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THE PROCESSING OF PHRASAL VERBS BY NATIVE AND NON-NATIVE SPEAKERS OF ENGLISH

by

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A dissertation submitted to the Graduate Faculty in Linguistics in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York.

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Abstract

THE PROCESSING OF PHRASAL VERBS
BY NATIVE AND NON-NATIVE SPEAKERS OF ENGLISH

by

Pamela McPartland-Fairman

Adviser: Professor David A. Swinney

Although native speakers of English often show a predilection for phrasal verbs over their single-word equivalents, non-native speakers do not seem to share that preference. A number of studies (McPartland, 1983; Dagut and Laufer, 1985; and Yorio, 1989) have demonstrated that non-native speakers of English produce very few phrasal verbs in their spontaneous speech (and when they do, make errors), generally avoid using phrasal verbs, and prefer semantically transparent combinations over opaque units, if they find they must use them.

Why do non-native speakers avoid using phrasal verbs? What makes them inherently difficult to acquire and process? Are opaque combinations more difficult to process than transparent items? What do non-native speakers comprehend when they hear phrasal verbs in context: do they become confused between the literal and the figurative meanings of

these constructions?

This study investigated the comprehension of phrasal verbs by 32 advanced non-native speakers of English as well as 32 native speakers with the goal of determining which meanings (literal, figurative, or both) are accessed during discourse comprehension and whether context plays a role in the lexical access process. In the experiment, forty phrasal verbs in contexts biased toward the literal or figurative interpretation were presented to the subjects auditorily. Using a cross-modal semantic priming technique, evidence was obtained about which meanings were activated. Overall, it was found that the non-native speakers' lexical access was similar to that of native speakers. Both groups simultaneously accessed the literal and figurative meanings regardless of biasing context. This suggests that the problems non-native speakers have with language comprehension, at least with ambiguous lexical items like phrasal verbs, do not take place at the level of access, and therefore, by default, must occur in a post-access stage of processing.

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INTRODUCTION TO CHAPTER I

Phrasal Verbs,[1] lexical units consisting of a verb and an adverbial particle, are ubiquitous in English. Although there is a common belief that they are confined to informal speech, they appear in both the written and spoken language, in formal and informal registers. Jespersen (1928:18) contends that "...the great number of these idiomatic combinations is one of the most characteristic traits of the English language."[2]

Although native speakers of English often show a predilection for these Anglo-Saxon combinations over their single-word Romance equivalents, non-native speakers do not seem to share that preference. A number of studies (McPartland, 1983; Dagut and Laufer, 1985; and Yorio, 1989) have demonstrated that non-native speakers of English produce very few phrasal verbs in their spontaneous speech (and when they do, make errors), generally avoid using phrasal verbs, and prefer semantically transparent combinations over opaque units, if they find they must use them.

Why do non-native speakers avoid using phrasal verbs? What makes them inherently difficult to acquire and process?

Are opaque combinations more difficult to process than transparent items? What do non-native speakers comprehend when they hear phrasal verbs in context: do they become confused between the literal and the figurative meanings of these constructions?

This study investigated the comprehension of phrasal verbs by 32 advanced non-native speakers of English as well as 32 native speakers with the goal of determining which meanings (literal, figurative, or both) are accessed during discourse comprehension and whether context plays a role in the lexical access process. Before presenting the study, the literature on the acquisition of idiomaticity by non-native speakers is presented (see Part I). Then, the linguistic issues related to idiomaticity, in general, and phrasal verbs, in particular, is examined (see Part II and III). Finally, studies on the processing of idioms and metaphors by native speakers are reviewed along with studies of language processing by bilinguals (see Part IV). This literature review brings together the second-language acquisition, theoretical linguistic, and processing issues that are of concern in the research presented here.

PART I: THE PROBLEM

1.1.1. The Acquisition of Idiomaticity by Second Language Learners

Adult language learners evidence a number of difficulties in using their second language: in pronunciation, L1 phonology shines through; in syntax, certain structures are either not acquired or incorrectly acquired; in semantics, while word meanings may be learned with difficulty, often the corresponding selectional restrictions and subcategorization rules are not; and in pragmatics, the learner's culture dictates certain assumptions which may not apply to the host culture and language.

Studies of adult second-language acquisition (SLA) have investigated each of these areas, in particular, phonology and syntax. Semantics has been examined less, and, within the broad category of word meaning, the acquisition of idioms has been given short shrift. However, in this researcher's experience with adult language learners, idioms in general, and phrasal verb idioms in particular, are frequently cited as one of the most vexing aspects of acquiring the language. Prepositions and rules for the use of articles are other troublespots.

In a study examining the errors made by five non-native speakers when using phrasal verbs and verb-preposition combinations, McPartland (1983) found that native speakers of Russian who had been using English for no more than five years exhibited what seemed to be a preference for semantically transparent verb-preposition combinations over more opaque phrasal verbs. Overall, these subjects produced very few phrasal verbs in their spontaneous speech, and when they did venture to use phrasal verbs, were unable to produce them correctly. Production problems were evidenced in the use of: filled for filled out, and mix up with for mix up. William A. Stewart has pointed out (personal communication) that similar errors occur in English creoles with verbs such as cut signifying itself as well as cut up and cut off (meaning 'sever' or 'interrupt'), and consequently, the wrong particle being inserted in the phrasal verb, e.g., cut up for cut off (meaning 'interrupt').

Dagut and Laufer (1985) also studied the acquisition of phrasal verbs, but with a different L1 group: Hebrew-speaking English majors and non-majors. These researchers identified fifteen phrasal verbs preferred (in spoken English) by native speakers over semantically equivalent single-word verbs[3]. These phrasal verbs were incorporated in three tests to see if they were also preferred by Hebrew speakers over their

one-word equivalents:

On a multiple choice test, non-English majors avoided selecting phrasal verbs as the verb to be filled in in over half of the 15 experimental sentences. Using Fraser's (1976) categories (see 1.3.7.) of literal (e.g., go out), systematic (or completive) (e.g., shoot down), and figurative (e.g., turn up) combinations, the researchers found that the phrasal verbs that were used were mainly literal, followed by systematic, and then figurative, corroborating McPartland's (1983) finding of a preference for semantically transparent verb-preposition combinations over opaque phrasal verbs. (Fraser does not, however, consider literal combinations phrasal verbs.)

On a verb translation test (from Hebrew to English), a strong preference for one-word verbs over phrasal verbs was found. Of the phrasal verbs that were supplied, again the categories were, in descending order: literal, systematic, and figurative. Although English majors translated twice as many verbs into phrasal verbs (rather than single-word verbs) compared to non-English majors, both groups fell short of native speakers.

On a verb memorizing test, subjects were instructed to memorize sentences containing phrasal verbs, and, one hour later, supply the phrasal verb (the single-word Hebrew verb was provided). Again there was a strong preference for the

one-word English verb. Of the phrasal verbs that were supplied, the order once again was: literal, systematic, and figurative.

All three tests indicate that most of the Hebrew-speakers learning English preferred one-word verbs over equivalent phrasal verbs and avoided using phrasal verbs, particularly figurative combinations.

This study reveals that phrasal verbs are avoided in the L2, and the researchers attribute this avoidance to the absence of phrasal verbs in the L1 supporting the notion of transfer (cf. Lado 1957; Wardhaugh 1970). According to Daugut and Laufer, Hebrew has no structure comparable to the phrasal verb, although verb-preposition combinations (e.g., the equivalent of wait for), are common. The problem with this conclusion is that the researchers claim their findings corroborate the role of the L1 in SLA (i.e., since phrasal verbs don't exist in Hebrew, they don't get acquired easily in English), but they haven't considered the complexities of phrasal verbs. For example, other factors that might be a hindrance to acquisition and use include: differences in the position of noun vs. pronoun objects; changes in transitivity from the verb alone to the verb + particle; differences in selectional restrictions from the verb alone to the verb in combination with a particle; variation in the productivity of verbs, e.g., some verbs combine with many particles while

other verbs combine with only one. (For a more detailed discussion, see 1.3.3., 1.3.4. and 1.3.6.).

Another issue that might interfere with the acquisition process involves the degree of ambiguity of a phrasal verb. Dagut and Laufer's data seem to support this explanation: In each of the three tests, when phrasal verbs were recognized or produced, subjects used mostly literal, some systematic (completive), but few figurative phrasal verbs. Perhaps there is a developmental sequence in the acquisition of phrasal verbs (and perhaps verb-preposition combinations) with the more literal being acquired earlier and the more figurative later (see McPartland, 1983), and these subjects had not reached the later stage of acquisition when figurative phrasal verbs become part of the second-language lexicon.

In an investigation of whether phrasal verbs were differentially used by native and non-native speakers of English in their college writing, Yorio (1989) found that both groups used the same proportion of phrasal verbs, but the type of phrasal verb was different: L1 writers preferred figurative phrasal verbs while L2 writers tended to use more literal combinations. Yorio also found that when the second-language learners attempted to use phrasal verbs, they

lacked formal control over them.

Irujo (1986) examined the acquisition of phrase idioms and lexical idioms (see 1.2.1.) by adult second-language learners in a university setting. The types of idioms in the study were: idioms that were identical in English and Spanish; idioms that were similar; and idioms that were different. Like Dagut and Laufer (1985), she claimed to find evidence of transfer (the influence of the L1), in the acquisition process.

Results revealed that on the recognition test and the comprehension test, subjects performed equally well with identical and similar idioms. On the recall test, the more different the idiom, the more difficult it was to supply. And on the production test, both similar and different idioms were difficult to produce. Production tasks indicated more evidence of negative transfer with similar idioms than with different ones, corroborating Oller and Ziahosseiny's (1970) claim that there would be more difficulty in the L2 if the L1 and L2 structures were similar than if they were different. However, Irujo found individual variation regarding the role of the L1 on the production test, with some subjects showing no interference and others showing much interference for similar and different idioms.

Irujo identified the characteristics of the best-known

idioms, e.g., lend a hand, sleep on it, as frequently used, useful in a university setting, short and relatively simple, and fairly transparent in meaning. The least-known idioms were less frequently used, more colloquial, and often contained difficult vocabulary. (Irujo, however, doesn't explain how she determined frequency-of-use, transparency, etc.)

Irujo claims that her findings show that if an idiom in the L2 is the same as in the L1, advanced ESL students can use their knowledge of idioms in the L1 to recognize and comprehend idioms in the L2. But the absence of an L2 idiom in the L1 or a slight difference between L2 and L1 idioms adversely affects recall and production of L2 idioms. Like Dagut and Laufer, Irujo has not proven that it is exclusively the similarities or differences between L1 and L2 idioms that affect the acquisition of idioms in the L2. The fact that Irujo found individual variation in terms of L1 interference in the production of idioms lends additional support to the argument that L1 interference alone cannot account for these results.

Semantic transparency is listed as one of the characteristics of the best-known idioms, and perhaps this plays more of a role than Irujo is aware of. All four studies described here (McPartland, 1983; Dagut and Laufer,

1985; Yorio, 1989; and Irujo, 1986) indicate that semantically transparent combinations (verb-preposition combinations, phrasal verbs, or phrase idioms) are more readily acquired than opaque combinations. These data may point to a developmental sequence from transparent to opaque combinations with acquisition proceeding in the following order: verb-preposition combinations, transparent phrasal verbs and idioms, systematic phrasal verbs, and finally opaque phrasal verbs and idioms.[4]

Kellerman (1977:95) introduces a new twist on transfer with his concept of the 'perceived relatedness' between two languages. He argues that what is important is not the actual similarity or difference in structures in the L1 and L2 but how related the two languages are perceived to be by the language learner. If the learner believes the L1 and L2 are the same when it comes to a particular structure, then it would be reasonable for the learner to use transfer. However, Kellerman (1977:101-102) claims that idioms are considered language-specific (L-S) and therefore, do not get transferred, at least by lower-level learners, even when it's possible to do so. Kellerman contrasts L-S items with language-neutral (L-N) items, which the learner believes can be transferred to the L2.

To test his hypothesis that idioms are considered non-transferable, Kellerman required groups of Dutch university students at different levels of proficiency to underline parts of English sentences they considered incorrect. The sentences contained idioms that were possible in both Dutch and English, e.g., 'the victory was in the bag,' and idioms that were possible in Dutch, but not in English, e.g., 'to be the cigar.' Kellerman's assumption was that subjects would not transfer idioms they underlined.

Results showed a strong tendency among first- and second-year university students to treat the idioms as language-specific. (p. 124-125). Third-year students were more successful at distinguishing correct English idioms that were possible in Dutch from Dutch-based erroneous idioms in English. The third-year group also exhibited a slight tendency to be more accepting of erroneous Dutch-based idioms. Kellerman attributed this to an increasing awareness of the similarities between Dutch and English by these more advanced subjects and a resultant tolerance of such idioms.

Kellerman also examined whether the tendency to reject or accept an idiom was related to the semantic transparency of the idiom, assuming that more opaque idioms would be rejected while more transparent would be accepted. A slight difference was found between less proficient and more

proficient learners with the latter more accepting of opaque idioms.

In a similar study, Jordens (1977) examined the treatment of German idioms by Dutch learners of German in a university setting. He compared Dutch-speaking students' behavior toward German expressions that are L2-specific with their behavior toward German expressions that are language-neutral. Like Kellerman (1977), he found that the learner's perceptions of the relationship between the two languages played an important role in the learner's treatment of idioms.

The study involved three types of L2-specific expressions:

a) The L2-expression was correct and had a Dutch equivalent.
b) The L2-expression was incorrect but had a (correct) Dutch equivalent.
c) The L2-expression was correct but did not have a Dutch equivalent.

There were also language-neutral expressions in the study:

d) The L2-expression was correct and had a Dutch equivalent.

Results showed that in general, L2-specific expressions tended to be rejected: second-year students tended to reject all L2-expressions with an L-1 equivalent, and they rejected L2-specific expressions with a Dutch equivalent to a greater

extent than the first-year group. Therefore, the distinction between types a and b isn't made until students are in their 3rd year of language instruction.

Kellerman (1985) cites Jordens' study as an example of U-shaped behavioral development in SLA, common when the L2 is typologically similar to the L1. U-shaped behavior refers to systematic linguistic behavior over time as realized in three stages:

stage 1: subjects perform in a limited linguistic domain which matches the TL norm

stage 2: subjects exhibit deviant performance, different from stage 1 behavior

stage 3: subjects again perform in accordance with the TL norm

In terms of Jordens' results, Kellerman claims that the first-year students fit stage 1: they assume that German and Dutch are closely-related languages and probably share idioms. The second-year students fit stage 2: they are becoming sensitive to the differences between the literal and figurative meanings of idioms, and the more semantically opaque (figurative) the expression, the more its translation equivalent tends to be rejected in the L2. Third-year students fit stage 3: they are able to distinguish expressions that are possible in German from those specific to Dutch.

Kellerman claims that in Stage 1, the L1 serves as a source of predictions about the L2, resulting in positive transfer. In stage 2, the L1 declines as a source of predictions, resulting in errors, and in stage 3, subjects approximate native-speaker levels of competence in the particular linguistic area (p. 351). (Of course, there will only be positive transfer in stage 1 if the L1 and L2 are closely-related languages like Dutch and English or Dutch and German.)

These SLA studies of idiomaticity raise a number of questions: Why do non-native speakers avoid using phrasal verbs and why does this aspect of the lexicon get acquired so slowly and incompletely? Is it because of the inherent difficulty of these lexical items or is it because they do not occur in most L1s? What types of phrasal verbs are particularly difficult to acquire, e.g., are semantically opaque phrasal verbs harder to acquire than transparent phrasal verbs? Can frequency-of-use override opacity when it comes to acquisition? How do less-proficient learners differ from more-proficient learners in their comprehension and production of phrasal verbs? How does the acquisition of phrasal verbs reflect the acquisition of other aspects of English by non-native speakers?

Although these studies raise many questions and their findings indicate some trends, they are explanatory in only a general way. They don't adequately describe either the process of acquiring idioms or the process of understanding them in context. The proposed study will investigate the on-line comprehension of phrasal verbs to obtain a fine-grained measure of which meanings advanced non-native speakers, as compared to native speakers, access when encountering phrasal verbs. Two categories of phrasal verbs will be examined: systematic and figurative combinations. Ultimately, the goal of the study is to determine to what extent the problems non-native speakers exhibit in the use of these items can be attributed to abnormal lexical access. But before describing this study of phrasal verb idioms, it is first necessary to define the terms 'idiom' and 'phrasal verb' and explore the exact nature of the complexity of these structures.

PART II: LINGUISTIC ASPECTS OF IDIOMATICITY

INTRODUCTION TO PART II

In the discussion in Part II, two linguistic issues related to idioms will be presented. The first issue concerns the various attempts at a definition of 'idiom' (1.2.1.). These definitions, for the most part, focus on the non-compositional aspect of these combinations, the complexity of the units, and the notion that the figurative meaning is commonly known. This dissertation supports the approach taken by Bolinger (1971) which allows for a range of idiomaticity from fairly transparent to entirely opaque. Completely transparent combinations don't qualify because they are literal, i.e., their meaning is a compositional function of the parts. The definition assumed in this study is:

> An idiom is a complex unit whose meaning is not entirely predictable from the meanings of its parts, and whose figurative interpretation is commonly known by native speakers of the language.

The second issue raised in Part II, concerns how idioms are to be treated in the grammar: either by being placed on a special idiom list apart from the ordinary lexicon or by being treated as unitary items, like other words in the dictionary (1.2.2.). These opposing views form the basis for

two hypotheses on the processing of idioms (1.4.1.), regarding whether the figurative meanings of idioms are comprehended by referring to a special idiom list in the mental lexicon or by being understood like other single-word lexical items.

Now for quite a few definitions of 'idiom'...

1.2.1. Definitions of 'Idiom'

The word 'idiom' derives from the Greek term 'idios' which contains the notions 'private,' and 'peculiar.' Although 'idiom' is a cognate of the English words 'idiot,' 'idiotic,' and 'idiocy,' unlike 'idiom,' these three terms underwent semantic specification and pejoration (Makkai 1972).

The Oxford English Dictionary defines an idiom as: "a peculiarity of phraseology approved by usage of the language and often having a signification other than its grammatical or logical one." This definition includes two important criteria: the special figurative reading is commonly known by speakers of the language and the meaning of an idiom is not a compositional function of the meanings of its parts. The first criterion is one of the features that distinguish idioms from metaphors.

However, this simple definition does not mention that idioms exhibit different degrees of idiomaticity from fairly transparent to entirely opaque. Nor does it deal with gradience in terms of syntactic deficiencies, that is, that some idioms are extremely flexible grammatically while others are completely frozen. As more and more linguistic details are added to the simple definition given above, it will become clear that within the broad category of 'idiom,' more specifically 'phrasal verb idiom,' there is both semantic and syntactic gradience.

Although, as Weinreich (1969) has pointed out, idiomaticity has been relatively neglected in modern linguistics (especially Western linguistics), many linguists have at least made a stab at defining the term. Many definitions focus on the "peculiarity of phraseology" aspect of an idiom which encompasses the non-compositional nature of these combinations, e.g., Sweet (1889 in Makkai, 1972:139) claims that: "the meaning of each idiom is an isolated fact which cannot be inferred from the meaning of the words of which the idiom is made up."

Smith (1925:168) refers to idioms as "...phrases which are verbal anomalies, which transgress ... either the laws of grammar or the laws of logic."

And Hockett (1958) refers to idioms as "certain lexicographic and syntactic phenomena which share the fact that the meaning is not predictable from the composition." For Hockett, idiomaticity permeates language, and he ascribes idiom status to both monomorphemic and polymorphemic units.

Katz and Postal (1963:275) explicitly state the non-compositional aspect of idioms: "The essential feature of an idiom is that its full meaning and more generally the meaning of any sentence containing an idiomatic stretch, is not a compositional function of the meanings of the idiom's elementary grammatical parts."

Pike's (1967) tagmemicist view refers to an idiomatic meaning as a hypermorphemic meaning which is not predictable from its parts. He also contributes the notion of idioms as complex units. Drawing on the concept of idioms as complex units, Chafe (1968) proposes that the meaning of an idiom is comparable to the meaning of a single lexical item, e.g., the meaning of the idiom kick the bucket is not made up of the meanings associated with kick, bucket, and the definite article, but is equivalent to the meaning of die.

Balint (1969 in Makkai, 1972), uses both non-compositionality and complex units in defining an idiom as "a phraseological unit whose meaning cannot be arrived at from the separate meanings of the constituents of the unit."

Weinreich (1969:32) too, stresses the theme of non-compositionality and adds this analysis of the resultant meaning: "An idiomatic sense of a complex expression may differ from its literal sense either in virtue of the semantic function ... or of the semantic constituents. The difference between expected and obtained constituents may amount to a suppression of some component of meaning, or the addition of some component, or a replacement of components."

Weinreich's (1969:42) formulation stresses multiple ambiguity, i.e., polysemy: "An idiom is a phraseological unit that involves at least two polysemous constituents, and in which there is a reciprocal contextual selection of subsenses." Weinreich cites red herring (i.e., 'phony issue') as an example of an expression which meets his criteria for idioms.

Another definition using the non-compositionality notion is Fraser's (1976, based on Fraser 1965, 1970). He defines an idiom as "a single constituent or series of constituents, whose semantic interpretation is independent of the formatives which compose it."

Katz and Postal (1963), Balint (1969), and Makkai (1972) attempt to distinguish categories of idioms and Makkai (1978), an idiom continuum. Katz and Postal distinguish

'lexical idioms' from 'phrase idioms.' Lexical idioms (e.g., compound words and phrasal verbs) are defined as polymorphemic lexical entries which are dominated by a single syntactic constituent (e.g., verb, adjective, noun, or preposition). Phrase idioms are not dominated by any single syntactic category; they are idioms with a more complex constituent structure (e.g., Has the cat got your tongue?)

