2 and L1 idiomatic competence and what specifically hinders or facilitates this interaction?
- What other types of data will prove valuable in uncovering the socio-affective and cognitive factors involved in idiom understanding? How do we obtain a more reliable birds-eye view of the idiomatic process at work?
- Which psychological model of idiomaticity should be applied to the development of idiomatic competence in target languages and on what theoretical constructs do we base its descriptive, explanatory, and predictive adequacy?
- What are the theoretical and classroom implications for the teaching of phrasal idioms and the development of idiomatic competence in second languages that provide solid ground upon which SLA theory and practice can begin to build future research endeavors?

These much-needed insights underscore the need for psycholinguists and language practitioners to keep on refining their theoretical constructs and research methods, so that they can look more closely at how phrasal idioms are mentally represented and accessed across several second languages. Armed with such information, the teaching community can then offer language learners specific

pedagogical activities to facilitate their comprehension of idioms as they attempt to master such linguistic and cultural material in the second or foreign language environment.

Furthermore, such activities could be aimed at meeting the pragmatic/strategic communicative needs of learners, all the while empowering them to achieve higher levels of idiomatic command. For example, learners could be presented with tailor-made idiom lessons containing listening, reading, writing, and pronunciation features and a number of practice (e.g., 'chose the correct word that completes the idiom,' 'find-a-word-cube,' 'chose the definition that goes with the idiom,' and 'match idioms with images and texts') and testing choices (e.g., 'matching the columns,' 'completing an idiomatic crossword puzzle,' 'choosing the correct word that completes the idiomatic sentence,' and 'completing sentences and short paragraphs [taken from authentic texts, songs, Internet, and the like] with the appropriate phrasal idiom'). Learners could also be asked to create and write their own paragraphs or dialogs using previously learned idioms and share them with the other members of the class and the instructor for immediate feedback and subsequent treatment.

Such an approach to teaching and learning idioms does not imply, of course, that only because something has been taught, it also has been learned and acquired. Acquisition of phrasal idioms in second languages is an arduous incremental process and retrieval and communicative use of such idioms can only take place after they have been acquired and automated via continuous exposure and contextual practice in and beyond the second language environment (Arnaud & Savignon, 1997). Only then can it be argued convincingly that a concerted effort is being made to develop *idiomatic competence* (i.e., the ability to understand and use idioms appropriately and accurately in a variety of sociocultural contexts with the least amount of mental effort, and to use them in a cultural manner similar to that of a native speaker) in second and foreign language learners.

In conclusion, pending future investigations, results obtained and triangulated with supporting qualitative insights support the claim that the study of phrasal idioms is a good example of the interdisciplinary nature of cognitive science. Psychology hypothesizes processing mechanisms necessary to our further understanding of second languages. Pedagogy, on the other hand, provides theoretical constructs about the nature of teaching second and foreign languages—its approaches, techniques, and evaluation instruments. Finally, the consequences of wedding pedagogical theory and psychological processing mechanisms can be made concrete by employing idiomatic expressions in second language acquisition activities. Perhaps one day the SLA research and teaching community will find ways of achieving this more interesting goal. In the meantime, however, some progress toward it may be made if some of the finer parameters of

the comprehension and interpretation process of L2 phrasal idioms across several second languages can be established. This preliminary pilot study is a first step in that direction.

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APPENDIX A. TAPING INTO THE IDIOM COMPREHENSION PROCESS

The following comments below offer a window into the process of idiom detection, comprehension, and interpretation. Many of the comments presented capture the (meta)cognitive processes exhibited by the participants of this study. They are offered here as additional support for the many strategies and techniques used by learners of Modern Greek when faced with authentic literature excerpts containing matching and non-matching phrasal idioms. Each comment is preceded by the idiom in question (given in bold, followed by its corresponding number from Table 3).

(εγώ δε χάφτω μύγες, 24) You just know: I don't eat flies

(τον έχω στο χέρι, 16) It sets an image in my head again.