Using a sector analysis approach, Balint (1969) divides idioms into two categories: syntagmatic simples (e.g., bookcase, and merry-go-round) and syntagmatic complexes (e.g., simmer down, and let the cat out of the bag). This division represents another attempt to distinguish different types of idioms.

Makkai (1972) identifies two idiomaticity areas in English: first, the lexemic idiomaticity area including phrasal verbs (e.g., bring up (raise), take off (remove)) and Tournure idioms (e.g., have it out (with), kick the bucket) (see section 1.3.3. for an explanation of Tournure idioms) and second, the sememic idiomaticity area consisting of sentence-long utterances such as proverbs (e.g., Don't count your chickens until they're hatched.)[5] In his later work on idiomaticity, Makkai (1978:445) identifies "a scale of metaphorical gradation from completely metaphorically translucent forms to entirely opaque ones." This concept of

semantic gradience also figures prominently in Bolinger's (1971) analysis of phrasal verbs (see 1.3.7.).

The definition of 'idiom' underlying this study incorporates the notion of an idiom as a complex unit (Pike, 1967; Chafe, 1968; Balint, 1969; and Weinreich, 1969), with a non-compositional interpretation (Sweet, 1889; Smith, 1925; Hockett, 1958; Katz and Postal, 1963; others), whose figurative meaning is commonly known by speakers of the language (Oxford English Dictionary). The definition that captures these issues is this:

> An idiom is a complex unit whose meaning is not entirely predictable from the meanings of its parts, and whose figurative interpretation is commonly known by native speakers of the language.

1.2.2. The Treatment of Idioms in the Grammar: A Special Idiom List vs. Units in the Lexicon

Because of their semantic and syntactic complexity, idioms cannot easily be accounted for in linguistic theory. The linguists who have attempted to incorporate idioms into their description of a language disagree on how they are to be treated in the grammar. One view treats them like other lexical items; another recommends placing them on a special idiom list, thereby not dealing with them directly in the

theory; and a third approach combines both of these views, depending on the type of idiom.

Having sorted out 'lexical idioms' and 'phrase idioms,' Katz and Postal (1963:47) use a combination approach: they propose that lexical idioms be listed as units in the regular lexicon, while phrase idioms be assigned to a special idiom list, separate from the ordinary lexicon.

Supporting Katz and Postal's notion of an idiom list, Weinreich (1969:58) proposes that each entry in the special idiom list be "a string of morphemes (from two morphemes to a sentence in length) with its associated phrase marker and a sense description." In addition to an idiom list, Weinreich's (1969:71) rather cumbersome description of a language incorporates an idiom comparison rule which would, in addition to stipulating the idiom's transformational restrictions, assign a familiarity rating to each entry in the idiom list, substitute sense specifications for semantic blanks where they occur (e.g., in eke out, eke is a semantic blank), and substitute sense specifications for the generated sense specifications already associated with the terminal strings.

Fraser (1976) takes a different tack. Instead of Weinreich's awkward listing, Fraser's framework would simply list all idioms in the regular lexicon. He also suggests

marking each idiomatic entry with a transformational frozenness level from L0 (completely frozen) to L5 (minimally restricted).

In his later approach to idiomaticity, Makkai (1973:11-12) proposes an 'ecological dictionary of English,' i.e., a computerized 'lexecon' of 'lexemes' and 'sememe nests,' including frequency counts and dialect markers. Each idiom would be listed as a regular entry with its idiomatic meaning, and cross-references given for each of its constituent words.

The treatment of idioms in linguistic theory - either placing them on a special idiom list or considering these units just like other items in the lexicon - has been taken up in language processing studies and will be discussed in relation to the processing of idioms in Part IV (see 1.4.1.).

PART III: LINGUISTIC ASPECTS OF PHRASAL VERBS[6]

INTRODUCTION TO PART III

Part III reviews the more important aspects of phrasal verbs, one particular type of idiomatic combination. Before defining the 'phrasal verb,' a brief history of the development of these Anglo-Saxon combinations is provided (1.3.1.). In defining phrasal verbs (1.3.2.), again the approach taken here is more inclusive than exclusive, allowing for systematic combinations (e.g., try on, do over), which are either fairly transparent or have a particle that has a predictable meaning, as well as figurative combinations (e.g., dig in, turn down) in which the constituents have completely merged, forming a new meaning. This distinction will be relevant to the study presented in this paper (Chapter 2).

A summary of the structure and essential features of phrasal verbs (1.3.3.), and the characteristics of verbs and particles that co-occur (1.3.4.), will be provided to reveal the complexity of these lexical items which, as discussed in Part I, cause non-native speakers of English much difficulty in the acquisition process. The criterial conditions for phrasal verbs (1.3.5.), set forth by several linguists are

analyzed because familiarity with the various tests that determine whether a combination qualifies as a phrasal verb (as opposed to a verb-preposition combination), was a prerequisite to selecting the items incorporated in the study.

1.3.1. Historical Development

> Every language provides a means to coin out of its own substance. English has been thought to be rather impoverished in this regard. Statistics are quoted on vast importations from French and more or less artifical graftings from Greek and Latin. For the linguist trained on written texts, who listens with only half an ear, these chiseled borrowings obscure an outpouring of lexical creativeness that surpasses anything else in our language. We call it the phrasal verb ...
>
> (Bolinger 1971: X1)

Kennedy (1920:40) considers the development of the phrasal verb "... a movement from the ground up." He cites Curme (1914) who described a gradual shift in usage in Old English (450-1100) and early Middle English (1100-1500) from verbs with inseparable prefixes to the construction in which the 'prefix' follows the verb. Kennedy's (1920:13) discussion of the slow process by which phrasal verbs were incorporated into English is worth quoting:

> ... the development of the verb-adverb combination would have been much more rapid had it not been weakened for some generations or even centuries, by the adoption into English of numerous Romanic verbs with inseparable

> prefixes which drove out the native compounds, and for a time made the newer combination unnecessary. In the formal literature, wherein dialog and the language of the street had little place, the Romanic compound verb came into general acceptance as the proper form, and it is only a comparatively recent reaction against the borrowed element in English which has tended to carry the more plebeian verb-adverb combination to higher planes of literary life.

Kennedy points out that phrasal verbs that appear in literature prior to the 16 century, the beginning of Modern English, were used in their literal sense, or with only a slight change in meaning. By the 17 century, figurative meanings took hold apart from the literal senses. At that time, other combinations appeared in which the verb maintained its literal sense, but the adverbial particle took on a perfective or intensive value, slightly different from its prepositional meaning (Kennedy 1920:16). These meaning variations continued into the 20th century.

1.3.2. Definitions of Phrasal Verb

Because phrasal verbs are a subset of idioms, their definitions closely resemble the definitions of 'idiom' given above (see 1.2.1.). Composed of a verb and an adverbial particle, they too are complex units with a non-compositional interpretation, whose figurative meaning is commonly known by native speakers of the language.

Bolinger (1971:XII), for example, defines the phrasal verb as "... a lexical unit in the strict sense of a non-

additive compound or derivative, one that has a set meaning which is not the sum of the meanings of its parts."

Makkai (1972:142) argues that a verb-particle combination is idiomatic only " ... if the new lexemic combination has lost its metaphorical link prima facie with whatever it may be related to historically in both of its constituent lexons." Makkai cites look up to (respect, admire), as an example of an idiomatic phrasal verb since there is no act of looking and the person doesn't have to be taller or higher in rank. As noted above (see 1.2.1.), Makkai's (1978) later work describes a semantic continuum from completely translucent to fully opaque forms.

Although Jespersen (1928), and Bolinger (1971) would not consider literal combinations true phrasal verbs, Makkai (1972) and Kennedy (1920) argue that despite the fact that their meaning is entirely predictable, certain verbs and particles show a strong tendency to co-occur and, therefore, constitute a semantic unit. The approach used in this study takes into consideration a range of idiomaticity from systematic or semi-literal (e.g., try on, and sign up), to fully figurative (e.g., pull off, turn up) phrasal verbs. (For a more detailed explanation of these categories, see 1.3.7. or Fraser, 1976.) Systematic phrasal verbs are not considered fully literal because the meaning of the unit is

not entirely predictable from the meanings of the components. For example, try on, implies putting articles of clothing on the body to determine if they fit or are suitable. The notions of 'clothing' and 'determining if they fit' are not apparent from the meanings of try and on. However, on occurs in other combinations also implying 'on the body,' e.g., put on and keep on. Many systematic or semi-literal phrasal verbs used in this study involved a change in meaning of one of the components resulting in a slightly different meaning for the combinations, e.g., sign in means 'register, as in a hotel.' One does sign one's name in a book or on a receipt to register but the notion of 'registering' is not contained in the normal meaning of sign (i.e., 'to write one's name').

1.3.3. The Structure and Essential Features of Phrasal Verbs

Like many of the structures analyzed in linguistic theory, there has been a history in the development of the issues relevant to phrasal verbs. One of the major concerns has been distinguishing 'verb-adverb' from 'verb-preposition' combinations (e.g., Onions, 1904). To determine whether a particle functions as a preposition or an adverb when combined with a verb, various tests have been

proposed, for example, Poutsma (1926) uses a test based on cohesion: if the particle forms a sense unit with the verb, it's an adverb; if it forms a sense unit with the following noun or pronoun, it's a preposition. Jespersen (1961:323) relies on stress on the particle and the resultant meaning. When these criteria fail, he turns to word order: if the particle follows the object, it's governed by the verb and is therefore an adverb; if the particle precedes the object, it could be an adverb or a preposition.

Another issue of concern is the position of pronoun objects. Kruisinga and Erades (1953) point out that, when there is a pronoun, the adverb goes after the pronoun obligatorily. When there is a noun object, the adverb can appear on either side of a noun object today; however, at the turn of the century, this was not the case and both Kruisinga and Erades (1953) and Kennedy (1920) had theories on the position of the adverb (particle) when the object was a noun.[7]

In a more up-to-date analysis, Kayne (1985:102) considers the constituent structure of the verb phrase in:

John looked the information up

to be: V [NP Prt], where V = verb; NP = noun phrase, and

Prt = particle. Thus, the constituent structure attributed to the VP is: '... looked [the information up].' Attributing such a constituent structure to the verb phrase implies that such VPs are in the category of 'small clauses,' such as: '... considered [Bill honest].' Kayne accepts Stowell's (1983) interpretation of the head of the small clause above to be the adjective 'honest.' Correspondingly, Kayne asserts that the head of the small clause in 'John looked the information up' is the particle 'up.'

In addition to the basic 'verb-adverb' type of phrasal verb, there are also combinations with an obligatory it between the verb and adverb, e.g., hit it off. Kennedy (1920) touches on this category and Makkai (1972) deals with them in greater detail. Makkai calls such combinations 'Tournure idioms' and considers them the most complex of his 'lexemic' idioms. According to Makkai, only the morphology of Tournure idioms changes; their internal composition cannot be altered.

Besides verb-particle combinations and Tournure idioms, there are also three-word combinations made up of a verb, an adverbial particle and a preposition, e.g., put up with. Kennedy (1920) calls them 'double combinations' and considers both words following the verb to be adverbial particles. Fraser (1976) calls them 'intransitive verb-

particle combinations followed by a preposition.' And Makkai (1972) describes them as 'unitary transitive verbs composed of three lexons.' In Makkai's terminology, the third lexon (e.g., with in put up with), is called a 'compulsory idiom bridge.' There are also 'optional idiom bridges' which are not constituent lexons of the idiom. They function as prepositions with the following noun, e.g., hold up under pressure. On Kayne's (1985:104) analysis, a sentence such as:

John teamed up with Bill

is an example of a 'V Prt PP,' i.e., verb, particle, and prepositional phrase. He notes that such constructions do not allow the structure 'V PP Prt,' e.g.:

*John teamed with Bill up

because of the following proposal, based on Stowell's (1981) Case Resistance Principle: A subjectless PP must not be assigned a θ-role (see Kayne 1985:104). Kayne, after considering various phrase structure analyses, concludes that the correct analysis is: '[V Prt] PP,' i.e., '... [teamed up] with Bill.' Such an analysis seems to coincide with

Makkai's description above of optional idiom bridges. Here 'with' serves as an optional idiom bridge. However, Kayne applies the same analysis to :

They've done away with free wine

In this case, 'with' seems to function as a compulsory idiom bridge, since there is no phrasal verb do away. Hence, 'with' is a constituent of the phrasal verb idiom.

1.3.4. The Characteristics of Verbs and Particles that Co-occur

In addition to the characteristics of phrasal verbs noted above (1.3.3.) (i.e., the nature of the particle, the position of noun and pronoun objects, the fixed nature of Tournure idioms, and the components of three-word combinations), Kennedy (1920) outlines the following characteristics of verbs and particles that co-occur: Verbs that combine with particles are predominantly monosyllabic; the rest are bisyllabic with stress on the first syllable. Kennedy cites the following bisyllabic combinations (with stress on the second syllable of the verb) as exceptions: collect up, connect up, and divide up. (In this

researcher's dialect the particle up does not co-occur with collect and is optional with connect. A recently coined colloquial substitute for divide up is divvy up which does fit the pattern of an initially-stressed bisyllabic verb.) Trisyllabic verbs, e.g., partition off, are rare.

Most of the monosyllabic verbs that combine with particles are Teutonic in origin[8] and about half of the bisyllabic verbs are Teutonic.

As for its meaning, the combination can be a translation of the idea of the Latin verb, e.g., blow out for extinguish, or it can try to reproduce the stem and prefix of a Latin compound verb, e.g., light up for illuminate. The combination can also be a figurative reproduction of a Latin verb, e.g., tear down for demolish.

Some of the verbs that co-occur with particles are seldom or never used without the particle, e.g., there's jot down, but not *jot.

And some verbs are used intransitively only in combination, e.g., calm down.

Fraser (1976), after examining the syntactic, semantic, and phonological properties of verbs that co-occur with particles, concludes that it is the phonological properties that determine whether a combination is feasible. For example, syntactic properties such as: 'some verbs are used

intransitively only in combination' provide no basis for stating which verbs combine with a particle and which don't. The only syntactic generalization that can be made, Fraser claims, is that stative verbs, (e.g., know, want), almost never combine with a particle.

As for semantic properties, some verbs that combine with a particular particle (e.g., dish out, give out) seem to have a common semantic thread, here 'conveying something.' If a common semantic thread could be identified, other verb + out combinations could be predicted. However, it would still be necessary to account for the non-occurrence of certain combinations (e.g., *offer out).

Based on his analysis of verb-particle combinations, Fraser concludes (following Kennedy 1920 and Whorf 1956) that the majority of verbs that co-occur with a particle are monosyllabic; the rest are mainly initially-stressed bisyllabic verbs. The fact that a combination such as fix up is acceptable, but rectify up is not, supports his view that it is the phonological shape of the verb that plays a major role in determining whether a verb will combine with a particle. He makes the argument that a polysyllabic verb often contains

the notion contributed by the particle, and therefore, the addition of the particle would be semantically redundant (e.g., surrender up would be redundant, but give up would not). (Earlier, Kennedy (1920) noted that with the initial appearance of phrasal verbs, even when the verb was monosyllabic, the particle was often redundant.)

But phonological considerations alone do not seem to determine if a verb can combine with a particle. Fraser concedes that even if the phonological properties are known, it is not possible to state which verbs do combine; it is only possible to state which ones don't, i.e., most polysyllabic verbs. Moreover, there are many monosyllabic verbs which don't combine with particles, e.g., chide.

Regarding the nature of the adverbial particles that co-occur with verbs, Bolinger (1971) claims that in their core meaning, particles must contain one of two features: motion-through-location or terminus or result. This excludes time and manner adverbials which contain neither, for example:

You'll never make a dent that way! Chop down!

Here, down means downward. The manner (specifically direction) is provided, but no result is implied, so this chop down would not be considered a phrasal verb by Bolinger (1971:85-87). In true phrasal verbs, there is a gradient in terms of the degree to which the particle accounts for

whatever semantic features of movement or activity the combination incorporates. (Bolinger 1971:91-95)

Eighty-seven out of the eighty-nine verbs incorporated in the study of the comprehension of phrasal verbs presented here were monosyllabic (see Table II). The two that weren't were initially stressed bisyllabic verbs. The particles represent Bolinger's (1971) features of motion-through-location or end or result, e.g., in blow out the candles, the candles are out, hence the particle contains the feature 'result,' rather than being a manner adverbial.

1.3.5. Criterial Conditions for Phrasal Verbs

To determine which combinations qualify as phrasal verbs, several criteria have been considered. Fraser (1976), building on the essential features of phrasal verbs set down by idiomaticity pioneers like Onions, Kruisinga, and Kennedy, developed five criteria to distinguish phrasal verbs (what Fraser calls 'verb-particle combinations') from verb-preposition combinations. Fraser argues that it's the syntactic properties of a phrasal verb which distinguish it from other combinations, not its semantic properties (e.g., its non-compositionality). Fraser's (1976:2-5) criteria are:

1. The particle can occur on both sides of the direct object NP, e.g.:

   She ran off the pamphlets.

   She ran the pamphlets off.

   (However, this doesn't apply to the action nominalization.)[9]

   *Her running of the pamphlets off was stupid.

2. The particle can't be preceded by a short adverbial, e.g.:

   *He looked furtively over the client.

3. The particle can't occur in sentence-initial position.

   *In the line, the man reeled.

4. The particle doesn't function with the following NP as a syntactic unit in gapping, e.g.:

   *He sped up the process, and she, up the distribution.

5. The particle doesn't usually receive reduced stress.

   *She ran off [əf] the pamphlets.

Fraser points out that property #1 (i.e., the particle can occur on both sides of the following direct object NP), is enough to distinguish a verb-particle combination from a verb-preposition combination. Of course, this would only apply to transitive phrasal verbs. Bolinger[10] (1971:6-22) has summarized the various tests used to determine if a

combination qualifies as a phrasal verb.

Fraser's properties 1, 3, 4 and 5 were used in the study presented in this paper to determine if a combination qualified as a phrasal verb (see 2.1.1.). Since there were intransitive phrasal verbs as well as transitive, criteria 1 would not suffice. Criteria 2 was not used because Kayne (1985:105) has noted that constructions with adverbs preceding the particle ('V Adv Prt') "...might be possible with adverbs that can reasonably be interpreted as modifying the particle ..." He cites the following as an example:

He walked quickly away

as well as the marginal sentence:

?She sat slowly up.

1.3.6. Syntactic and Semantic Effects of Combining a Verb and a Particle

Part I reviewed three studies of the difficulties second-language learners have acquiring phrasal verbs (Dagut and Laufer, 1985, McPartland 1983 and Yorio, 1989). These studies consider only the semantic characteristics of phrasal verbs as obstacles in the acquisition process (e.g., more opaque phrasal verbs are harder to acquire than transparent combinations). McPartland (1989) considers the

possibility that it is the syntactic effects of combining verbs and particles (along with semantic issues and variations in frequency of use) that make phrasal verbs inherently difficult in L2 learning. The changes that occur when verbs and particles combine may cause problems particularly in the production of these lexical units.

Kennedy (1920) and Fraser (1976) have attempted to detail the syntactic effects of combining verbs with adverbs. Kennedy observed that certain intransitive verbs become transitive (e.g., cough and cough up ...) while certain transitive verbs become intransitive (e.g., clear ... and clear up). In many of these, a reflexive object is understood. Moreover, selectional restrictions vary, e.g., the object of the combination can be very different from the object of the verb alone (e.g., buy a house but buy out a person). And, in combination, some verbs have an active form, but the meaning is passive (e.g., dirt rubs off).

Fraser (1976) supplements Kennedy with the following: There are some verbs that combine with a particle which do not function as a verb without the particle, e.g., there is gun down, but *gun.) Some verbs can occur without the particle, but when they do, have a very different meaning (e.g.: cracked up vs. cracked.)

Also, most verbs which optionally take a directional adverbial don't do so when a particle is present (e.g., speed + adverbial vs. speed up (no adverbial)). And productive verbs (e.g., get) form a verb-particle combination with almost every particle; while less productive verbs (e.g., do, fall, go, keep, make, put, run, take, and turn) combine with few particles, and some verbs combine with only one particle (e.g., chicken + out, and fog + up). And finally, there are only a few verb-particle combinations which may optionally take an object in the sense in which verbs like drink, and read may (e.g., clean up.)

As for the semantic (called 'semasiological' by Kennedy) effects of combining a verb and a particle, Kennedy (1920:27-28) notes these: The meaning of the verb is assigned the modification usually caused by the adverb, e.g., jot down; the particle has a perfective or intensive function, e.g., clean out; the combination has a meaning different from the meaning of the verb because an earlier figurative meaning persisted while the literal meaning disappeared, e.g., go off (explode); the particle may be unnecessary but it seems that the verb can't fully express what the combination does even if the particle is redundant, e.g., fill up (initially, the particle was added to give emphasis or to round out the speech rhythm); and some combinations have taken on special

meanings because of use in special contexts, e.g., kick off (football).

Fraser (1976) adds that some combinations have numerous semantic interpretations (e.g., make up has nine different meanings), while others have only one.

1.3.7. Categories of Phrasal Verbs

All the phrasal verbs in the study presented here, by definition (see 1.3.2.) involved some degree of idiomaticity, that is, none were entirely literal. Some would roughly fit Fraser's (1976:29) category of 'systematic verb-particle combinations' which exhibit a consistent change of meaning due to the presence of the particle, e.g.:

Hang up the picture. (the picture is up)

or, more commonly, the particle assigns a completive sense to the verb, e.g.:

The music has faded.

(The music is soft but can still be heard.)

The music has faded out.

(The action of fading is completed.)

Examples of systematic phrasal verbs from the study are: blow out, hold in and get up.