(μένω στον τόπο, 6) The illusion with the language. It just seems that it would be.

(κάνω το πρώτο βήμα, 18) Because of where it is in the text. It stands out.

(γίνεται η ζωή μου Μεγάλη Εβδομάδα, 10) Her life becomes holy week: definitely an expression that can't be translated literally.

(είμαι καρφί στο μάτι του, 12) Because of the use of words... it just doesn't make sense to me.

(αλλάζω χρώμα, 1) Position of words used to make a point.

(μιλάω στον αέρα, 21) I chose this for several reasons: First, because of context; it followed a comment so it emphasizes and plays on the comment. Secondly, it is a figurative phrase because the individual whom they are speaking would not likely *talk in the air*.

(ανάβω φωτιά, 2) It follows some sort of doing it. Seems like a perfect place to stick a witty expression.

(είμαι το δεξί του χέρι, 11) It must be an expression because of the language rhythm. I just have a feeling.

(βάζω φερμουάρ, 7) It just doesn't make sense. It is at the end, too. It makes an image.

(του βάζω τα δυο πόδια σ' ένα παπούτσι, 15) Two feet in one shoe? Impossible!

(από πού βαστάει η σκούφια μου, 8) Only phrase which seemed figurative, so I choose it through process of elimination.

(ανοίγει η γη να με καταπιεί, 3) I choose this phrase through trial-and-error. The other sentences seem matter of fact and not idiomatic.

(είμαι όλος αυτιά, 14) I picked this expression because it translated directly into the English expression *I'm all ears*. In fact, it is the same thing verbatim.

(κάθομαι στο κεφάλι του, 17) I chose this phrase because it did not seem literal—'to sit on his head.' The phrase stuck out because it was more extravagant than the others.

(πνίγομαι σε μια κουταλιά νερό, 22) Only phrase that could possibly be interpreted differently.

(πάνω πουλιά στον αέρα, 5) I picked this because it seems figurative. Also, it comes at the end of the paragraph, so it can be used to comment on the situation.

(χτύπα ξύλο, 26) Because it directly translates to the English expression 'knock on wood.' Also, it is the only phrase which is not a matter of fact in the passage. The other sentences are straightforward and cannot be interpreted differently.

(ρίχνω στο λάδι φωτιά, 23) Only phrase which seemed figurative and literally did not fit with the rest of the context.

(κολυμπάω στο χρήμα, 29) I chose 'κολυμπά στο χρήμα' because the last part of the phrase translates to 'in the money.' Part of it is translation because this is also a phrase in English. Part of it is context because the speaker says it after he makes a comment.

(του ψήνω το ψάρι στα χείλη, 31) Because it was the only one that I could not understand. Because the phrase was more complex than the others, it might be idiomatic. I think literally it makes no sense.

(του ανοίγω την καρδιά μου, 4) You can't actually open your heart, but it is used to say that someone told you how they feel. This would probably never happen.

(έμεινα με το στόμα ανοιχτό, 20) Amazement of hearing shocking news, he was left speechless.

(στον ουρανό σε ψάχνω, στη γη σε βρίσκω, 27) Because of the English phrase 'I searched high and low'.

(τον παίζω στα δάχτυλά μου, 30) Playing with fingers is not meant literally, but an expression on how smart this person is. You can't play with people on your fingers.

(βάζω τη μύτη μου παντού, 25) The words in this sentence seem to flow.

(κάθομαι σ' αναμμένα κάρβουνα, 28) You wouldn't really say this to someone on a daily basis.

(του αλλάζω τα φώτα, 9) The passage is talking about an annoying shopper, not changing lights.

(είμαι στα μαχαίρια, 13) The passage is referring to two people on non-speaking terms, not about knives, etc."

(μ' αυτό το πλευρό να κοιμάσαι, 19) The passage is talking about letting a friend borrow a new car, not about sleeping.