Other phrasal verbs in the study would fit Fraser's

(1976:29) category of 'figurative' combinations, which are unsystematic. With these phrasal verbs, it is not possible to predict the effect of the particle on the interpretation of the verb, e.g., play down. Figurative phrasal verbs are considered: "a single semantic unit unanalyzable into contributing component parts." Examples from the study presented in Chapter 2 are: pass away, slip up, and wind up.

In addition to these two groupings, Kennedy (1920) and Makkai (1972) allow for literal combinations. Actually, Kennedy's category is entirely literal with each word retaining its usual meaning, e.g., fall down. Makkai's literal category, in which the verb and particle yield a logically deducible meaning, e.g., go away, seems to be closer to Fraser's systematic combinations. However, as mentioned above (see 1.3.2.), none of the phrasal verbs in this study are literal.

Bolinger (1971) attempted a fine-grained analysis resulting in five categories of combinations: first- and second-level metaphors and first-, second-, and third-level stereotypes.[11] However, this break-down seemed too detailed for the purposes of the present study: The aim was to determine if fairly transparent phrasal verbs were processed differently from more opaque combinations. Thus, Fraser's two categories were

adequate.

It is hoped that this discussion on idioms and phrasal verbs has revealed the complexity of the topic. Part I examined studies that dealt with the acquisition of phrasal verbs and other idioms by adult, second-language learners. As Part III revealed, with the numerous syntactic and semantic changes that occur when a verb combines with a particle, it isn't surprising that these lexical items are considered impenetrably hard by the second-language learner. Why wouldn't learners be in a quandary when discovering that verbs they thought were intransitive could become transitive, and vice versa, that selectional restrictions on verbs differ when these verbs combine with particles, and that the meaning of the unit can change so drastically that there is no longer any resemblance to the meanings of the component parts?

The next section, Part IV will examine studies of the processing of idioms and metaphors by native speakers of English. One of the issues raised in Part II will be re-analyzed from the point of view of language processing: that is, whether idioms should be placed on a special list or treated like units in the lexicon (1.2.2. and 1.4.1.). A new issue will also be introduced: whether or not context has an effect on lexical processing (1.4.2.). And a review of the literature on bilingual processing will highlight the

differences between monolingual and bilingual language access. These processing issues will serve to introduce the study of the processing of phrasal verbs, comparing native and non-native speakers of English, presented in Chapter 2.

PART IV: THE PROCESSING ISSUES

INTRODUCTION TO PART IV

Part II, the linguistic aspects of idiomaticity, examined some of the theoretical issues concerning idiomaticity. One such issue dealt with representational models for the treatment of idioms in the grammar. On one view (Katz and Postal, 1963; Weinreich, 1969), phrase idioms are not considered part of the regular lexicon; instead they are relegated to a special idiom list (see 1.2.2). Lexical idioms, such as phrasal verbs, are considered units in the regular lexicon by Katz and Postal.

On the other hand, Fraser (1976) recommends treating all idioms as unitary lexical items and incorporating them in the lexicon, obviating the need for a special idiom list. Makkai (1973) too supports listing each idiom as a regular entry with its idiomatic meaning, but also recommends cross-references for each idiom's constituent words.

When viewed as processing models, these two representational hypotheses predict different types of processing outcomes. However, they do so in the light of particular issues about access and processing that are orthogonal to the Idiom List/Lexical Representation

Hypotheses. These two issues, that of whether processing involves a serial or simultaneous search and that concerning the role that context plays in access, will be considered in Part IV (1.4.1. and 1.4.2., respectively).

1.4.1. The Idiom List Hypothesis vs. The Lexical Representation Hypothesis; special cases of serial and simultaneous processing

Two hypotheses on the processing of idioms have emerged based on the representation models described above: the Idiom List Hypothesis and the Lexical Representation Hypothesis. The Idiom List Hypothesis holds that idioms are stored and accessed from a special idiom list which is not part of the regular lexicon. By contrast, the Lexical Representation Hypothesis holds that idioms are accessed in the same manner as all other words.

These hypotheses on the representation of idioms in the mental lexicon have been empirically examined in a number of processing studies. In these, it has turned out that those researchers supporting the Idiom List Hypothesis have done so under certain assumptions about processing: namely, that only under an assumption of serial processing can empirical evidence for a special idiom list be obtained. That is, it

is only when evidence for both the lexicon and the idiom list is found that one can reasonably argue for an independent idiom list. And, the only situation in which such evidence can be found is if these sources are searched in some serial fashion (one before the other). Note that any empirical finding of simultaneous access to both idiomatic and literal interpretations for an idiom can only be taken as evidence for idiom representation in the lexicon, under conditions of Occam's razor. That is, while it could be that the lexicon and the putative idiom list are accessed simultaneously, it violates simplicity notions to posit a special idiom list unless independent empirical grounds for believing in it can be established. Thus, although the issues of serial vs. simultaneous search and those of idiom list vs. lexical representation are orthogonal, in practical terms, supporting the Idiom List Hypothesis is only to be found via evidence for a serial search, and the Lexical Representation Hypothesis is supportable in a simultaneous search access account. In what follows, evidence for first, the serial, and then the simultaneous access of items will be given.

A Serial Processing Model was initially proposed by Clark and Lucy (1975) to account for the comprehension of figurative sentences such as 'Can you pass the salt?' Influenced by the work of Grice (1975) and Searle (1969),

Clark and Lucy suggest that the processing of such sentences involves first determining the literal meaning of the utterance; then comparing the literal meaning with the context; next, if the literal meaning is inappropriate, determining the conveyed meaning; and finally, using the utterance on the basis of its conveyed meaning.

In a study of the processing of phrase idioms, Brannon (1975) obtained evidence supporting a Serial Processing Model. Her data show a longer reaction time to decide that two idiomatic sentences had different meanings than that two, semantically-equivalent, nonidiomatic sentences had different meanings. She argued that the processing of idioms took longer because the literal meaning was accessed first, followed by the figurative meaning.

The Serial Processing Model was also supported by experimental data by Bobrow and Bell (1973). They presented subjects with a set of sentences with literal interpretations followed by a sentence containing a phrase that was ambiguous between literal and idiomatic interpretations, or a set of sentences with idiomatic interpretations followed again by an ambiguous idiomatic sentence. Subjects were to report on the meaning of the ambiguous sentence they first perceived after the literal set and after the idiomatic set.

Results revealed an increase in the number of literal

interpretations first perceived after exposure to a literal set, and a corresponding increase in the number of idiomatic interpretations after an idiomatic set. Bobrow and Bell argue that these results support the notion that there is a special idiom mode of processing. Since an idiom mode of processing makes it possible to access from the special idiom list, this study was taken to support the Idiom List Hypothesis.

Variants of the Serial Processing Model are introduced by Gibbs (1980, 1986) and Cacciari and Tabossi (1988). Gibbs (1980) argues that it isn't necessary to interpret the literal meaning of an idiom in conversation before deriving its figurative interpretation, but if the literal use of an idiom is heard, the figurative (i.e., conventional) interpretation is automatically analyzed before it is determined that the literal meaning is appropriate. This view is called the Direct Access Model. Gibbs presented empirical evidence for this by having subjects read a story in which the last line was an idiom (e.g., 'You can let the cat out of the bag') and make paraphrase judgments. Reading and reaction times were measured. Results indicated a significant main effect for sentence type (i.e., literal or idiomatic). Gibbs' reaction time differences reveal that idioms take significantly less time to process than literal

interpretations of the same string. These data suggest that the figurative meaning of idioms is comprehended directly, without first computing their literal interpretation, thus supporting a kind of reverse serial model.

In another lexical processing study, Gibbs (1986) had subjects read a story which ended with a sentence containing an idiom (the prime sentence) (e.g., 'He kept it under his hat'). Each story was followed by one of these target sentences:

a) a paraphrase of the literal meaning (e.g., 'It's beneath his cap').

b) a paraphrase of the figurative meaning (e.g., 'He didn't tell anyone').

c) a meaningful but unrelated sentence (e.g., 'It happened to Sally').

Results revealed that it took less time to comprehend the paraphrase of the figurative meanings than the literal meanings. Presumably, this is because subjects processed the conventional, figurative meanings of the literal primes before processing their literal meanings. This corroborates Gibbs' (1980) view that it is unnecessary to compute an idiom's literal meaning before deriving its figurative meaning, thus calling into question the literal first, figurative second, order of the serial processing model.

These results support the view that subjects process the figurative meanings of prime sentences even when their meaning is literal. Gibbs concludes that his subjects were biased toward the figurative (i.e., conventional) interpretation of the literal prime sentences.

In addition to demonstrating the direct access of the figurative meanings of idioms, Gibbs' data shows no evidence that any literal processing took place. If the subjects had computed the literal meanings of the idioms after the figurative meanings, there would have been some facilitation for their responses to the paraphrases of the literal meaning, but there was none.

But Gibbs seems to beg the question: he fails to state how to determine if a group of words is an idiom. Cacciari and Tabossi (1988), on the other hand, try to independently motivate the predictability of an idiom as will be seen below.

Cacciari and Tabossi (1988) examined the on-line processing of Italian idioms (e.g., the Italian equivalent of: 'After the excellent performance, the tennis player was in seventh heaven'). The strings could be interpreted literally until their final word. In the context preceding the idiom or in the idiomatic string itself, there was no indication that an idiom was to occur, so presumably,

comprehension would proceed compositionally until 'heaven' was encountered. Since this word does not fit literally in the context, the sentence would have to be reinterpreted idiomatically.

The task was a cross-modal semantic priming technique (see 2.2.1 for a detailed explanation). Familiar idioms were presented in neutral sentence contexts such as the one given above, and three visually-presented target words were paired with each sentence: an idiom target (e.g., HAPPY), a literal target (e.g., SAINT), and an unrelated control target (e.g., UMBRELLA).

Results showed that the idiom targets were responded to faster than the literal targets, which were not significantly different from the unrelated control targets. These results support Gibbs' (1980) view that idioms are processed directly without their literal interpretation being computed. Since there was no indication prior to the last word in the idiomatic string that an idiom was present, Cacciari and Tabossi note that it's suprising that subjects would abandon the computation of the literal meaning of the sentence before accessing its final word. Since very few sentences in the study contained idioms, the researchers discount the possibility that the subjects were in an idiom mode of processing (see Bobrow and Bell, 1973).

The researchers tested to see if the subjects were in fact biased toward the idiomatic interpretation of some idioms after being exposed to the initial fragment of the idiom. To test this out, two groups of subjects were asked to complete each string at the third or second word from the end (e.g., 'To be in...' and 'to be in seventh...'). Results indicated that the idioms were 'predictable.'

In a second experiment, a cross-modal semantic priming task was used to determine which meanings were accessed when idioms previously determined to be 'non-predictable' were tested. Results showed that the reaction time to literal target words was significantly faster than to idiomatic target words, which were not reliably faster than the unrelated controls. Since 'non-predictable' idioms were found to be initially processed only literally, these data support the Serial Processing model.

The researchers ran a third experiment identical to the second, except that visual targets were presented 300 ms. after the final word of the idiomatic expression. Such a delay with single lexical items allows for post-perceptual, integrative tasks, e.g., resolving lexical ambiguity or interpreting unambiguous words. Cacciari and Tabossi expected that, after the delay, the reaction time for idiomatic targets would be faster than the controls. Results

revealed no difference between the idiomatic and literal targets, which were faster than the controls.

Based on these findings, Cacciari and Tabossi argue that idioms are not encoded as long words in the mental lexicon, as claimed by the Lexical Representation Hypothesis. Instead, their meaning is associated with certain combinations of words and is accessed when there is enough input to make the combination identifiable. The words that make up the idiom are viewed as the same individual lexical items that are accessed during regular literal comprehension.

Cacciari and Tabossi hypothesize that an idiom can't be identified until a certain component, called a 'key,' has been made available. Identifying the figurative meaning of an idiom may depend on whether the key appears early or late in the idiom, and whether the idiom occurs in a context biased toward the idiomatic interpretation of the string. Without a biasing context, Cacciari and Tabossi asssume that the idiom can't be recognized until after the key has been accessed. (However, the researchers did not test for the role of context.) On this view, comprehension of an idiom always starts with literal processing until after the key is activated, at which point the figurative meaning is accessed. Despite the lack of a full characterization of the 'key' of

an idiom, this model does account for the data in the three experiments.

Contrary to the studies above that support a Serial Processing Model, Swinney and Cutler (1979) provide evidence that the access of both the literal and figurative meanings of idioms is simultaneouly initiated when the first word in a string is encountered. This approach is called a Simultaneous Processing Model. Swinney and Cutler required subjects to determine if a visually-presented string of words formed a meaningful, natural phrase in English. Controls were created by replacing one word, the first or last, in the idiom. In other words, there were two substitution positions, e.g.:

IDIOMS	CONTROLS (literal phrases)
out of sight	out of shape
held up	open up
cut it out	try it out
hold on	move on

Results indicated that idioms were judged to be acceptable phrases faster than the matched literal controls for both of the substitution position conditions, thereby supporting the Lexical Representation Hypothesis (idioms are stored and accessed as long words in the lexicon), and the notion that the lexicalized meaning (figurative meaning) is accessed at the same time as the literal meaning.

To be sure the effects weren't obtained because the subjects were in an idiom mode of processing throughout the experiment, the researchers analyzed the first example of an idiom in the study with its matched control and found that the results were similar to the results found across all materials. Moreover, subjects who had indicated some awareness of the presence of idioms were compared with those who indicated no awareness, and it was found that there was no difference in performance between the groups. Thus, it could not be claimed that these results were obtained because subjects were in an idiom mode of processing. Additional checks involved examining whether there was a higher probability of occurrence of a word in the idiom compared to a word in the literal control. The investigators claimed to have avoided this by using the same form class and using a word which had equal or higher frequency than the word it replaced in the idiom. (But it's possible that the whole idiom had a higher frequency of occurrence than the whole, literal, control string.)

To determine if the sequence of items in the phrase played a role, i.e., if the words in the idioms were predictable and affected processing, the investigators instructed subjects to provide the first word that came to mind after seeing phrases in each group with the final word

omitted. No difference was found in terms of the predictability of the idioms vs. the controls.

Returning to the issue of the Idiom List Hypothesis vs. the Lexical Representation Hypothesis, Swinney and Cutler (1979), having evidence for simultaneous processing, argue, under assumptions of simplicity, that both the literal and figurative meanings are represented in the lexicon (Lexical Representation Hypothesis). As discussed earlier, the Idiom List Hypothesis only makes sense under the notion of seriality. Under evidence for simultaneous processing, the notion of a 'special list' can't be supported unless there are independent reasons to posit a special idiom list.

Swinney (1982) has reported using an on-line priming task and finding immediate and simultaneous access of both the literal and figurative meanings of phrase idioms, e.g., kick the bucket, which have both a literal and figurative interpretation when presented in sentence contexts. This finding of simultaneous access held independently of whether the context was biased toward the literal or figurative interpretation. (See 1.4.2. for more on the role context plays in lexical access.)

In addition to the Serial Processing Model and the Simultaneous Processing Model, there is evidence that stradles both approaches: In a study of the interpretation of

idioms and metaphors, Ortony, Schallert, Reynolds, and Antos (1978) got mixed results depending on the extent of context provided. In a reaction time study of the processing of metaphors under long and short context conditions, Ortony et al. (1978) found no significant difference between the processing of metaphorical and literal targets in the long context condition, hence providing counter-evidence to the Serial Processing model. They conclude: "Thus, the process of first interpreting a sentence literally then determining that such an interpretation does not fit the context, and finally computing the intended figurative meaning does not seem to always underlie the interpretation of figurative language." (p. 470) However, in the short-context condition, there was a significant difference in the processing of metaphorical and literal targets, with metaphorical targets taking longer than literal.

Ortony et al. also examined the response time taken to understand: idioms which were to be interpreted idiomatically; idioms which were to be interpreted literally in view of the context; and literal paraphrases of idioms (controls). Results indicated that the idioms to be interpreted idiomatically and the controls were processed faster than the idioms that were to be interpreted literally. Two possible explanations are given: 1) idiom familiarity

led subjects to idiomatic interpretations before attempting literal interpretations, and 2) the meaning of an idiom is stored in the same way as the meaning of a single lexical item, implying lower processing demands at the syntactic level than non-idiomatic expressions of comparable syntactic structure (p.475). The latter explanation supports the Lexical Representation Hypothesis.

1.4.2. The Contextually Predictive Model vs. The Contextually Independent Model

Another important issue in the lexical processing literature is the role context plays in lexical access. There are two opposing views: the interactionist view and the modularist view. According to the interactionist view, (e.g., Cole and Jakimik, 1979; Marslen-Wilson and Tyler, 1980) the comprehension device must be a 'top down' system, or it would not be able to handle ambiguous information. In a top-down argument, higher-order information forces resolution at an early stage of processing. According to the modularist view (Chomsky 1980, 1981; Fodor, 1983) a modular, 'bottom-up' system can handle ambiguity at one level of analysis by allowing resolution to occur at a higher level of processing. (Swinney 1982:153)

Non-modular functions, like problem solving, are domain general routines that involve the evaluation of world knowledge. Fodor (1983) considers the language processing system as one module (there are other modules for other cognitive processes). Others, e.g., Swinney (1979) and Forster (1976) posit sub-modules within the language module. These sub-modules are informationally encapsulated (i.e., they do not involve the evaluation of world knowledge), rapid, automatic, and contextually impenetrable.

On the interactionist (non-modular) view of lexical processing, prior context constrains or predetermines lexical access, and thus only words related to the contextually-relevant meaning of the ambiguity would be accessed. This is called the Contextually Predictive Model. On the modularist view (or Contextually Independent Model) of lexical access, all meanings related to the lexical ambiguity, whether contextually appropriate or not, would be accessed, at least momentarily (Swinney 1982:157).

Homographs (lexical ambiguities) such as idioms and metaphors are often used to study the autonomy of lexical access (and the notion of sub-modules), for the following reasons: first, since most words have multiple meanings, the processing of lexical ambiguities reflects language processing in general. Second, because both meanings of

lexical ambiguities are easily distinguished, the effects of context on the activation of each of the meanings can be examined empirically. (Swinney 1982: 155-6)

Studies by a number of researchers (e.g., Tanenhaus et al. 1979; Swinney 1979; and Garrett, 1978) have demonstrated that, regardless of context, all meanings related to an ambiguity are accessed simultaneously. In an on-line task, Swinney (1979) required subjects to make visual lexical decisions to words related to the contextually appropriate meaning of an ambiguity, the contextually inappropriate meaning, and an unrelated control word while listening to contextually biased sentences. The visual words were presented immediately after the ambiguity in the sentence (point one), and three syllables later (point two). Swinney found significant facilitation for lexical decisions to visual words related to the contextually appropriate meaning as well as the contextually-inappropriate meaning at test point one. These results support a Contextually Independent Model of lexical access in that both meanings of the ambiguity were accessed (as shown by priming for both meanings), regardless of a strong contextual bias. By test point two, there was significant facilitation only for lexical decisions made to words related to the contextually-relevant meaning. Swinney claims that the results at test

point two support the notion of a post-access decision process which uses context to determine the appropriate meaning of the word, maintaining activation for the appropriate meaning but suppressing the inappropriate meaning.

Onifer and Swinney (1981) in another on-line task involving biased sentences, examined ambiguous lexical items (e.g., 'scale'), which had one very frequent meaning ('weight') and one very infrequent meaning ('fish'), in strongly biasing contexts. The results were the same as in Swinney (1979): both meanings for the ambiguity were activated immediately after the ambiguity was heard, i.e., even the infrequent meaning when the context required the more frequent meaning. Swinney (1982:158-9) concludes:

> Thus even when both frequency and semantic context dictate that one meaning is both unlikely and inappropriate, that meaning is still momentarily activated by the lexical access system. These data provide a strong case in support of there being an autonomous, form-driven lexical access subsystem (module) in the comprehension process, and they support the argument that context does not behave in a predictive or totally interactive fashion with respect to lexical access ...
> ... Further, these data argue that lexical access is an exhaustive process, not a terminating ordered search[12] as has been argued throughout much of the literature. (Forster 1976, Hogaboam and Perfetti, 1975)

These results are interpreted by Swinney (1982) as providing empirical evidence for the autonomy of lexical

access and, hence, support for a Contextually Independent Model of lexical processing.

The little evidence that exists for the interactionist view in studies relevant to idiomatic processing is presented by Ortony et al. (1978). They found that metaphorical targets took significantly longer to process than literal targets in one context condition (i.e., the 'short-context' condition; there was no significant difference in the long-context condition). They claim that:

> whether or not a target sentence requires a relatively large amount of processing time is a function of how easily it can be interpreted in the light of contextually determined expectations rather than a function of its non-literalness. (p.467)

The study presented in Chapter 2 attempts to sort out this modular/autonomous vs. non-modular/interactionist issue as regards idiomatic processing. It specifically examines whether context affects which meanings of phrasal verbs are accessed in on-line processing.

The previously mentioned studies of the processing of idioms and metaphors by native English speakers reveal conflicting results as to the nature of the representation of idioms in the lexicon, the manner in which idioms are accessed, and the role context plays in the processing of idioms. The study presented in this dissertation will attempt to lend support, through empirical evidence, to one

view over another in each area in dispute. The study will specifically test whether the figurative meanings of phrasal verbs are accessed at the same time as the literal meanings, without the literal meanings, or after or before the literal meanings. It will also investigate whether context plays a part in the initial access of phrasal verbs. But more than this, the study will compare and contrast how non-native speakers of English store and access phrasal verbs with how natives process the same items. Since non-natives are being examined in the study, the next section will present a brief overview of empirical findings about language processing by bilinguals.

1.4.3. Bilingual Processing

The beginning of Part IV examined the studies of language processing by monolingual, English speakers, and delved into two major processing issues: the access of literal and figurative meanings, and the role of context in lexical processing. This section will review the studies of language processing by bilinguals.

Using reaction-time measures to determine efficiency in information processing by bilinguals, Dornic (1980) found that bilinguals are slower at elementary decoding

(comprehension) and encoding (production) operations than monolinguals. Dornic (1980:120-121) studies simple comprehension and production processes because, he claims:

> It is these simple processes that most often cause a 'chain reaction' - a considerable deterioration in more complex operations. If a person is slower in performing an extremely simple comprehension task in his second language, he will also comprehend less when listening to a lecture in that language. The same applies to language production.

(Speed of processing is considered an indication of increasing automaticity: As an operation is repeated, it becomes more automatic.)

In a study requiring subjects to detect sequences or combinations of digits according to certain rules, Dornic (1969) found his subjects' performance to be slower and worse in the nondominant language, although the subjects had rated themselves as 'fully balanced' on such a task.

To measure the encoding efficiency of the non-dominant (NDL) vs. the dominant language (DL), Dornic studied the reaction time (naming latencies) for subjects to name colors, digits, and common objects. He found an increase in reaction time when subjects were encoding in the NDL compared to the DL (p.123). That is, verbal labels for everyday objects, which can be assumed to be overlearned in both languages, were found to be more accessible in the DL than in the NDL.

Dornic (1969) found a tendency for bilinguals to count slower and underestimate numbers when doing rapid counting in their NDL compared to their DL. Dornic attributed this to a lower internal pronounceability and coding capacity in the NDL.

From these studies, Dornic (1980) concludes that the NDL is characterized by slower functioning, a lower degree of automaticity, and an inferior knowledge of grammar and syntax (p.125). He claims that the bilingual conceals these deficiencies by using strategies and compensatory processes, thereby presenting an apparent balance between the two languages. However, whenever any form of stress is added, e.g., information overload, environmental stress, emotional stress, social stress, or fatigue, the imbalance between the DL and NDL becomes evident.

Favreau (1981) (reported in McLaughlin et al. 1983) found that on a lexical decision task, there was evidence of semantic facilitation[13] for both balanced and dominant bilinguals in their L1 and in the long-time interval condition in the L2; however, only balanced bilinguals exhibited semantic facilitation in the short-time interval condition in the L2. This was considered evidence that the dominant bilinguals, though fluent in their L2, are less efficient at automatized lexical processing than balanced

bilinguals.

Henning (1974) (reported in McLaughlin et al., 1983) found that on a vocabulary recognition task, native speakers and more advanced L2 learners made errors indicative of semantic clustering for lexical items, while less proficient L2 learners made errors indicative of acoustic clustering. McLaughlin el al. (1983) interpret these results as indicating that the less advanced learners had not automatized acoustic and orthographic aspects of the language, and therefore, had less cognitive energy for semantic aspects.

Magiste (1979) (also reported in McLaughlin et al., 1983), used measures of reaction time to verbal stimuli to determine the decoding and encoding abilities of German-Swedish teenage bilinguals, and monolinguals. Results indicated that monolinguals performed faster, particularly in the encoding tasks, than the bilinguals. It was hypothesized that the bilinguals' poorer performance was due to their failure to reach the same degree of automatic familiarity with L2 words as monolinguals achieve in their only language.

These studies seem to indicate that monolinguals outperform balanced bilinguals, and balanced bilinguals outperform dominant bilinguals on language processing tasks.

Even when the dominant bilinguals are very fluent in the L2, they are less efficient at processing than balanced bilinguals and monolinguals.

The study presented in Chapter 2 will compare the performance of advanced, adult second-language learners with monolingual speakers of English on a lexical processing task. In terms of language proficiency, since they learned English mainly as adults, these non-native speakers should be considered less fluent than the balanced bilinguals (and perhaps less fluent than even the dominant bilinguals) in the bilingual processing studies presented above.

FOOTNOTES

[1] The term 'phrasal verb' was coined by Henry Bradley according to Logan Pearsall Smith (reported by Fairclough (1965:50): quoted in Bolinger (1971)). Like Bolinger (1971) I use the term 'phrasal verb' because it is the one most commonly used, it allows for several degrees of closeness between the verb and particle, and does not exclude verb idioms of three words as does Taha's (1960) term 'two-word verb.'

[2] The Longman Dictionary of Phrasal Verbs (Courtney 1983) lists over 12,000 entries; The Oxford Dictionary of Current Idiomatic English, Volume 1: Verbs with Prepositions and Particles (Cowie and Mackin 1975) lists over 7,000.

[3] The phrasal verbs were: turn up (appear), let down (disappoint), go out (leave), take away (remove), mix up (confuse), cut off (disconnect), put up with (accept), burn down (be destroyed by fire), look up to (respect), come in (enter), get up (rise), go into (investigate), give in (surrender), shoot down (destroy by a missile), and show off (boast).

[4] In a study of 100 verbs and 25 formants, Makkai (1972) found that the idiomatic lexicalization of verb-particle combinations (idiomatic constructions) depends on such combinations occurring as literal constitutes. Makkai claims that this supports Kronasser's (1952) and Kovacs'(1961) assumption that lexeme formation in natural languages moves from the concrete (literal) to the abstract (figurative). Perhaps SLA runs on a parallel course from the concrete to the abstract.

[5] The complete list of examples in each area is as follows: The lexemic idiomaticity area includes: phrasal verb idioms, Tournure idioms, irreversible binomials, phrasal compounds, incorporating verbs and pseudo-idioms. The sememic idiomaticity area includes: proverbial idioms, familiar quotations, first-base idioms, institutionalized politeness, and additional hypothetical cases.

[6] 'Phrasal verbs' are also called 'verb-adverb combinations' by Kennedy (1920); 'compound verbs' by Kruisinga (1932); 'collocations' and 'phrases' by Palmer (1938); 'composite lexemes' by Swadesh (1946); 'phrase idioms' by Householder (1959); 'semantically exocentric expressions' by Lees (1968); 'two-word verbs' by Taha (1960);

'lexical idioms' by Katz and Postal (1963) 'discontinuous verbs' by Live (1965) 'compound lexical clusters' by Pei (1966); 'formulas' by Nida (1966); 'locutions' by Liem (1966) 'specialized hypermorphemes' by Pike (1967); and 'verb-particle combinations' by Fraser (1965, 1970, 1976).

[7] Kruisinga and Erades depict two scenarios: when the noun is stressed, the adverb goes immediatly after the verb; but when the noun has been previously mentioned, the adverb goes after the noun. However, they qualify this by claiming that if the adverb has taken on a new meaning in combination with the verb, (i.e., the phrasal verb is idiomatic), it occurs after the verb, e.g., 'to back up a friend.'

On Kennedy's analysis, when there is a noun object, the adverb appears after the verb. Exceptions to this rule occur when the noun object is short or if the speaker wishes to stress the particle.

[8] Only 18% of the monosyllabic verbs in Kennedy's sample were non-Teutonic in origin, e.g., add up. Of the bisyllabic verbs, 55% were non-Teutonic, e.g., figure out.

[9] As Kayne (1985:102) has pointed out, the 'V NP Prt' is an instantiation of a 'small clause' construction, and since small clause constructions do not take derived nominals, it is not surprising that derived nominals containing a phrasal verb would be ungrammatical.

[10] Bolinger (1971:6-22) lists these tests to distinguish phrasal verbs from verb-preposition combinations:

a. Replaceability by a simple verb (Live, 1965: 428).
b. If it's transitive, the combination should passivize.
c. If it's transitive, the combination should allow an action nominalization (Lees, 1968; Fairclough, 1965; Fraser, 1970).
d. If it's transitive, the particle can either precede or follow the noun object (Mitchell, 1958; Fairclough, 1965).
e. If it's transitive, pronouns usually precede the particle (Mitchell, 1958; Fairclough, 1965).
f. Whether the combination is transitive or intransitive, adverbs cannot occur between the verb and the particle unless the particle is in its most literal sense (Mitchell, 1958; Fairclough, 1965).
g. The adverb can be accented.
h. If the combination is transitive, the particle can precede a simple definite noun phrase without taking it as its object.
i. Phrasal verbs can be defined by simply listing them.

[11] a. In a first-level metaphor, the literal meaning of the particle is extended, e.g., the literal up becomes the figurative up of load up.

b. In a second-level metaphor, the meaning of the whole phrasal verb is figuratively extended, e.g., make up a face.

c. A first-level stereotype refers to the semantically additive combining of a verb and a particle.

d. A second-level stereotype refers to a phrasal verb that is no longer semantically additive, i.e., it is non-compositional.

e. In a third-level stereotype, the whole verb phrase is frozen, e.g., to put on airs.

[12] In a terminating ordered search, possible word forms are compared against internal representations in order of their frequency of use in a search that ends once some contextually-compatible entry is encountered.

[13] On a semantic facilitation task, subjects must make word/non-word judgments about a target word for which a prime signal is given that's either semantically related or unrelated to the target. The prime that is semantically related to the target word increases the speed of processing the target.

CHAPTER 2: THE STUDY: THE PROCESSING OF PHRASAL VERBS BY NATIVE AND NON-NATIVE SPEAKERS OF ENGLISH

INTRODUCTION TO CHAPTER 2

From the standpoint of the problems non-native speakers may experience in understanding idioms, there are three basic stages of comprehension at which their processing may be disrupted: the level of accessing the meaning of the idioms from memory; the level at which that meaning is integrated into a first-pass sentential analysis (involving structural and lexical information integrated at the level of logical form); or, a later stage (according to standard models) where pragmatics, implicature, and world knowledge information is incorporated into sentence meaning. The study presented here examines the most basic stage of these stages, that of initial perceptual access, with a goal of discovering whether (as predicted by many theories), a basic source of non-native speakers' difficulties in the comprehension of idioms stems from faulty information access.

In particular, the study presented here investigates the access of information associated with phrasal verbs to determine if non-native speakers simultaneously access <u>both</u> the literal and figurative meanings during discourse comprehension (as has been reported for native speakers in Swinney (1982) or whether access is limited to only the literal or figurative interpretation of the idiom at any one

time (the Serial Hypothesis). In addition, this study also explored whether context influences access; that is, whether meanings are accessed independently of context or whether context dictates which meanings are activated. Ultimately, the goal of this study is to determine to what extent the deficit non-native speakers display in the use of phrasal verbs can be attributed to abnormal access processes. In addition, as no on-line processing evidence yet exists concerning phrasal verbs per se, this study also represents pioneering work focused on discovering if the current results concerning processing of idioms found with native speakers apply equally to phrasal verb constructions.

In what is reported below, a basic cross-modal semantic priming technique (see Swinney, Onifer, Prather, and Hirshkowitz, 1976) was used to detect which meanings were activated in on-line processing of phrasal verbs by both native and non-native English speakers. Phrasal verbs (both in idiomatic phrasal verb constructions and in verb + preposition constructions) were given in auditorily presented sentences, and subjects were required to both understand the sentences and to name a visually-presented probe word. One of the probe-conditions involved a probe that was related to the literal meaning of the verb (in the verb + preposition construction). A second probe-condition involved a probe that

was related to the figurative meaning of the whole phrasal verb. There were also probe-conditions involving unrelated control words matched for frequency and length with each of the related probes. The time it took for subjects to begin to say each probe word was captured by a computer/timer apparatus. The assumption with this type of priming task is that related words will be named faster than unrelated (control) words (priming) just in the case that the meaning of the phrase the probe word is related to has been accessed during on-line processing.

Since the processing study would investigate which meanings were available to the subjects in an on-line comprehension task, it was first necessary to identify a group of phrasal verbs (out of the thousands that occur in English), that advanced non-native speakers were likely to be familiar with. If these subjects didn't know both the literal and figurative meanings, only one meaning would be available to them in the processing task, thereby skewing the results. To control for this, non-native speakers' comprehension was assessed in a pre-test which involved subjects' writing a paraphrase of the part of the sentence containing the phrasal verb (Pre-test I).

Since the verbs were to be presented in context in the processing study, ratings as to how normal (i.e., how typical

of English) they were, had to be obtained from native speakers. The ratings from this pre-test were taken into consideration in the analysis of the processing results (Pre-test II).

To determine whether semantic transparency played a role in lexical access, the phrasal verbs were also rated for transparency in a third pre-test, and the processing results were subsequently analyzed according to a transparent vs. opaque classification scheme. Below, details of the three pre-tests will be presented, followed by the on-line processing study.

PART I: PRE-TESTS

2.1.1. PRE-TEST 1: THE OFF-LINE COMPREHENSION STUDY

METHODS

Subjects: Fifty-seven subjects either at the most advanced level in an ESL program or enrolled in undergraduate or graduate courses at the City University of New York participated in this pre-test. Therefore, they were all relatively advanced in terms of language proficiency. Only subjects with a high level of proficiency in English were

selected for this task because it could be assumed (based on the SLA studies of idiomaticity) that lower-proficiency language learners would not have acquired a sufficient number and range of phrasal verbs, particularly the more opaque kind. Sixteen different L1s were represented, but the majority of subjects were Chinese, Japanese, and Spanish speakers (see Table I).

Materials and Procedures: All the phrasal verbs in the study were idioms (see 1.2.1.). A verb was considered a phrasal verb (as opposed to a verb + preposition combination) for this pre-test based on four of the five criteria established by Fraser (1976) (see 1.3.5.):

1. the particle can occur on both sides of the direct object NP (for the 41 transitive verbs in the study), e.g.:

   He tripped up the champion with a surprise move.

   He tripped the champion up with a surprise move.

2. The particle can't occur in sentence-initial position.

   The man tried on the new suit.

   *On the new suit, the man tried.

   *On, the man tried the new suit.

3. The particle doesn't function with the following NP as a syntactic unit in gapping

   She left out the price, and he, out the size.

4. The particle doesn't usually receive reduced stress.

We stopped off [ɔ f] the next day at my sister's house.

*We stopped off [ə f] the next day at my sister's house.

Fraser's stipulation that 'the particle can't be preceded by a short adverbial,' was not applied. (See Kayne's (1985) refinement, 1.3.5.)

The phrasal verbs chosen all occurred in American English and were considered (by this researcher) to be combinations that advanced non-native speakers might have acquired. Moreover, every effort was made to select phrasal verbs that did not have a multiplicity of meanings since, in the processing study, the access of literal and figurative meanings would be tested, and if a phrasal verb had several figurative meanings, this might confound the processing results.

Eighty-nine phrasal verbs were selected (see TABLE II) out of the 7,000 phrasal verbs and verbs with prepositions that appear in The Oxford dictionary of current idiomatic English: Volume 1: Verbs with prepositions and particles (Cowie and Mackin 1975). Two- to four-sentence contexts were written for these eighty-nine phrasal verbs. (When the verb

was transitive, the object was placed after the particle so that both transitive and intransitive items would appear with the particle immediately after the verb.) These contexts were biased toward the figurative interpretation of the phrasal verb. Contexts of approximately the same length were created for each corresponding verb + preposition construction. These contexts were biased toward a literal interpretation of the verb and the following prepositional phrase. In order to keep processing considerations equivalent in these two constructions, in the carrier sentences for each pair, all the words preceding the verb and one (or two) words after the preposition/particle were identical.

One phrasal verb, give up, was assigned a context biased toward only the figurative meaning because no acceptable literal match could be created. (This un-matched item was dropped from the processing study.) Thus, there were 89 contexts biased toward figurative interpretations of phrasal verbs and 88 contexts biased toward literal interpretations of verbs with prepositions (see Appendix A).

To determine if advanced non-native speakers knew both the literal and figurative meanings of these verbs, subjects were asked to write a paraphrase of each carrier sentence (or part thereof), e.g.:

A. A prisoner escaped on foot from Rikers Island last night. The police said he ran over an old bridge that wasn't used anymore and disappeared.

B. The boy's parents were really upset about the car accident. The police said he ran over an old man on the way home from the party and didn't even stop.

A is biased toward the literal meaning of run (i.e., 'walk quickly') and the prepositional phrase 'over an old bridge.' B is biased toward the figurative meaning of the phrasal verb run over (i.e., 'hit with a moving vehicle'). It was assumed that this paraphrase task would underdetermine comprehension, since some subjects might understand more than they could express in written English. On the other hand, in some cases, the contexts might evoke meanings that the subjects could not provide if the verbs had been presented out of context.

The paraphrases provided by the non-native-speaking subjects were then graded by one native-speaker on a scale of 1 to 4, with 1 representing 'no response' or 'an incorrect response'; 2, 'a statement which indicated some understanding, though not a true paraphrase'; 3, 'a partial

paraphrase'; and 4, 'a full paraphrase.' Examples of scores of 1 to 4 are given below for paraphrases of the sentence in which the context was biased toward the figurative meaning of the phrasal verb touch up:

> Joe was taking art lessons with a very strict teacher. Normally, he didn't mind her critical feedback. But when she touched up his watercolor painting, he got angry.

Score of 1 (incorrect response)

"when his teacher felt the painting with her hand ..."

"when she spoke about his painting"

Score of 2 (some understanding, but not a true paraphrase)

"when she criticized his ..."

Score of 3 (a partial paraphrase)

"when she drew a line on his water color painting."

Score of 4 (a full paraphrase)

"she tried to mend it by adding or changing something"

See APPENDIX B for the scoring sheet.

The results of this comprehension study were to be used for two purposes: to create a list of the best-known pairs (i.e., verbs with prepositions and phrasal verbs), and to identify those non-native speakers who demonstrated familiarity with phrasal verbs as possible subjects for the subsequent processing study.

RESULTS

Because it took the non-native speakers quite a long time to do the comprehension study (3 1/2 to 4 hours to complete the task), some subjects did only part of this task. Those who did not do the full test completed pairs of literal and figurative items. The break-down is as follows: 28 subjects completed 177 items (the entire task); 22 subjects did 76 items; 4 subjects 102 items; 2 subjects 28 items; and 1 subjects did 126 items. For the list of items completed by each subject, see TABLE III.

In keeping with the results of the SLA studies of idiomaticity (see 1.1.1.), this study revealed that despite the advanced level of proficiency of the subjects, many had difficulty paraphrasing these verbs. Before the verbs were analyzed as to how well they were known by the non-native-speaking subjects, the poorer-performing subjects were identified and deleted from the data. To separate the higher-performing subjects from the lower-performing subjects, those who had scored 3s or 4s (that is they produced partial or full paraphrases) on at least 75% of the items were identified. Thirty-two subjects were in this group. Twenty-five subjects who did not meet this criteria were dropped. For each of the remaining subjects, paraphrase

scores were computed by adding the 'valid' (considering only conditions where a response was given) percent for scores of 3 and 4 for the literal and figurative meanings. The paraphrase scores of these high-performing subjects (see Table IV) were then analyzed to establish a ranked list of the best-known to the least-known items.

It is evident from TABLE IV that the literal and figurative meanings of phrasal verbs are differentially learned by advanced non-native speakers. For example, the literal and figurative meanings of turn up, waste away, pass out, pass away, wipe out, and watch out, were correctly paraphrased by most of the subjects, while many subjects performed poorly on such items as rub off, let up, slip up and tell off. It should be noted that this list represents learners' demonstrated knowledge of both the literal and figurative meanings of the verb; therefore, high scores on one meaning could drive up the overall score. For a list of best-known to least-known phrasal verbs (i.e., figurative meaning alone), see TABLE V. Although turn up has move down (23 points) on the list, compared to its position on the list from TABLE IV, most of the best-known items are still at the top of the list. Contrary to the literature on the acquisition of idiomaticity reviewed earlier (see 1.1.1.) the phrasal verbs that were shown to be well-acquired were not

necessarily transparent in meaning, e.g., turn down and have over. (Perhaps they are frequently used and frequency overrides transparency in the acquisition process.)

It has been determined that between 30 and 40 pairs would be sufficient (and manageable) for the on-line processing, and hence, the 40 best-known pairs were subsequently selected for the processing study. This guaranteed that the subjects (who were in this pre-test and who were to be used in the on-line processing study), knew both the literal and figurative meanings of virtually all of the items selected for the processing study. In other words, a set of verbs and a set of L2 learners who had demonstrated that they were familiar with both the literal and figurative meanings of these verbs were established from this study.

In addition to eliminating the items that were the least well-known by the 32 high-performing subjects, 15 additional items were deleted from the top 55 (leaving 40 items) for the following reasons:

1. The literally-biased sentential contexts were judged awkward or contrived by 2 native English-speaking judges. For example, waste away (number 84 in the comprehension study), come apart (19) (see also #4 below), pass away (67), clear up (12), pass out (68), crack down (54), see off (34), and slip away (76). Do over (6), had awkward

contexts in both the literal and figurative biases. (See Appendix A for the contexts.)

2. The meaning of the verb with preposition was very similar to the meaning of the phrasal verb. For example, cheer on (5), hand down (88), buy up (89), keep in (7), and call in (2). (See Appendix A for the contexts.)
3. The literal interpretation involved a phrasal verb, not a verb with preposition, e.g., wipe out (46). (See Appendix A for context.)
4. The literal interpretation involved a verb with adverb not a verb with preposition, e.g., come apart (19).

The remaining 40 verbs, which were chosen for the processing study, appear in Table VI ranked from best-known to least-known.

2.1.2. PRE-TEST 2: NORMALCY JUDGMENTS

METHODS

Subjects: 42 native speakers of English rated the contexts for how normal (or typical of English) they were (see Appendix C).

Materials and procedures: Although judgments for only the forty literal and figurative biasing contexts were needed (for the processing study), judgments were obtained on all

items (89 figurative and 88 literal) because this test was administered before the less-well known or otherwise problematic verbs were identified and deleted.

The contexts were presented in the same order as in the comprehension pre-test. The judges rated the verbs in context on a seven-point scale where 1 represented 'normal' or 'typical' of English and 7 represented 'not normal.'

RESULTS

The results of the native speakers' judgments of how normal the contexts were appear in Table VII (for the 40 items used in the processing study). Mean scores were calculated and only two items had means of 5 or higher, i.e., 'not very normal.' These were: sign up and get along. In both cases this rating occurred when the bias was toward the literal meaning. (See Appendix C, numbers 15 (Part I) and 60 (Part II), respectively.)

These two items were later examined in the processing study to determine if their reaction times were different from the mean reaction times to other 'normal' items. (They were not.) All other items were rated 'very normal' to fairly normal (1 to 4) on the pre-test.

2.1.3. PRE-TEST 3: SEMANTIC TRANSPARENCY

INTRODUCTION

It was desirable that the results of the processing study be analyzable with regard to transparency vs. opacity of items, to determine if semantic transparency affected lexical access. One of the considerations in running this pre-test was that certain items would be lexicalized by non-native speakers while others would not. As noted in Chapter 1 (see 1.3.2.), all the phrasal verbs in the study were to some degree idiomatic, i.e., none were entirely literal. However, categorizing each phrasal verb as either systematic or figurative proved to be a daunting task. For example, are waste away (deteriorate) and take over (assume control) systematic or figurative? It is hard to draw the line. In fact, Kennedy (1920:8) expressed this view in the following way: "it would be a hopeless undertaking to classify every verb-adverb combination as either close enough to be termed a verb-adverb compound, or loose enough to be called merely an adverbial modification." (Here, a 'verb-adverb compound' corresponds to 'figurative' phrasal verbs and 'adverbial modification' to 'systematic.') Bolinger (1971), recognizing that phrasal verbs can be spread across a continuum of closeness, agrees with Kennedy's position.

However, an attempt was made to distinguish the more transparent (i.e., systematic) from the more figurative phrasal verbs in order to analyze the processing data to determine if there was a processing difference.

Instead of arbitrarily categorizing the phrasal verbs as 'systematic' or 'figurative,' native-speaker judgments on a 7-point scale were obtained for this analysis.

METHODS

Subjects: Twelve native-speakers gave judgments on how semantically 'transparent' or 'opaque' the 40 phrasal verbs in the processing study were. These subjects were all English-as-a-second-language teachers, because it was felt that their familiarity with analyzing language would make it possible for them to give informed judgments.

Materials and Procedures: The materials were presented visually to subjects. On each line of the test, a verb appeared with a prepositional object or object of the phrasal verb given in parentheses. The objects were taken from the sentential contexts in the comprehension pre-test, and occasionally, an additional object was provided to clarify which meaning of the verb was to be rated for transparency. The meaning was also provided in parentheses. When the phrasal verb was intransitive, the subject and a time clause

were provided (See Appendix D). This information was given to ensure that subjects were rating the phrasal verb for the specific meaning that was expressed in the contexts in the processing study.

RESULTS

The results of this pre-test are given in Table VIII. The phrasal verbs were grouped into the category of 'transparent' or 'opaque' based on mean scores averaged across subjects. Scores of 1 to 4 were classified as 'transparent' and 5 to 7 'opaque.' Overall, 17 items fell into the 'transparent' category and 23 were judged 'opaque.'

The most transparent items (with mean scores of 2) were: try on, go up, blow out, run away, and throw out. The most opaque (or least transparent) items (with mean scores of 6) were: carry out, drop off, lead on, drag out, turn down, bounce back, carry on, dig in, pull up, turn up, get by, get along, and pull off (with a mean score of 7).

When examining the scores for acquisition (comprehension) and transparency together, (see TABLE IX), no strong picture emerges. The best-known items (valid percent = 100) had scores of 2, 5, and 6 for transparency, i.e., they were mainly opaque. In the group of least-well-known phrasal verbs (valid percents from 62.1 to 75.1), the range of

transparency was from 2 to 5 (one items scored 2 the other 3 scored 5), i.e., they were mainly opaque, too.

In conclusion, either the judgments on the transparency of phrasal verbs were inaccurate or there is no systematicity to the acquisition of phrasal verbs except possibly that related to a transfer-of-training, i.e., second-language learners acquire the phrasal verbs that are covered in ESL/EFL textbooks.

PART II: THE ON-LINE PROCESSING OF PHRASAL VERBS

2.2.1. METHODS

Subjects: 37 non-native speakers of English and 35 native speakers participated in the on-line processing study. Five non-native speakers were deleted from the final analysis because they had not been pre-tested with the comprehension study and they expressed doubts about their proficiency in English (doubts with which the investigator agreed). Thus, data from 32 non-native speakers was analyzed; Seventeen of these 32 had been pre-tested with the Comprehension Study. (See TABLE X) Three native speakers were deleted from the final analysis, one, because of equipment malfunction, another because she had trouble reading the words on the monitor, and the third to make the number of subjects

equivalent in the two groups. The last tested subject was deleted for this reason bringing the native-speaker total to 32 also.

Materials and Procedures: After identifying the 40 phrasal verbs (and matched verbs + prepositions) that had been acquired by advanced non-native speakers, these items and their discourse contexts were recorded on audiotape for use in the processing study.

A cross-modal semantic priming technique (see Swinney, Onifer, Prather and Hirshkowitz, 1976) was used to detect on-line activation (and hence access) of the literal and figurative meanings. Using the results of semantic facilitation (see e.g., Meyer, Schvaneveldt, and Ruddy, 1975) a cross-modal semantic priming technique reveals the activation of word meanings during sentence comprehension. For example, if the words nurse and straw are flashed on a computer monitor, reaction times to say these words out loud will be approximately the same for the two words because these words are identical in length, number of syllables, and word frequency. However, if a sentential context is presented with the word doctor in it, and subsequently the words nurse or straw are flashed on the screen, reaction times will be faster for nurse than for straw because there would be 'priming' from the 'accessed' word doctor to the

word nurse.

Thus, the cross-modal semantic priming technique involves presenting sentences auditorily and having subjects respond to probe words presented visually on a computer screen. For each phrasal verb, e.g., run over, a set of four probe words was created. This set was composed of one experimental word semantically related to the literal meaning of the verb, in this case walk, one experimental word semantically related to the figurative meaning of the phrasal verb, that is, hit, and two control words which were not semantically related to the literal or figurative meaning of the verb, but each was matched to one of the experimental words for frequency, length, and number of syllables: in this case thin was matched with walk, and aid was matched with hit.

Each phrasal verb was presented in the same context as in the paraphrase task. For each item, the biasing context appeared prior to the verb. Thus, materials for each of the 40 experimental items comprised two sentential contexts and four 'probe' words. The sentence materials were divided into two 'scripts,' in which each script contained half of the experimental items biased toward the literal meaning of the verb + preposition and half biased toward the figurative meaning of the phrasal verb. These two scripts of 40 items

each were tape recorded along with 40 'filler' sentences interspersed randomly in each script. The fillers were approximately the same length and structure as the experimental sentences. Five practice sentences preceded the experimental sentences and fillers bringing the total to 85 sentences in any one script (see Appendix E). The four probe words were divided into four 'word lists' in which each of the four probe conditions was equally represented and counterbalanced. Each subject heard one script combined with one word list, and thus, no subject heard more than one version of each sentence nor saw more than one probe word for any one sentence.

Subjects were told that they would hear a series of sentences through the headphones and they were to listen carefully and try to understand the meaning of the sentences. They were also told that they would see a word flash on the screen in front of them at some point during each item, and they would have to say that word out loud as quickly as possible. The reaction time from the moment the word appeared on the screen to the moment the subject began to say the word was captured by an IBM computer apparatus, and a proprietary software program, 'RT Lab,' controlled all timing and presentations.

To illustrate, subjects heard a context like the one introduced in the comprehension study (2.1.1.):

> A prisoner escaped on foot from Rikers Island last night. The police said he ran over* an old bridge that wasn't used anymore and disappeared.

Immediately coincident with the offset of the word over (*), one of the following words: walk, thin, hit or aid was presented to each subject. If the time it took to name the word related to the literal meaning of the verb (walk) was faster than its matched control (thin), this would be evidence that the literal meaning had been primed, that is, that the literal meaning was accessed at this point. Similarly, if the time it took to name the word related to the figurative meaning of the phrasal verb (hit) was faster than its matched control (aid), this would be evidence that the figurative meaning had been accessed.

2.2.2. RESULTS AND DISCUSSION

2.2.2.1. Non-native Speakers

The overall results (for both transparent and opaque items) for the non-native speakers indicate that both the

literal and figurative meanings were accessed. Mean reaction times for naming the experimental words and their controls for both the literal and figurative meanings of the verbs are given in TABLE XI. The raw data appear at the top of the table and the priming scores at the bottom: the priming scores represent the mean reaction time to each control word minus the reaction time to its paired experimental word. As can be seen from the table, subjects exhibited significant priming in three out of four conditions: when the context biased the phrase toward the literal meaning, there was significant priming for both the literal meaning and the figurative meaning (21 ms. and 47 ms., respectively). Similarly, when the context was biased toward the figurative meaning, significant priming for the literal meaning was found (46 ms.). In other words, the literal meaning was accessed under both contextual conditions: when there was a literal bias and when there was a figurative bias. The figurative meaning was accessed only when the bias was toward the literal meaning.

No evidence of priming (or access) was found for the figurative meaning when the bias was in the direction of that figurative meaning (8 ms. of inhibition, i.e., -8 ms. of priming was found). An interpretation of this effect will be provided below when the analysis of the priming scores is considered separately for the transparent vs. opaque items.

Despite one unexplained cell, these results indicate that both meanings (the literal and figurative) were simultaneously accessed by these advanced non-native speakers, corroborating Swinney's (1982) findings for native speakers with phrase idioms. The literal meanings could be expected to be accessed for two reasons: these subjects might have been more familiar with the literal meanings and these would come under automatic processing while the figurative meaning might only be available under controlled (non-automatic) processes. In addition, it should be noted that the probe point (after the preposition/particle), allowed enough time for the meaning of the verb alone to be processed, but not necessarily the whole phrasal verb (verb and particle). However, perhaps the most interesting cell in the priming matrix is the one that indicates that in the face of a context biased toward the literal meaning, the figurative meaning <u>was</u> accessed (47 ms. of priming). This confirms that these non-native speakers, like native speakers, access both meanings simultaneously, rather than merely accessing the literal meaning first and, only if that turns out to be incompatible with the context, then accessing the figurative meaning. Moreover, this particular cell also provides evidence that context does not have an effect on

which meanings are accessed: since the figurative meaning is accessed despite the fact that the discourse bias is in the direction of the literal meaning, context does not determine which meaning will be accessed in this case. These results strongly suggest that both the literal and figurative meanings are activated regardless of contextual bias and thus support a modular model of processing for these non-native speakers.

When the 23 items judged to be opaque (scores of 5-7) by the twelve native speakers (see Table VIII), are pulled out and analyzed separately, the data make this interpretation even more convincing (see Table XII). There is priming in each of the four conditions (although it is only marginally significant due to the decreased number of items contributing to the analysis). The literal probes are primed whether the context is biased toward the literal meaning (14 ms. of priming) or the figurative meaning (59 ms. of priming), and the figurative probes are primed when the context is biased toward the literal meaning (26 ms. of priming) or the figurative (23 ms. of priming). Note that this last data point stands in contrast to the overall analysis reported above. Taken together, these data on opaque phrasal verbs support the notions that these subjects simultaneously access

both meanings and that context has no effect on lexical access. They also support the notion that these two-part verbs are lexicalized (see the Lexical Representation Hypotheses 1.4.1.), and are not accessed after it is found that the literal meaning does not fit the context.

When the 17 items judged to be transparent (scores of 1-4) by the native speakers (see Table VIII), are analyzed alone, three out of four cells demonstrate the same findings as for the overall analysis (see TABLE XIII): the literal probes are primed whether the context is biased toward the literal meaning (30 ms. of priming), or toward the figurative meaning (also 30 ms. of priming). The figurative probe is primed when the context is biased toward the literal meaning (75 ms. of priming), but not when the bias is in the direction of the figurative meaning (51 ms. of inhibition or -51 ms. of priming). It is clear that these transparent items account for the one aberrant cell in the overall non-native speaker results (TABLE XI). This cell represents a significant effect in the wrong direction. That is, when the probe word is related to the figurative meaning and the context is also biased toward the figurative meaning, the experimental words were processed slower than the unrelated control words. Unlike in the three other conditions, there is no automaticity here; the figurative meanings are not automatically accessed. This may be due to the closeness

between the literal and figurative meanings in these transparent items. Perhaps the non-native speakers expected the more literal meaning (reflected in the experimental probe) but didn't get it, thus resulting in interference. Another possible explanation is that the related probe words for these items were not good associates for these subjects and, therefore, the figurative meanings were not accessed. But despite this one aberrant cell, once again, the figurative meaning was accessed in the face of a literal bias (75 ms. of priming), confirming that non-native speakers simultaneously access the literal and figurative meanings of phrasal verbs and that context does not interfere with lexical access.

In addition to the analyses above, two groups of non-natives were compared to determine whether the presence or absence of phrasal verbs in the subjects' Lls affected the access of the literal and figurative meanings. Twelve Chinese speakers and one German were compared with three Japanese, four Spanish, three Hebrew, and three French speakers; the former group represents languages that have the equivalent of phrasal verbs and the the latter, those that don't.

In an analysis of variance of all the main effects plus groups as a main effect, no significant difference was found. As can be seen in TABLE XIV, when the context was

biased toward the literal meaning, there was significant priming for both the literal and figurative meaning for both groups (19ms. and 49 ms. respectively for those with phrasal verbs in the L1, and 22ms. and 48ms. respectively for those without). Similarly, when the context was biased toward the figurative meaning, there was significant priming for the literal meaning (52ms. for those with phrasal verbs in the L1 and 44ms. for those without). No evidence of priming (or access) was found for the figurative meaning when the bias was in the direction of that figurative meaning (1ms. of inhibition, i.e., -1ms. of priming was found for those with phrasal verbs in the L1 and 13ms. of inhibition or -1ms. of priming for those without phrasal verbs in the L1).

These data show that despite Dagut and Laufer's (1985) claim that the absence of phrasal verbs in the L1 negatively affects the acquisition of phrasal verbs in the L2, there is no evidence that once these items are acquired, their presence or absence in the L1 affects the access of their meaning.

2.2.2.2. Native Speakers

Overall results for native speakers reveal what appears to be priming in all four conditions (see Table XV): when the context was biased toward the literal meaning and the probes

were related to the literal meaning, there was 18 ms. of priming; when the context was literal and the probes were figurative, there was 8 ms. of priming; when the context was figurative and the probes were literal, there was 22 ms. of priming; and when the context was figurative and the probes were also figurative, there was 10 ms. of priming. These scores, though marginal, were all in the direction that would be expected from the Swinney (1982) study. However, as can be seen in TABLE XV, all but one cell contain results that do not reach standard levels of significance. Nonetheless, they parallel the non-native speaker findings above that reveal the simultaneous access of both the literal and figurative meaning and no interactions by context. As with the non-native speakers, the natives accessed the figurative meaning when the context was biased in the direction of a literal interpretation.

It should be noted that the native speaker population used in the study consisted mainly of doctoral students in linguistics familiar with language processing studies. Several subjects remarked that they were thinking (guessing) about what was going on in the experiment while they were being tested. Hence, this was not an ideal group of normal (control) subjects.

When only opaque items are analyzed (see Table XVI), results are as follows: when the context was biased toward

the literal meaning and the probes were literal, there was 20 ms. of priming; but when the context was literal and the probes figurative, there was 0 ms. of priming; when the context was figurative and the probes were literal, there was 40 ms. of priming, but when the context was figurative and the probes figurative, there was 20 ms. of inhibition (i.e., a priming score of -20 ms.) In summary, there was literal activation in both biasing conditions, but no figurative activation with opaque items.

For transparent phrasal verbs (see Table XVII), when the context was biased in the direction of the literal interpretation, there was 6 ms. of inhibition (i.e., a priming score of -6); and when the context was literal but the probes were figurative, there was 17 ms. of priming. When the contextual bias was toward the figurative meaning and the probes were literal, there was 4 ms. of inhibition (i.e., a priming score of -4); and when the bias was figurative and the probes figurative, there was 51 ms. of priming. In other words, on these transparent items, there was activation of the figurative meaning regardless of biasing context, but no activation of the literal meaning.

These data are relatively uninterpretable in light of current theory, either of idiom processing or of methodology. Most likely, they are the result of using a less-than-ideal set of 'normal' control stubjects. It is possible that

native-speaker processing of phrasal verbs does not conform to Swinney's (1982) findings for phrase idioms; however, if these results are attributable to the presence of phrasal verbs, some pattern of priming should have been found. Given the overall lack of significant results, it is more likely just a problem of the weak subject population.

2.2.2.3. Native and Non-native Speakers

Overall, the advanced non-native speakers in this experiment performed like the native speakers of Swinney (1982), and to a certain extent, like those native speakers in this study. For both native and non-native groups, there was priming for, and hence activation of, both the literal and figurative meanings supporting a simultaneous model of access (see Swinney 1982). Moreover, for both groups, lexical access was shown to be independent of contextual bias, supporting Modularity Theory (see 1.4.2.).

Overall, non-native speakers responded to probe words 215 ms. slower than the native speakers (852 ms. vs. 637 ms., respectively) in the experiment. Since processing speed is considered an indication of increasing automaticity, it would seem that the non-natives had not reached the automaticity of processing that native speakers had acquired. Slower processing speed is the focus of the studies of bilingual processing discussed in 1.4.3. However, the study presented

here reveals that although the non-native speakers perform slower, they store and access meanings in the same exhaustive, automatic fashion as native speakers. Thus, their slower processing speed seems less of an issue than one might first assume. They have achieved automaticity in terms of what is accessed, if not in terms of how quickly it is accessed. Besides, as there is no established cut-off regarding the difference between automatic and controlled processing, 215 ms. is apparently not too slow to qualify non-native access as 'controlled' processing.

The most parsimonious interpretation of the findings of this study is that the figurative meanings of phrasal verbs are lexicalized: that is, the idiomatic meaning of the two words are stored as a unit, hence access is not a constructive process in which non-natives access the literal meaning and then, realizing that a different meaning is required, go to a special idiom list to access the meaning of the unit. The multiple meanings are simultaneously activated, and at this point in the processing, context does not change the activation pattern.

If non-natives store and access meanings as do native speakers, then it can be assumed that they are not experiencing disruption at this basic level of processing. If they experience difficulty, and the off-line comprehension

study of 57 non-native speakers (among many other studies) indicates that they do, then it must occur at a later stage, e.g., when the meanings that are accessed are integrated into a superficial sentential analysis, or at the point when pragmatic information, implicature, and world knowledge come into play. Although it is clear that both meanings are available to these subjects, it is not clear which meanings they would choose in a post-access decision process. Native speakers could be expected to be guided by context, but it is not so obvious what non-natives would do.

Further research should examine the issue of what non-native speakers do after lexical access to determine at what point in the comprehension process disruption takes place. Running the same, or a similar, study but testing further downstream for which meanings are still activated would reveal post-access processes. Furthermore, testing lower-level adult, second-language learners as well as both language dominant- and balanced bilinguals would complete the picture of second-language processing begun in this study.

THE END

TABLE I.

Subjects by Native Language in the Comprehension Study

Chinese	14	24.56%
Japanese	12	21.05
Spanish	8	14.04
Korean	4	7.02
Hebrew	4	7.02
French	3	5.26
German	2	3.51
Haitian Creole	2	3.51
Persian	1	1.75
Thai	1	1.75
Serbo-Croatian	1	1.75
Russian	1	1.75
Burmese	1	1.75
Greek	1	1.75
Turkish	1	1.75
Khmer	1	1.75
16 Lls	57	99.97%

TABLE II

Phrasal Verbs in the Comprehension Study

1. blow out
2. call in
3. call off
4. call on
5. cheer on
6. do over
7. keep in
8. look over
9. look up
10. try on
11. break down
12. clear up
13. go up
14. sign up
15. sign up
16. stay up
17. talk back
18. break in
19. come apart
20. run away
21. carry out
22. drag out
23. drop off
24. hang up
25. have over
26. hold in
27. keep down
28. keep up
29. lead on
30. leave out
31. pass up
32. pull off
33. run over
34. see off
35. spell out
36. swear in
37. tell off
38. throw away
39. throw out
40. touch up
41. trip up
42. turn down
43. turn in
44. turn on
45. turn up
46. wipe out
47. act up
48. bounce back
49. break up
50. carry on
51. catch up
52. come through
53. come up
54. crack down
55. die down
56. dig in
57. drop out
58. follow through
59. get across
60. get along
61. get by
62. get up
63. give in
64. give up
65. hold on
66. let up
67. pass away
68. pass out
69. pull through
70. pull up
71. race around
72. rub off
73. set off
74. set out
75. shape up
76. slip away
77. slip up
78. stand out
79. step down
80. stop by
81. stop off
82. take over
83. throw up
84. waste away
85. watch out
86. wind up
87. dream up
88. hand down
89. buy up

TABLE III.

Number of Items Completed by Each Subject in the Comprehension Study

Subject	Items Completed	Subject	Items Completed
1	177	30	76
2	177	31	76
3	177	32	102
4	177	33	177
5	177	34	177
6	177	35	177
7	177	36	76
8	28	37	102
9	76	38	102
10	76	39	177
11	126	40	177
12	76	41	76
13	28	42	76
14	102	43	177
15	177	44	76
16	177	45	177
17	177	46	177
18	76	47	76
19	76	48	177
20	76	49	177
21	76	50	177
22	76	51	177
23	76	52	177
24	76	53	177
25	76	54	177
26	76	55	177
27	177	56	76
28	76	57	76
29	177		

TABLE IV.

Best-known to Least-known Pairs (literal and figurative) in the Comprehension Study

Total valid percents for literal and figurative pairs by the 32 highest-performing subjects. Ranked from the best-known to the least-known items.

	TOTAL	VERB		TOTAL	VERB
1	223.5	turn up	19	187.5	race around
2	200.2	waste away	20	186.0	look over
3	200.1	pass out	21	186.0	drop off
4	200.0	pass away	22	182.9	look up (I)
5	200.0	wipe out	23	182.8	drag out
6	200.0	watch out	24	182.5	pull off
7	196.6	have over	25	182.4	bounce back
8	196.5	try on	26	182.4	follow through
9	194.1	crack down	27	182.3	turn down
10	194.1	die down	28	182.3	turn in
11	193.8	pull up	29	182.2	see off
12	193.8	hand down	30	182.0	lead on
13	192.9	sign up I	31	181.3	set out
14	192.9	run over	32	180.7	sign in
15	189.2	leave out	33	178.0	carry out
16	189.1	break in	34	176.5	go up
17	188.2	carry on	35	176.5	drop out of
18	187.5	buy up	36	176.1	call in

TABLE IV. (continued)

37	175.1	stop by	63	147.1	trip up
38	173.4	cheer on	64	147.1	turn on
39	172.8	call up	65	146.2	hang up
40	170.6	dig in	66	143.8	pull through
41	170.5	blow out	67	175.1	slip away
42	170.1	keep in	68	143.8	dream up
43	169.5	hold on	69	141.2	catch up
44	168.9	stand out	70	141.2	get across
45	168.7	run away	71	140.6	pass up
46	164.8	throw out	72	136.4	stay up
47	164.8	come up	73	135.2	touch up
48	164.7	get by	74	133.0	talk back
49	162.6	stop off	75	133.0	hold in
50	160.3	do over	76	129.4	break up
51	158.9	get along	77	129.3	come through
52	158.1	come apart	78	125.1	throw up
53	155.5	clear up	79	125.0	throw away
54	154.7	keep up	80	119.9	spell out
55	152.9	get up	81	118.8	take over
56	151.8	keep down	82	117.3	swear in
57	151.5	give in	83	112.6	wind up
58	150.5	call off	84	105.9	act up
59	150.5	break down	85	99.6	tell off
60	150.1	step down	86	68.8	slip up
61	150.1	set off	87	57.8	let up
62	150.1	shape up	88	56.3	rub off

Note: The one item which had only a figurative bias, give up, was not included in these results.

TABLE V.

Phrasal Verbs (figurative meaning) from the Best-known to the Least-known by the 32 High-performing Subjects

1	100.1	pass out	25	94.1	crack down
2	100.1	waste away	26	93.8	slip away
3	100.0	pass away	27	93.8	stop by
4	100.0	wipe out	28	93.5	call up
5	100.0	turn down	29	93.5	look over
6	100.0	die down	30	93.5	clear up
7	100.0	drop out	31	93.1	blow out
8	100.0	watch out	32	92.6	come apart
9	100.0	hand down	33	89.6	see off
10	100.0	have over	34	89.6	look up
11	100.0	try on	35	89.6	cheer on
12	100.0	give up	36	88.9	pass up
13	100.0	pull up	37	88.9	spell out
14	100.0	buy up	38	88.9	lead on
15	96.8	call in	39	88.3	follow through
16	96.6	leave out	40	88.3	throw out
17	96.5	break in	41	88.3	get along
18	96.3	sign up	42	88.2	dig in
19	96.3	drop off	43	88.2	hold on
20	96.3	run over	44	87.5	race around
21	94.1	carry on	45	87.5	set out
22	94.1	break up	46	86.2	go up
23	94.1	turn in	47	86.2	keep in
24	94.1	turn up	48	86.2	pull off

TABLE V. (continued)

49	82.8	call off	74	58.8	get up
50	82.8	break down	75	58.8	trip up
51	82.8	drag out	76	58.8	get across
52	82.4	bounce back	77	58.6	stay up
53	82.4	come up	78	55.2	hold in
54	82.3	get by	79	51.8	keep down
55	81.5	carry out	80	50.0	dream up
56	81.3	step down	81	44.4	tell off
57	81.3	throw up	82	41.2	catch up
58	80.7	sign in	83	41.1	touch up
59	77.8	talk back	84	35.3	act up
60	77.5	do over (77.5)	85	35.2	come through
61	76.5	turn on	86	31.3	take over
62	75.9	hang up	87	18.8	slip up
63	75.1	stand out	88	18.8	wind up
64	75.1	shape up	89	12.5	rub off
65	75.1	stop off			
66	75.0	give in			
67	75.0	let up			
68	72.4	run away			
69	71.4	throw away			
70	68.8	pull through			
71	68.8	set off			
72	65.5	swear in			
73	62.1	keep up			

TABLE VI.

The 40 Best-known Pairs
by the 32 High-performing Subjects
after Problematic Items were Deleted

1. turn up	21. turn in
2. watch out	22. lead on
3. have over	23. set out
4. try on	24. sign in
5. die down	25. carry out
6. pull up	26. go up
7. sign up	27. drop out
8. run over	28. stop by
9. leave out	29. call up
10. break in	30. dig in
11. carry on	31. blow out
12. race around	32. hold on
13. look over	33. stand out
14. drop off	34. run away
15. look up	35. throw out
16. drag out	36. come up
17. pull off	37. get by
18. bounce back	38. stop off
19. follow through	39. get along
20. turn down	40. keep up

TABLE VII.

Ratings of Normalcy (Mean Scores) by 42 Native Speakers

(1 = Normal; 7 = Not normal)

VERB	Bias Toward Literal Meaning	Bias Toward Figurative Meaning
1. try on	3	1
2. look over	1	1
3. sign up	6	1
4. look up	2	1
5. sign in	3	3
6. go up	1	2
7. call up	2	2
8. blow out	2	1
9. break in	4	1
10. carry out	2	2
11. drop off	2	1
12. lead on	2	4
13. drag out	1	3
14. run away	1	3
15. have over	1	2
16 leave out	4	1
17. pull off	2	2
18. run over	2	1
19. throw out	2	1
20. turn down	2	1
21. bounce back	1	2

TABLE VII. (continued)

Verb	Bias Toward Literal Meaning	Bias Toward Figurative Meaning
22. carry on	1	2
23. turn in	2	1
24. dig in	2	2
25. die down	3	2
26. drop out	3	1
27. follow through	2	2
28. hold on	3	2
29. pull up	2	1
30. turn up	1	1
31. set out	4	1
32. stand out	2	1
33. stop by	1	1
34. get by	4	1
35. watch out	3	2
36. stop off	3	1
37. keep up	3	2
38. get along	5	1
39. race around	1	2
40. come up	1	2

TABLE VIII.

Ratings of Semantic Transparency of Phrasal Verbs by 12 Informed Native Speakers

TRANSPARENT (score of 1 - 4)	Means	OPAQUE (score of 5 - 7)	Means
1. try on	2	1. carry out	6
2. look over	3	2. drop off	6
3. sign up	4	3. lead on	6
4. look up	4	4. drag out	6
5. sign in	3	5. have over	5
6. go up	2	6. keep up	5
7. call up	4	7. pull off	7
8. blow out	2	8. turn down	6
9. break in	3	9. bounce back	6
10. run away	2	10. carry on	6
11. leave out	3	11. turn in	5
12. run over	4	12. dig in	6
13. throw out	2	13. die down	5
14. hold on	3	14. drop out of	5
15. stop by	4	15. follow through	5
16. watch out	4	16. pull up	6
17. race around	3	17. turn up	6
		18. set out	5
		19. stand out	5
		20. get by	6
		21. stop off	5
		22. get along	6
		23. come up	5

TABLE IX.

Comprehension and Semantic Transparency Ratings of Phrasal Verbs (figurative meaning)

The 40 items in the processing study from best-known to least-known by the 32 high-performing subjects and the judgments of semantic transparency (1-4 = transparent; 5-7 = opaque).

		Compr.	ST			Compr.	ST
1	try on	100.0	2	23	follow through	88.3	5
2	have over	100.0	5	24	get along	88.3	6
3	turn down	100.0	6	25	hold on	88.2	3
4	die down	100.0	5	26	dig in	88.2	6
5	pull up	100.0	6	27	set out	87.5	5
6	watch out	100.0	5	28	race around	87.5	3
7	drop out	100.0	5	29	go up	86.2	2
8	leave out	96.6	3	30	pull off	86.2	7
9	break in	96.5	3	31	drag out	82.8	6
10	drop off	96.3	6	32	bounce back	82.4	6
11	sign up	96.3	4	33	come up	82.4	5
12	run over	96.3	4	34	get by	82.3	6
13	turn in	94.1	5	35	carry out	81.5	6
14	carry on	94.1	6	36	sign in	80.7	3
15	turn up	94.1	6	37	stand out	75.1	5
16	stop by	93.8	4	38	stop off	75.1	5
17	call up	93.5	4	39	run away	72.4	2
18	look over	93.5	3	40	keep up	62.1	5
19	blow out	93.1	2				
20	look up	89.6	4				
21	lead on	88.9	6				
22	throw out	88.3	2				

TABLE X.

Processing Study: Subjects by Native Language

Native Language	Number of Subjects	Percent
*English	32	100%
*Chinese	12	37%
Spanish	4	12
Japanese	3	9
Hebrew	3	9
French	3	9
Korean	2	6
Turkish	1	3
*German	1	3
Greek	1	3
Brazilian Portuguese	1	3
*Persian	1	3

Total native speakers of English: 32

Total non-native speakers of English: 32

*These languages contain phrasal verbs.

TABLE XI
Processing Study: Non-native Speakers Overall

Reaction time (in msec.) to literal-related experimental words and matched control words and figurative-related experimental words and matched control words in biasing contexts by non-native speakers.

	LITERAL PROBE		FIGURATIVE PROBE	
	Exp	Control	Exp	Control
Context biased toward the literal meaning	785	806	883	930
Context biased toward the figurative meaning	774	820	904	896

Amount of Priming (Control - Experimental) (in msec.) for Each Meaning of all Phrasal Verbs by Non-native Speakers.

	LITERAL PROBE	FIGURATIVE PROBE
Context biased toward the literal meaning	21[1]	47[2]
Context biased toward the figurative meaning	46[3]	-8[4]

1 $p < .05$
2 $p < .01$
3 $p < .01$
4 $p = .8$

TABLE XII.
Processing Study: Non-native Speakers on Opaque Items

Reaction time (in msec.) to literal-related experimental words and matched control words and figurative-related experimental words and matched control words in biasing contexts by non-native speakers.

	LITERAL PROBE		FIGURATIVE PROBE	
Context biased toward the literal meaning	780	794	880	906
Context biased toward the figurative meaning	748	807	870	893

Amount of Priming (in msec.) for Each Meaning of all Phrasal Verbs by Non-native speakers.

	LITERAL PROBE	FIGURATIVE PROBE
Context biased toward the literal meaning	14[1]	26[2]
Context biased toward the figurative meaning	59[3]	23[4]

1 $p < .09$
2 $p < .05$
3 $p < .01$
4 $p < .05$

TABLE XIII.

Processing Study: Non-native Speakers on Transparent Items

Reaction time (in msec.) to literal-related experimental words and matched control words and figurative-related experimental words and matched control words in biasing contexts by non-native speakers.

	LITERAL PROBE		FIGURATIVE PROBE	
Context biased toward the literal meaning	792	822	887	962
Context biased toward the figurative meaning	809	839	950	899

Amount of Priming (in msec.) for Transparent items by Non-native speakers.

	LITERAL PROBE	FIGURATIVE PROBE
Context biased toward the literal meaning	30[1]	75[2]
Context biased toward the figurative meaning	30[3]	-51[4]

1 $p < .01$
2 $p < .01$
3 $p < .01$
4 $p < .01$

TABLE XIV.

Processing Study: A Comparison of Subjects Based on Whether or not Phrasal Verbs are Present in the L1

I. Subjects who have phrasal verbs in their L1: Chinese (12), German (1):

Reaction time (in msec.) to literal-related experimental words and matched control words and figurative-related experimental words and matched control words in biasing contexts.

	LITERAL PROBE		FIGURATIVE PROBE	
Literal bias	788	807	883	932
Figurative bias	769	821	901	900

Amount of Priming (in msec.) for Each Meaning of all Phrasal Verbs.

CONTEXT	LITERAL PROBE	FIGURATIVE PROBE
Literal bias	19	49
Figurative bias	52	-1

II. Subjects who do not have phrasal verbs in their L1: Japanese (3), Spanish (4), Hebrew (3), French (3)

Reaction time (in msec.) to literal-related experimental words and matched control words and figurative-related experimental words and matched control words in biasing contexts.

CONTEXT	LITERAL PROBE		FIGURATIVE PROBE	
Literal bias	783	805	882	930
Figurative bias	773	817	906	893

Amount of Priming (in msec.) for Each Meaning of all Phrasal Verbs.

CONTEXT	LITERAL PROBE	FIGURATIVE PROBE
Literal bias	22	48
Figurative bias	44	-13

TABLE XV.
Processing Study: Native Speakers Overall

Reaction time (in msec.) to literal-related experimental words and matched control words and figurative-related experimental words and matched control words in biasing contexts by non-native speakers.

	LITERAL PROBE		FIGURATIVE PROBE	
Context biased toward the literal meaning	625	643	641	649
Context biased toward the figurative meaning	611	633	640	650

Amount of Priming (in msec.) for Each Meaning of all Phrasal Verbs by Native speakers.

	LITERAL PROBE	FIGURATIVE PROBE
Context biased toward the literal meaning	18[1]	8[2]
Context biased toward the figurative meaning	22[3]	10[4]

1 $p < .06$
2 $p < .6$
3 $p \leq .055$
4 $P \leq .4$

TABLE XVI.
Processing Study: Native Speakers on Opaque Items

Reaction time (in msec.) to literal-related experimental words and matched control words and figurative-related experimental words and matched control words in biasing contexts by non-native speakers.

	LITERAL PROBE		FIGURATIVE PROBE	
Context biased toward the literal meaning	621	641	625	625
Context biased toward the figurative meaning	603	643	656	636

Amount of Priming (in msec.) for Opaque Items by Native speakers.

	LITERAL PROBE	FIGURATIVE PROBE
Context biased toward the literal meaning	20[1]	0[2]
Context biased toward the figurative meaning	40[3]	-20[4]

1 $p < .05$
2 $p = 1.0$
3 $p < .01$
4 $p < .05$

TABLE XVII.
Processing Study: Native Speakers on Transparent Items

Reaction time (in msec.) to literal-related experimental words and matched control words and figurative-related experimental words and matched control words in biasing contexts by non-native speakers.

	LITERAL PROBE		FIGURATIVE PROBE	
Context biased toward the literal meaning	630	624	664	681
Context biased toward the figurative meaning	622	618	617	668

Amount of Priming (in msec.) for Transparent Items by Native speakers.

	LITERAL PROBE	FIGURATIVE PROBE
Context biased toward the literal meaning	-6[1]	17[2]
Context biased toward the figurative meaning	-4[3]	51[4]

1 $p < .5$
2 $p < .05$
3 $p < .47$
4 $p < .01$

APPENDIX A

The Comprehension Study: A Paraphrase Task

STUDENT'S NAME: _____
(Please print)

Address: _____
Street City State Zip Code

Telephone number: (___) _____ (___) _____
(day) (evening)

Today's date: _____
(month) (day) (year)

Native language: _____

Do you speak any other languages? Which ones? _____

If you are currently taking English classes, please write the level you are on for each subject:

Reading level: _____ Conversation level: _____

Writing level: _____ Grammar level: _____

Comments: _____

Please give the following information about your English training in your country:

How old were you when you first started to study English? _____

How often did you study English in grades 1 to 5? _____hours/week; grades 6 to 9? _____hours/week; grades 10 to 12? _____hours/week; grades 13 to 16? _____hours/week.

How many years did you study English in your country _____; in the United States _____?

How old were you when you finished your English language training? _____

How old were you when you first came to the United States? _____

How many years have you been living in the United States? _____

If you are in college or graduate school, how many courses have you taken in college _____; in graduate school _____?

Directions: Each item below has two or more sentences. Read all the sentences for each item one time. Then write the meaning of the underlined words in each item. Write the meaning in your own words. Try not to use the words given in the sentence. If the underlined words have more than one meaning, write the meaning you think of first, and then write any additional meanings.

EXAMPLES

1. The bicycle riders usually ride in the city but they want to ride out of the city where there are no cars. They hope to go on a trip with their bicycles soon.

---

2. The dress designer never used scissors when he was working on a dress. He always tore down the material.

---

3. The boxer was new and inexperienced at boxing competitions. Everyone was surprised when he knocked down the champion in the second round.

---

4. A big ship was in the harbor, and on the weekends, visitors could get a tour. At the end of the tour, the visitors were shown off the ship by one of the crew members.

---

5. Nancy's parents didn't want to pay for her second year of college because her grades were all C's and D's. They said she was always fooling around and never did her homework.

PART ONE

Starting time: _____

1. Nobody realized that the fan was on and the window was open. First the papers flew off the table and landed on the windowsill. After that, they blew out the window.

---

2. All the new dolls were sold in one week. The manager of the toy store knew that he could make a lot of money if he had more dolls to sell. That's why he called in the order immediately.

---

3. Kevin stood on the terrace waiting for his best friend from childhood, whom he hadn't seen in twenty years. When Charles appeared, Kevin called off the terrace to his old friend approaching the building.

---

4. When their parents went on a business trip, they left their number at the hotel in case of an emergency. The babysitter called up the parents to ask them what to do because the children wouldn't stop fighting.

---

5. When the team's supporters got off the bus and entered the football stadium, the noise increased considerably. All the college students cheered on the football field then took their seats.

---

6. The fashion designer quietly asked one of the seamstresses to change some of the dresses a few days before the fashion show. Nobody knew what had been done over the day of the show.

---

7. The little boy was afraid of losing his new parrot. So it was kept in a cage all the time.

---

8. Ruth examined all her bills for the kitchen equipment, trying to find where the mistake had been made. When she looked over the estimate for the kitchen cabinets, she found the error.

---

9. Betsy's dog disappeared and she searched the house for him. When she finally looked up the road, the dog was standing there.

---

10. Tom bought a new suit, but then gained a lot of weight. He went on a diet and lost over ten pounds. But when he tried on the new suit, it didn't fit.

---

11. Jack bought six bottles of soda and carried them home on his bicycle. When he was half-way home, he stopped to see if they were okay. Later, he discovered that everything broke down the road from where he had stopped.

---

12. Linda asked her father to meet her for a game of tennis in the afternoon, even though it was raining when she called. When Mr. Lewis arrived, it had cleared up the way his daughter had predicted.

---

13. A man stole the actress' bag and she ran after him, but he got on a bus. She asked somebody where the bus would go. She was told it would go up the street and turn right at the first light.

---

14. Joseph's mother was going to be 75 next Saturday. The family organized a big party at a fancy hotel. Joseph brought a few relatives and said he would pay for them to stay at the hotel. Before the party, he signed in the relatives and went to find a cheaper room for himself.

---

15. The soldier was writing to his girlfriend and he had a lot to tell her that day. When he finished, there wasn't enough space for his name at the bottom of the letter. He didn't have any choice, so he signed up the side of the paper.

16. The governor's campaign manager and his assistants were tired after a long campaign, but their work wasn't finished. They were asked to stay up the night of the election and report the results to the candidate.

17. It was easy to take care of those two boys. When the babysitter told them what they had to do, they talked back and forth and then did it.

18. According to the police, the criminals trained a monkey called "Joe" to enter apartments and steal money. He broke in the day before we returned from our vacation.

19. When the delivery arrived from the supermarket, there was no milk in any of the bags. It came apart from the other items.

20. The police couldn't understand what happened to the teenager. He ran away as his parents said, or he had been kidnapped.

21. The terrorists searched the building and found the weapons that were supposed to be taken to the secret camp. They were carried out the door and put into the truck.

22. The senator hoped the investigations about his finances and his contacts with the Mafia would be done quickly, but he wasn't so lucky. They were dragged out the whole year.

23. Nobody knew where the refrigerator in front of the house had come from. Somebody said it had dropped off the back of a truck yesterday afternoon.

---

24. The woman heard a strange male voice when she answered the telephone. Then it was hung up the minute she began to ask who it was.

---

25. Most people put family portraits over their fireplace, but Dorothy and Paul are different. Each month they display a different movie star. It's hard to imagine who they will have over their fireplace next.

---

26. The psychiatrist met once a week with a group of criminals from the State prison to discuss their feelings and problems. During the last meeting, a young man held in his anger for most of the meeting then sarcastically criticized everyone in the group.

---

27. The thieves stole all the jewelry in the bedroom, but didn't get any of the really valuable jewels. They were kept down the hall in a safe.

---

28. When the owner came to see the progress on his house, he was disappointed, so the builder made a tough new work schedule. It was kept up the next few days until the owner left.

---

29. It was the horse's first big race and he wasn't used to running in the front. He was leading on the second lap of the race, but lost in the end.

---

30. When people would write asking about the company's products, Joan always forgot to give certain information. When she left out the prices, customers were always furious.

---

31. Charles was supposed to be at his sister's house at 7:00 but it was already 7:30. He was driving about 60 miles per hour and missed the turn near the house. What he passed up the road didn't look familiar so he turned around and went back.

---

32. The FBI was in Miami on a big drug case. They had a really difficult job to do. It had to be pulled off that morning before the drug dealers left the country.

---

33. A prisoner escaped on foot from Rikers Island last night. The police said he ran over an old bridge that wasn't used anymore, and disappeared.

---

34. Donna's aunt is going on a cruise to the Bahamas. She wants to be seen off the day she leaves.

---

35. The little boy lost the final competition after doing so well in the earlier contests. He couldn't spell out loud a word he had practiced the night before.

---

36. The last three governors were over 70, and the people finally elected a 55-year-old man. The judge was ready for the ceremony. When he swore in the middle-aged governor, everyone was watching on T.V.

---

37. The figure skater's mother had an accident during the competition, but his coach didn't want to upset him while he was practicing. He was told off the ice and after the competition ended about the tragedy.

---

38. Jack bought some pills for his allergies but never took them. Just to be safe, Jack threw away from lack of use all the pills in his medicine cabinet.

---

39. When Linda got off the train in Chicago, she waited for her bag near the door of the train. She was surprised that it was thrown out the window.

---

40. Joe was taking art lessons with a very strict teacher. Normally, he didn't mind her critical feedback. But when she touched up his watercolor painting, he got anry.

---

41. Danny was drunk when he got home from the party. He tripped up the stairs and chipped a tooth.

---

42. David got a scholarship to New York University but wanted to go to Columbia. He couldn't decide what to do. After a while, he turned down the scholarship and got a student loan so he could go to Columbia.

---

43. Corinne wasn't sure why the policeman had stopped her car. He said she had turned in the middle of the block illegally.

---

44. Brian loved David Salle's paintings and couldn't wait to see his new exhibit. He was turned on the minute he saw the first painting.

---

45. Everybody on the tour bus expected the driver to go straight back to the office. It was a surprise when he turned up the hill and took a scenic route back.

---

46. The pilot didn't regret dropping the bomb. He wiped out the whole village in a second.

---

47. Martha lost her part in the play but got a role at a theater nearby. She continued acting up the block at the new experimental theater.

---

48. Judith was afraid her dog would never be well again. She couldn't believe how fast it bounced back after the surgery.

---

49. The two sleds were very old and the frames were cracked, but he took them to the park for the children to use anyway. He had a feeling they would break up the hill in the park, but he thought they might as well enjoy them while they lasted.

---

50. After the mayor died in office, everyone wondered about his special project to fight crime. It would be carried on a year longer by his successor as it turned out.

---

51. The F.B.I. had been looking for that murderer since September 1st. Some said he was living in the mountains. After a few weeks, he was caught up the mountain near his hide-away.

---

52. The candidate needed a large contribution to continue his campaign. Finally, it came through the last day possible.

---

53. The woman screamed when she saw the burglar. He had come up the stairs with a gun in his hand.

---

54. Everyone is complaining about the drug problem in the city, so the candidate for mayor said something had to be done. He said he would crack down the week he became mayor and put the drug dealers out of business.

---

55. The old dog disappeared and couldn't be found for a week. We discovered it died down the road behind the house.

---

56. Ken called his roommate and asked him to have dinner ready when he got home. He wanted to dig in the minute he walked in the house.

---

57. The hijackers opened the door of the plane while it was in the air and pushed one of the passengers out. Everybody was shocked when he dropped out of the plane.

58. The computer experts started a project developing a new computer. This group had a reputation for completing anything they started. The first week went extremely well. But it was hard to follow through the second week because several staff members were out sick with the flu.

59. In the 1970s, there was a revolution in that country. The military wanted to capture the president and put him in jail, but he fled. The aging president got across his big country and escaped.

60. The couple couldn't tell the marriage counselor exactly how they wanted each other to change. But they knew they wanted to get along the way they used to.

61. Dolores contacted American Express and applied for a credit card as soon as she began to work. She got by mail a welcome letter and an application form.

62. When the course began, the bicycling instructor asked the students to be ready to ride as early in the morning as possible. They didn't know how they would get up the second day of practice.

63. Jerry's gift to Nancy was certainly unusual. Everyone was surprised when he gave in an envelope a picture of himself.

65. Jeff called his wife from overseas but he reached their answering machine. He had held on a few minutes to see if she would answer, and then put down the receiver.

66. The manager said nobody else could be admitted to the club because there was a policy on occupancy. It would only let up to 200 people in the club at the same time.

---

67. The surgeons discovered that Joe's heart wasn't funtioning properly during surgery. After an hour, he passed away from the pressure on his heart.

---

68. Nobody noticed that the well-dressed man had stolen a painting from the wall of the gallery. He passed out the door and down the street before anyone realized the painting was missing.

---

69. Annette's family was very worried about her surgery. Nobody thought she would pull through the way she did.

---

70. It was the first time Joanna was going fishing, and there was a lot of garbage in the water. Joanna didn't want to pull up a soda can instead of a fish.

---

71. There was an emergency at work when Victor was ready to leave the office. He got home an hour late and had to get ready for his date. With incredible speed, he raced around the minute he got home and was ready to go.

---

72. We bought a house that was very old and needed to be cleaned thoroughly. We even got a special machine to clean the floors. We couldn't believe what rubbed off the floor in the kitchen.

---

73. The anti-government forces wanted the bomb to explode during the President's speech. But it was set off the moment the President's limousine arrived.

---

74. The couple decided to have a garage sale because they had a lot of clothes and furniture they didn't use. Therefore, they set out in the driveway, all the things they didn't want.

75. Henry, the new salesman, hadn't sold any cars in two months. He was told to shape up very soon or he would be fired.

76. The chef spilled a bowl of soup in the kitchen, and one of the waiters fell on the floor. Fortunately, he slipped away from the stove, so he didn't get hurt.

77. Virginia's supervisor has not been happy with Virginia's performance. Then she slipped up the day before yesterday and didn't return her supervisor's phone call.

78. There's a homeless man who is always outside the church on the corner. He even stands out in the rain without an umbrella.

79. Everyone was surprised when the mayor said she was resigning. She stepped down the day before yesterday because she was ill.

80. Elaine and Bob had a picnic near a waterfall. Then they stopped by a lake to take pictures.

81. When we arrived in Ohio, we visited an old friend from childhood. Then we stopped off the next day at my sister's house.

82. After a long investigation, it was found that Edith and Henry were the ones who had stolen the important documents last week. Nobody knew what they had taken over the year they had worked for the company.

83. During the party, Jack drank a lot but seemed to be fine on the way home. Suddenly he threw up the minute the car stopped in front of the house.

84. On her trip, Ellen was spending money foolishly. In a short time, she had wasted, away from home, her last hundred dollars.

85. The last time the poet came to New York, her pocketbook was stolen in a restaurant. She was nervous about returning to the city. All she could do was watch out the next time she came to the city.

86. The car manufacturer had one last test to be sure the car could go uphill without a problem. The sports car wound up the hill smoothly and quietly.

87. Every night, Sam had lots of dreams. He usually had dreams about his family life. Last night, what he dreamed up to the time he woke up was about his childhood in Vermont.

88. In the boarding school, twenty students ate dinner at the same table. The plates were handed down to each student until everyone got one.

89. Everyone expected the street sale to be a big success but the weather made that impossible. Only a few items were bought up and then it began to rain.

END OF PART ONE

Ending Time: _____

PART TWO

Directions: Each item below has two or more sentences. Read all the sentences for each item one time. Then write the meaning of the underlined words in each item. Write the meaning in your own words. Try not to use the words given in the sentence. If the underlined words have more than one meaning, write the meaning you think of first, and then write any additional meanings.

Starting Time: _____

1. The twins were so happy about their birthday party. First they opened their presents, then they ate lunch. After that, they blew out the candles on their cake and everybody sang "Happy Birthday."

_____

2. He wanted privacy when he spoke to his ex-girlfriend. That's why he called in the bedroom instead of in the living room.

_____

3. Kevin arranged a meeting with Charles to discuss the possibility of forming their own computer company. When Charles appeared, Kevin called off the meeting which had been scheduled for weeks.

_____

4. The children were supposed to come down for dinner at 6:00 but they didn't appear. The babysitter called up the stairs to tell them it was time to eat.

_____

5. The Thanksgiving football game was a big event at that school, but the home team was losing by half-time. All the college students cheered on the football team in the third quarter.

_____

6. The Air Force flew over the farm land several times, and the farmers said the crops were beginning to die. Nobody knew what had been done over the fields.

_____

7. Her husband had been beating her for years, but she was ashamed to tell anyone her horrible secret. So it was kept in a long time before she got help.

_____

8. Ruth didn't think she could see the swimming pool from her house. When she looked over the fence, she was able to see the pool.

---

9. Betsy knew her old friend lived in Chicago, but she didn't have her telephone number. When she finally looked up the number, she discovered it wasn't listed.

---

10. Tom loved to play golf. He even invented a new way to hit the ball. When he experimented in his back yard, it was successful. But when he tried on the golf course, it failed.

---

11. Jack bought an old factory and spent the whole day fixing all the equipment that wasn't working. Later, he discovered that everything broke down the instant he left.

---

12. There were hundreds of bushes in front of the house and Mr. Lewis, the owner, hired two men to remove them. The men used a special machine to remove the bushes. When Mr. Lewis arrived, it had cleared up the hill in front of the house.

---

13. The actress was making money and decided to buy a computer stock. She hoped to double her money very quickly and after a week, she called her broker on Wall Street. She was told it would go up the expected five percent, that's all.

---

14. It was Joseph's secretary's fiftieth birthday and the office staff was organizing a big celebration. Everyone was asked to contribute to the gift and write something on the border of the card. Before the party, he signed in the middle of the card and refused to contribute for the gift.

---

15. The doctor told the patient he was working too hard and needed to do more exercise or he would get a heart attack. He didn't have any choice, so he signed up the next day for an exercise class.

16. A poisonous gas made its way into all the houses in the area and the Petersons were notified of the danger. They were asked to stay up the street at the local school with the other families.

17. The twins wouldn't cooperate with the babysitter. When the babysitter told them what they had to do, they talked back and made her very angry.

18. Peter shocked everyone at the party. He broke in a million pieces a $5,000 antique lamp.

19. The detergent was too strong, and Paul had a problem when he washed the delicate tablecloth. It came apart from the strong detergent.

20. The little boy got scared when the strangers asked him for directions. He ran away as fast as he could.

21. The night of the mission, the terrorists met outside the embassy and were given the new plans. They were carried out the way the leader hoped they would be.

22. The drug dealers were finally caught by the police in an apartment in Queens. They were dragged out the door and taken away in police vans.

23. Everyone at home was waiting for the new refrigerator but it didn't come. Somebody said it was dropped off the day before at the wrong house.

---

24. On their camping trip, the boys found a rabbit and killed it. Then it was hung up the hill near the tent.

---

25. Dorothy and Paul always invite very strange guests to their home each evening. It's hard to imagine who they will have over that evening for dinner.

---

26. Nobody checked the audience when the mayor came to the town meeting. During the last meeting, a young man held in his hand a loud radio that disrupted the meeting.

---

27. The American journalist wrote about people in the poor farming areas who wanted to fight for their freedom. They were kept down the whole 20th century by their poverty and illiteracy.

---

28. Barbara moved from a house to an apartment. She didn't have any room in her apartment for her bicycle. It was kept up the street at her mother's house.

---

29. Everone who knew him said he was a liar and a manipulator, except his girlfriend. He was leading on the woman, and she didn't even realize it.

---

30. Helen was afraid her house might be robbed, so she didn't want anyone to know she was going away for a few weeks. When she left out the back door, nobody saw her go.

---

31. Jimmy wanted to buy a new house with a big yard. He spent months looking, but everything he saw looked worse and worse. What he passed up the first few weeks was the best, but it was too late.

---

32. A 1965 Chevrolet got stuck on the bridge during rush hour, but somebody called a tow truck quickly. It had to be pulled off the bridge as soon as possible.

---

33. The boy's parents were really upset about the car accident. The police said he ran over an old man on the way home from the party and didn't even stop.

---

34. The new anchorwoman on CBS News goes to every party in town. She wants to be seen off the air as much as on.

---

35. One of the doctoral students failed the comprehensive exam. He couldn't spell out loud and clear the most difficult theory in his field.

---

36. The candidate was angry during the interview with the press and didn't care who knew it. When he swore in the middle of the press conference, he surprised the reporters.

---

37. Donald insulted his girlfriend at the party, and thought she hadn't noticed. He was told off the minute they were alone.

---

38. Whenever they went to the beach, Jack and his father liked to throw a ball back and forth after swimming. That day, the beach was crowded with sunbathers. Just to be safe, Jack threw away from the sunbathers as much as possible.

---

39. Everybody enjoyed the turkey on Thanksgiving, and Wendy couldn't wait to eat some more of it. She was surprised that it was thrown out the next day.

---

40. It was the first time little Joe met a blind child. He was quite happy when they were just talking. But when she touched up his face and across his head, he got scared and began to cry.

---

41. This was the second time he was playing the chess champion. After an hour, he was losing. He tripped up the champion with a surprise move.

---

42. It was the first time Dennis was taking Marie on a date. He sat in his car for a while thinking of what he would say when he met her. After a while, he turned down the street and pulled into her driveway with anxiety.

---

43. Corinne asked the personnel manager why she wasn't given an interview. He said she had turned in the application after the deadline.

---

44. The surgeons had to work on his chest and the back of his legs during the surgery. He was turned on the table by the surgeons after two hours.

---

45. The man kept talking to Laura all the time they were in the store together. It was a surprise when he turned up the next day at her house.

---

46. After washing the rug, Ed discovered that the washing machine was filthy. He wiped out the machine with a sponge.

---

47. When her parents went away Friday morning, Martha started fighting with her brothers, and refused to eat. She continued acting up the whole day.

48. Judith was just learning to play tennis and was having trouble keeping her eye on the ball. She couldn't believe how fast it bounced back after her partner hit it.

49. William knew the relationship was in trouble because Brenda never had time to see him anymore. He had a feeling they would break up the next time they saw each other.

50. After the race, one of the horses collapsed. The veterinarians got a trailer for the horse, but couldn't decide how to get the horse into the trailer. One of them got an idea. It would be carried on a big stretcher to the trailer.

51. One of the students got the flu in the beginning of the semester and couldn't do the homework the first three weeks. After a few weeks, he was caught up the way he hoped to be.

52. Sandra was waiting for the package to arrive all week. Finally, it came through the mail on Friday.

53. The parents didn't want to discuss their son's drug problem at the family gathering because it was a sensitive issue. It had come up the minute the relatives arrived.

54. When the carpenter saw the wall, he said there was the beginning of a hole in it. He said he would crack down the wall and rebuild it.

55. The party was lively as long as Paul was there telling stories. We discovered it died down the moment he left.

56. The new gardener couldn't wait to start working the day he was hired. He wanted to dig in the garden before it got too dark.

57. Ronald was upset about failing the midterm. Everybody was shocked when he dropped out of the course the week after he received his grade.

58. The hunter was thrilled when he spotted a deer. But it was hard to follow through the woods, and he lost it in ten minutes.

59. He had been president of that country for twenty years, but a younger man challenged him for the presidency. They arranged a debate and everyone said the president did very well. The aging president got across his big plans for the country successfully.

60. The little boys didn't know what they were going to do at the parade. But they knew they wanted to get along the route to see the marchers clearly.

61. Brenda withdrew all her money before the trip. During her vacation, her wallet was stolen with all her money in it. She got by the first night of the trip but had no money for food the next day.

62. It was raining very hard when the bicycle riders reached a steep hill. They didn't know how they would get up the hill in such bad weather.

63. The students in the course wanted to write a paper, but the professor said he would give an exam. Everyone was surprised when he gave in a week before the end of class, and said a paper would be okay.

64. June wanted to learn wind-surfing, but it wasn't as easy as she expected. After an hour, she gave up and went swimming instead.

65. It wasn't surprising that he was selected for the position as ambassador. He had held on a temporary basis an important position in the government and was well respected.

66. The weatherman predicted rain for most of the holiday. It would only let up to give us some relief in the evening.

67. The visiting Prime Minister was greeted by a big crowd in Washington. After an hour, he passed away from the crowd and went to the White House.

68. Joe felt good at the beginning of the race, but then he got more and more tired. He passed out the minute he reached the finish line and was taken to a hospital.

69. During the snowstorm, Annette walked to the store with a sled. Nobody thought she would pull, through the snow, three bags of groceries.

70. Somebody wanted to park behind Joanna, but there wasn't enough space. Joanna didn't want to pull up a little because she would be too close to the fire hydrant.

71. Everybody wanted to see the new Australian runner at the Olympics. The race was very exciting from start to finish. With incredible speed, he raced around the track and won by two seconds.

---

72. Ellen was in her first year of college and she became friends with two very wild girls. We couldn't believe what rubbed off the first semester she was there.

---

73. The woman asked the jeweler to combine two rings into one large one. She asked him to put the diamond in the center and the rubies all around it. But it was set off the center and looked awful.

---

74. The couple wanted to have a picnic lunch at noon and they had a five-hour drive ahead of them. Therefore, they set out in the early morning and stopped only once on the way.

---

75. The student in the sculpture class was almost finished with the marble figure. He was told to shape up very close to the head to make the figure look more realistic.

---

76. After the President's speech, the Secret Service agents discovered a woman with a gun in the middle of the audience. Fortunately, he slipped away from the crowd and didn't get hurt.

---

77. Virginia could hardly walk after her first accident. Then she slipped up the hill near the trail and her ankle was very sore.

---

78. John is one of the best athletes in the country. He even stands out in the international competitions.

---

79. The last scene was the most dramatic one for the star. She stepped down the road to her death.

80. Our new neighbors came for dinner on Friday night. Then they stopped by a few days later just to say "hello."

81. Because we were in a hurry to get to our country house, we ate breakfast in the car. Then we stopped off the highway to stretch our legs and get some fresh air.

82. Everyone was surprised when Edith and Henry said they planned to buy the company and become the president and vice-president. Nobody knew what they had taken over the year before they joined this company.

83. Jack wasn't bowling the way he usually played. Suddenly he threw up the lane one ball after another.

84. After she was told she had cancer, she began to see changesin herself. In a short time, she had wasted away from 130 pounds to 80.

85. It was so difficult to say "goodbye" to her boyfriend at the train station. When she got on the train, she couldn't read or eat. All she could do was watch out the window.

86. While going north, the sports car hit another car at 70 miles per hour. The sports car wound up, the next moment, on the other side of the highway.

87. Sam was very smart and creative. Every week, he had another invention. Last night, what he dreamed up to the surprise of everyone was a new way to water the grass.

88. Cynthia wanted to inherit her greatgrandmother's dishes, but over the years, everything had broken except the plates. The plates were handed down to each generation until Cynthia got them.

---

89. Sales didn't go well at the first street festival. Only a few items were bought up and down the street.

END OF PART TWO

Ending Time: _____

Thank you for your help with this study.

Scoring Sheet for Comprehension Study

Subject's name: _____ Enrolled in: _____

L1: _____ L2: _____

Total scores: LITERAL: 1___, 2___, 3___, 4___, FIGURATIVE: 1___, 2___, 3___, 4___.

	LITERAL MEANING				FIGURATIVE MEANING			
	NA/WA 1	MI 2	MD 3	FD 4	NA/WA 1	MI 2	MD 3	FD 4
1) blow out			FLEW				EXTINGUISH	BY BLOWING
2) call in			TELEPHONED				TELEPHONED	THE ORDER
3) call off			SHOUTED					CANCELLED
4) call up			SHOUTED					TELEPHONED
5) cheer on		SHOUTED	SUPPORT				ENCOURAGED	BY SHOUTING
6) do over			MADE/DONE				MADE/DONE	AGAIN
7) keep in			STORED				HELD	SECRETLY
8) look over			SAW/GLANCED					EXAMINED
9) look up			SAW/SEARCHED				SEARCHED	IN DIRECTORY
10) try on			EXPERIMENTED				PUT ON TO	SEE IF FITS
11) break down			WS DESTROYED					STOP FCTING
12) clear up			REMOVED STG.					STOP RAINING
13) go up			TRAVEL/MOVE					INCREASE
14) sign in		WROTE	NAME					REGISTERED
15) sign up		WROTE	NAME					ENROLLED IN
16) stay up			REMAIN					NOT SLEEP
17) talk back			DISCUSSED				RESPOND	RUDELY
18) break in			SMASHED				ENTERED	ILLEGALLY
19) come apart		ARRIVED	SEPARATELY				WAS TORN	TO PIECES

20)	run away		HURRIED	AWAY			LEAVE HOME	INTENTIONALY
21)	carry out			HAULED				IMPLEMENTED
22)	drag out			PULLED			CONTINUED	SLOWLY/DELIB
23)	drop off			FALLEN				DELIVERED
24)	hang up		FASTENED	TO TREE				DISCONNECTED
25)	have over			HANG/DISPLAY			INVITE TO	ONE'S HOME
26)	hold in			CARRIED			KEPT	INSIDE/SECRT
27)	keep down			HELD/STORED				SUPPRESSED
28)	keep up			STORED				CONTINUED
29)	lead on			WINNING				MANIPULATING
30)	leave out			WALKED OUT				OMITTED
31)	pass up			WENT BY			SAW BUT	DIDN'T TAKE
32)	pull off			TOWED OFF			DONE	COMPLETELY
33)	run over			TRAVERSED			HIT	WITH VEHICLE
34)	see off			NOTICED			SAID GDBYE	TO AT DOCK
35)	spell out			SAY SPELLING				EXPLAIN
36)	swear in			CURSED				ADMIN. OATH
37)	tell off			INFORMED				SCOLDED
38)	throw away			TOSSED BALL			PUT	IN GARBAGE

39)	throw out		TOSSED/FLUNG		PUT	IN GARBAGE	
40)	touch up		FELT		PAINTED	TO INPROVE	
41)	trip up		STUMBLED			TRICKED/BEAT	
42)	turn down	DROVE IN	DIFF. DIRECT			DECLINED	
43)	turn in	DRIVEN	A DIFF. WAY			SUBMITTED	
44)	turn on	MOVED TO	DIFF. POSITN			EXCITED	
45)	turn up	DROVE IN	DIFF. DIRECT			APPEARED	
46)	wipe out		CLEANED			DESTROYED	
47)	act up	PERFORMING	IN THEATER		BEHAVING	BADLY	
48)	bounce back		FLEW BACK			RECOVERED	
49)	break up		NOT FUNCTION			END RELATSHP	
50)	carry on		TRANSPORTED			CONTINUED	
51)	catch up		FOUND/ARREST		COMPLETED	OLD WORK	
52)	come through		ARRIVED		ARRIVED	WHEN NEEDED	
53)	come up		ASCENDED			BEEN RAISED	
54)	crack down		TEAR DOWN		TREAT	SEVERELY	
55)	die down		EXPIRED			BECAME QUIET	
56)	dig in		EXCAVATE		EAT	HUNGRILY	
57)	drop out of		FELL FROM			WITHDREW	
58)	follow thru	GO	AFTER/CHASE		CONTINUED	TO COMPLETN	

59)	get across				TRAVERSED				EXPLAINED		SUCCESSFULLY
60)	get along				POSITN ONESF				INTERACT		HARMONIOUSLY
61)	get by				RECEIVED				MANAGED		TO SURVIVE
62)	get up				ASCEND						RISE FR BED
63)	give in				HANDED						COMPROMISED
64)	give up (f)	-	-		-		-				STOPPED TRY.
65)	hold on				BEEN EMPLOYD						WAITED
66)	let up				ALLOW/PERMIT						DIMINISH
67)	pass away				WALKED AWAY						DIED
68)	pass out				WALKED OUT						FAINTED
69)	pull through				HAUL/CARRY						RECOVER
70)	pull up				HAUL/CATCH				MOVE VEHIC		FORWARD
71)	race around			RAN	IN A RACE				DID EVYTHG		QUICKLY
72)	rub off				CAME OFF						AFFECTED
73)	set off				PUT/PLACED						DETONATED
74)	set out				PUT/PLACED				LEFT ON		JOURNEY
75)	shape up				MOLD						IMPROVE
76)	slip away				STUMBLED				LEFT		QUIETLY
77)	slip up				STUMBLED						MADE MISTAKE

78) stand out	REMAINS	OUTSIDE			IS EXCEPTNL
79) step down		WALKED DWN			RESIGNED
80) stop by		HALTED			VISITED
81) stop off		HALTED/PARK.			VISITED
82) take over		CONFISCATED			TOOK CONTROL
83) throw up		TOSSED/FLUNG			VOMITED
84) waste away	SPENT	RECKLESSLY		LOST WEIGT	EXCESSIVELY
85) watch out		STARE/LOOK			BE CAREFUL
86) wind up	DROVE	IN A CIRCLE			ENDED UP
87) dream up	IMAGINED	IN SLEEP			INVENTED
88) hand down	GIVEN/PASS	BY HAND			BEQUEATHD TO
89) buy up		PURCHASED		PURCHASED	QUICKLY

APPENDIX C

Normalcy Ratings for the Comprehension Study

Directions: Read each item below and rate the underlined verb in the context given according to how normal it is in English. Here "normal" means "typical" or "characteristic" of English. "Not normal" means "strange" or "uncharacteristic" of English. If you think the use of the verb in this context is normal, circle number 1; if you think it is not normal, circle number 7; or you may circle one of the numbers between 1 and 7.

EXAMPLES

1. The bicycle riders usually ride in the city but they want to ride out of the city where there are no cars. They hope to go on a trip with their bicycles soon.

normal 1 2 3 4 5 6 7 not normal

2. The dress designer never used scissors when he was working on a dress He always tore down the material.

normal 1 2 3 4 5 6 7 not normal

3. The boxer was new and inexperienced at boxing competitions. Everyone was surprised when he knocked down the champion in the second round.

normal 1 2 3 4 5 6 7 not normal

4. Nancy's parents didn't want to pay for her second year of college because her grades were all C's and D's. They said she was always fooling around and never did her homework.

normal 1 2 3 4 5 6 7 not normal

PART ONE

Starting time: _____

1. Nobody realized that the fan was on and the window was open. First the papers flew off the table and landed on the windowsill. After that, they blew out the window.

normal 1 2 3 4 5 6 7 not normal

2. All the new dolls were sold in one week. The manager of the toy store knew that he could make a lot of money if he had more dolls to sell. That's why he called in the order immediately.

normal 1 2 3 4 5 6 7 not normal

3. Kevin stood on the terrace waiting for his best friend from childhood, whom he hadn't seen in twenty years. When Charles appeared, Kevin called off the terrace to his old friend approaching the building.

normal 1 2 3 4 5 6 7 not normal

4. When their parents went on a business trip, they left their number at the hotel in case of an emergency. The babysitter called up the parents to ask them what to do because the children wouldn't stop fighting.

normal 1 2 3 4 5 6 7 not normal

5. When the team's supporters got off the bus and entered the football stadium, the noise increased considerably. All the college students cheered on the football field then took their seats.

normal 1 2 3 4 5 6 7 not normal

6. The fashion designer quietly asked one of the seamstresses to change some of the dresses a few days before the fashion show. Nobody knew what had been done over the day of the show.

normal 1 2 3 4 5 6 7 not normal

7. The little boy was afraid of losing his new parrot. So it was kept in a cage all the time.

normal 1 2 3 4 5 6 7 not normal

8. Ruth examined all her bills for the kitchen equipment, trying to find where the mistake had been made. When she looked over the estimate for the kitchen cabinets, she found the error.

normal 1 2 3 4 5 6 7 not normal

9. Betsy's dog disappeared and she searched the house for him. When she finally looked up the road, the dog was standing there.

normal 1 2 3 4 5 6 7 not normal

10. Tom bought a new suit, but then gained a lot of weight. He went on a diet and lost over ten pounds. But when he tried on the new suit, it didn't fit.

normal 1 2 3 4 5 6 7 not normal

11. Jack bought six bottles of soda and carried them home on his bicycle. When he was half-way home, he stopped to see if they were okay. Later, he discovered that everything broke down the road from where he had stopped.

normal 1 2 3 4 5 6 7 not normal

12. Linda asked her father to meet her for a game of tennis in the afternoon, even though it was raining when she called. When Mr. Lewis arrived, it had cleared up the way his daughter had predicted.

normal 1 2 3 4 5 6 7 not normal

13. A man stole the actress' bag and she ran after him, but he got on a bus. She asked somebody where the bus would go. She was told it would go up the street and turn right at the first light.

normal 1 2 3 4 5 6 7 not normal

14. Joseph's mother was going to be 75 next Saturday. The family organized a big party at a fancy hotel. Joseph brought a few relatives and said he would pay for them to stay at the hotel. Before the party, he signed in the relatives and went to find a cheaper room for himself.

normal 1 2 3 4 5 6 7 not normal

15. The soldier was writing to his girlfriend and he had a lot to tell her that day. When he finished, there wasn't enough space for his name at the bottom of the letter. He didn't have any choice, so he signed up the side of the paper.

normal 1 2 3 4 5 6 7 not normal

16. The governor's campaign manager and his assistants were tired after a long campaign, but their work wasn't finished. They were asked to stay up the night of the election and report the results to the candidate.

normal 1 2 3 4 5 6 7 not normal

17. It was easy to take care of those two boys. When the babysitter told them what they had to do, they talked back and forth and then did it.

normal 1 2 3 4 5 6 7 not normal

18. According to the police, the criminals trained a monkey called "Joe" to enter apartments and steal money. He broke in the day before we returned from our vacation.

normal 1 2 3 4 5 6 7 not normal

19. When the delivery arrived from the supermarket, there was no milk in any of the bags. It came apart from the other items.

normal 1 2 3 4 5 6 7 not normal

20. The police couldn't understand what happened to the teenager. He ran away as his parents said, or he had been kidnapped.

normal 1 2 3 4 5 6 7 not normal

21. The terrorists searched the building and found the weapons that were supposed to be taken to the secret camp. They were carried out the door and put into the truck.

normal 1 2 3 4 5 6 7 not normal

22. The senator hoped the investigations about his finances and his contacts with the Mafia would be done quickly, but he wasn't so lucky. They were dragged out the whole year.

normal 1 2 3 4 5 6 7 not normal

23. Nobody knew where the refrigerator in front of the house had come from. Somebody said it had dropped off the back of a truck yesterday afternoon.

normal 1 2 3 4 5 6 7 not normal

24. The woman heard a strange male voice when she answered the telephone. Then it was hung up the minute she began to ask who it was.

normal 1 2 3 4 5 6 7 not normal

25. Most people put family portraits over their fireplace, but Dorothy and Paul are different. Each month they display a different movie star. It's hard to imagine who they will have over their fireplace next.

normal 1 2 3 4 5 6 7 not normal

26. The psychiatrist met once a week with a group of criminals from the State prison to discuss their feelings and problems. During the last meeting, a young man held in his anger for most of the meeting then sarcastically criticized everyone in the group.

normal 1 2 3 4 5 6 7 not normal

27. The thieves stole all the jewelry in the bedroom, but didn't get any of the really valuable jewels. They were kept down the hall in a safe.

normal 1 2 3 4 5 6 7 not normal

28. When the owner came to see the progress on his house, he was disappointed, so the builder made a tough new work schedule. It was kept up the next few days until the owner left.

normal 1 2 3 4 5 6 7 not normal

29. It was the horse's first big race and he wasn't used to running in the front. He was leading on the second lap of the race, but lost in the end.

normal 1 2 3 4 5 6 7 not normal

30. When people would write asking about the company's products, Joan always forgot to give certain information. When she left out the prices, customers were always furious.

normal 1 2 3 4 5 6 7 not normal

31. Charles was supposed to be at his sister's house at 7:00 but it was already 7:30. He was driving about 60 miles per hour and missed the turn near the house. What he passed up the road didn't look familiar so he turned around and went back.

normal 1 2 3 4 5 6 7 not normal

32. The FBI was in Miami on a big drug case. They had a really difficult job to do. It had to be pulled off that morning before the drug dealers left the country.

normal 1 2 3 4 5 6 7 not normal

33. A prisoner escaped on foot from Rikers Island last night. The police said he ran over an old bridge that wasn't used anymore, and disappeared.

normal 1 2 3 4 5 6 7 not normal

34. Donna's aunt is going on a cruise to the Bahamas. She wants to be seen off the day she leaves.

normal 1 2 3 4 5 6 7 not normal

35. The little boy lost the final competition after doing so well in the earlier contests. He couldn't spell out loud a word he had practiced the night before.

normal 1 2 3 4 5 6 7 not normal

36. The last three governors were over 70, and the people finally elected a 55-year-old man. The judge was ready for the ceremony. When he swore in the middle-aged governor, everyone was watching on T.V.

normal 1 2 3 4 5 6 7 not normal

37. The figure skater's mother had an accident during the competition, but his coach didn't want to upset him while he was practicing. He was told off the ice and after the competition ended about the tragedy.

normal 1 2 3 4 5 6 7 not normal

38. Jack bought some pills for his allergies but never took them. Just to be safe, Jack threw away from lack of use all the pills in his medicine cabinet.

normal 1 2 3 4 5 6 7 not normal

39. When Linda got off the train in Chicago, she waited for her bag near the door of the train. She was surprised that it was thrown out the window.

normal 1 2 3 4 5 6 7 not normal

40. Joe was taking art lessons with a very strict teacher. Normally, he didn't mind her critical feedback. But when she touched up his watercolor painting, he got anry.

normal 1 2 3 4 5 6 7 not normal

41. Danny was drunk when he got home from the party. He tripped up the stairs and chipped a tooth.

normal 1 2 3 4 5 6 7 not normal

42. David got a scholarship to New York University but wanted to go to Columbia. He couldn't decide what to do. After a while, he turned down the scholarship and got a student loan so he could go to Columbia.

normal 1 2 3 4 5 6 7 not normal

43. Corinne wasn't sure why the policeman had stopped her car. He said she had turned in the middle of the block illegally.

normal 1 2 3 4 5 6 7 not normal

44. Brian loved David Salle's paintings and couldn't wait to see his new exhibit. He was turned on the minute he saw the first painting.

normal 1 2 3 4 5 6 7 not normal

45. Everybody on the tour bus expected the driver to go straight back to the office. It was a surprise when he turned up the hill and took a scenic route back.

normal 1 2 3 4 5 6 7 not normal

46. The pilot didn't regret dropping the bomb. He wiped out the whole village in a second.

normal 1 2 3 4 5 6 7 not normal

47. Martha lost her part in the play but got a role at a theater nearby. She continued acting up the block at the new experimental theater.

normal 1 2 3 4 5 6 7 not normal

48. Judith was afraid her dog would never be well again. She couldn't believe how fast it bounced back after the surgery.

normal 1 2 3 4 5 6 7 not normal

49. The two sleds were very old and the frames were cracked, but he took them to the park for the children to use anyway. He had a feeling they would break up the hill in the park, but he thought they might as well enjoy them while they lasted.

normal 1 2 3 4 5 6 7 not normal

50. After the mayor died in office, everyone wondered about his special project to fight crime. It would be carried on a year longer by his successor as it turned out.

normal 1 2 3 4 5 6 7 not normal

51. The F.B.I. had been looking for that murderer since September 1st. Some said he was living in the mountains. After a few weeks, he was caught up the mountain near his hide-away.

normal 1 2 3 4 5 6 7 not normal

52. The candidate needed a large contribution to continue his campaign. Finally, it came through the last day possible.

normal 1 2 3 4 5 6 7 not normal

53. The woman screamed when she saw the burglar. He had come up the stairs with a gun in his hand.

normal 1 2 3 4 5 6 7 not normal

54. Everyone is complaining about the drug problem in the city, so the candidate for mayor said something had to be done. He said he would crack down the week he became mayor and put the drug dealers out of business.

normal 1 2 3 4 5 6 7 not normal

55. The old dog disappeared and couldn't be found for a week. We discovered it died down the road behind the house.

normal 1 2 3 4 5 6 7 not normal

56. Ken called his roommate and asked him to have dinner ready when he got home. He wanted to dig in the minute he walked in the house.

normal 1 2 3 4 5 6 7 not normal

57. The hijackers opened the door of the plane while it was in the air and pushed one of the passengers out. Everybody was shocked when he dropped out of the plane.

normal 1 2 3 4 5 6 7 not normal

58. The computer experts started a project developing a new computer. This group had a reputation for completing anything they started. The first week went extremely well. But it was hard to follow through the second week because several staff members were out sick with the flu.

normal 1 2 3 4 5 6 7 not normal

59. In the 1970s, there was a revolution in that country. The military wanted to capture the president and put him in jail, but he fled. The aging president got across his big country and escaped.

normal 1 2 3 4 5 6 7 not normal

60. The couple couldn't tell the marriage counselor exactly how they wanted each other to change. But they knew they wanted to get along the way they used to.

normal 1 2 3 4 5 6 7 not normal

61. Dolores contacted American Express and applied for a credit card as soon as she began to work. She got by mail a welcome letter and an application form.

normal 1 2 3 4 5 6 7 not normal

62. When the course began, the bicycling instructor asked the students to be ready to ride as early in the morning as possible. They didn't know how they would get up the second day of practice.

normal 1 2 3 4 5 6 7 not normal

63. Jerry's gift to Nancy was certainly unusual. Everyone was surprised when he gave in an envelope a picture of himself.

normal 1 2 3 4 5 6 7 not normal

65. Jeff called his wife from overseas but he reached their answering machine. He had held on a few minutes to see if she would answer, and then put down the receiver.

normal 1 2 3 4 5 6 7 not normal

66. The manager said nobody else could be admitted to the club because there was a policy on occupancy. It would only let up to 200 people in the club at the same time.

normal 1 2 3 4 5 6 7 not normal

67. The surgeons discovered that Joe's heart wasn't funtioning properly during surgery. After an hour, he passed away from the pressure on his heart.

normal 1 2 3 4 5 6 7 not normal

68. Nobody noticed that the well-dressed man had stolen a painting from the wall of the gallery. He passed out the door and down the street before anyone realized the painting was missing.

normal 1 2 3 4 5 6 7 not normal

69. Annette's family was very worried about her surgery. Nobody thought she would pull through the way she did.

normal 1 2 3 4 5 6 7 not normal

70. It was the first time Joanna was going fishing, and there was a lot of garbage in the water. Joanna didn't want to pull up a soda can instead of a fish.

normal 1 2 3 4 5 6 7 not normal

71. There was an emergency at work when Victor was ready to leave the office. He got home an hour late and had to get ready for his date. With incredible speed, he raced around the minute he got home and was ready to go.

normal 1 2 3 4 5 6 7 not normal

72. We bought a house that was very old and needed to be cleaned thoroughly. We even got a special machine to clean the floors. We couldn't believe what rubbed off the floor in the kitchen.

normal 1 2 3 4 5 6 7 not normal

73. The anti-government forces wanted the bomb to explode during the President's speech. But it was set off the moment the President's limousine arrived.

normal 1 2 3 4 5 6 7 not normal

74. The couple decided to have a garage sale because they had a lot of clothes and furniture they didn't use. Therefore, they set out in the driveway, all the things they didn't want.

normal 1 2 3 4 5 6 7 not normal

75. Henry, the new salesman, hadn't sold any cars in two months. He was told to shape up very soon or he would be fired.

normal 1 2 3 4 5 6 7 not normal

76. The chef spilled a bowl of soup in the kitchen, and one of the waiters fell on the floor. Fortunately, he slipped away from the stove, so he didn't get hurt.

normal 1 2 3 4 5 6 7 not normal

77. Virginia's supervisor has not been happy with Virginia's performance. Then she slipped up the day before yesterday and didn't return her supervisor's phone call.

normal 1 2 3 4 5 6 7 not normal

78. There's a homeless man who is always outside the church on the corner. He even stands out in the rain without an umbrella.

normal 1 2 3 4 5 6 7 not normal

79. Everyone was surprised when the mayor said she was resigning. She stepped down the day before yesterday because she was ill.

normal 1 2 3 4 5 6 7 not normal

80. Elaine and Bob had a picnic near a waterfall. Then they stopped by a lake to take pictures.

normal 1 2 3 4 5 6 7 not normal

81. When we arrived in Ohio, we visited an old friend from childhood. Then we stopped off the next day at my sister's house.

normal 1 2 3 4 5 6 7 not normal

82. After a long investigation, it was found that Edith and Henry were the ones who had stolen the important documents last week. Nobody knew what they had taken over the year they had worked for the company.

normal 1 2 3 4 5 6 7 not normal

83. During the party, Jack drank a lot but seemed to be fine on the way home. Suddenly he threw up the minute the car stopped in front of the house.

normal 1 2 3 4 5 6 7 not normal

84. On her trip, Ellen was spending money foolishly. In a short time, she had wasted, away from home, her last hundred dollars.

normal 1 2 3 4 5 6 7 not normal

85. The last time the poet came to New York, her pocketbook was stolen in a restaurant. She was nervous about returning to the city. All she could do was watch out the next time she came to the city.

normal 1 2 3 4 5 6 7 not normal

86. The car manufacturer had one last test to be sure the car could go uphill without a problem. The sports car wound up the hill smoothly and quietly.

normal 1 2 3 4 5 6 7 not normal

87. Every night, Sam had lots of dreams. He usually had dreams about his family life. Last night, what he dreamed up to the time he woke up was about his childhood in Vermont.

normal 1 2 3 4 5 6 7 not normal

88. In the boarding school, twenty students ate dinner at the same table. The plates were handed down to each student until everyone got one.

normal 1 2 3 4 5 6 7 not normal

89. Everyone expected the street sale to be a big success but the weather made that impossible. Only a few items were bought up and then it began to rain.

normal 1 2 3 4 5 6 7 not normal

END OF PART ONE

Ending Time:

PART TWO

Directions: The instructions for Part II are the same as for Part I. Read each item below and rate the underlined verb in the context given according to how normal it is in English. Here "normal" means "typical" or "characteristic" of English. If you think the use of the verb in this context is normal, circle number 1; if you think it is not normal, circle number 7; or circle one of the numbers between 1 and 7.

Starting Time:_____

1. The twins were so happy about their birthday party. First they opened their presents, then they ate lunch. After that, they blew out the candles on their cake and everybody sang "Happy Birthday."

normal 1 2 3 4 5 6 7 not normal

2. He wanted privacy when he spoke to his ex-girlfriend. That's why he called in the bedroom instead of in the living room.

normal 1 2 3 4 5 6 7 not normal

3. Kevin arranged a meeting with Charles to discuss the possibility of forming their own computer company. When Charles appeared, Kevin called off the meeting which had been scheduled for weeks.

normal 1 2 3 4 5 6 7 not normal

4. The children were supposed to come down for dinner at 6:00 but they didn't appear. The babysitter called up the stairs to tell them it was time to eat.

normal 1 2 3 4 5 6 7 not normal

5. The Thanksgiving football game was a big event at that school, but the home team was losing by half-time. All the college students cheered on the football team in the third quarter.

normal 1 2 3 4 5 6 7 not normal

6. The Air Force flew over the farm land several times, and the farmers said the crops were beginning to die. Nobody knew what had been done over the fields.

normal 1 2 3 4 5 6 7 not normal

7. Her husband had been beating her for years, but she was ashamed to tell anyone her horrible secret. So it was kept in a long time before she got help.

normal 1 2 3 4 5 6 7 not normal

8. Ruth didn't think she could see the swimming pool from her house. When she looked over the fence, she was able to see the pool.

normal 1 2 3 4 5 6 7 not normal

9. Betsy knew her old friend lived in Chicago, but she didn't have her telephone number. When she finally looked up the number, she discovered it wasn't listed.

normal 1 2 3 4 5 6 7 not normal

10. Tom loved to play golf. He even invented a new way to hit the ball. When he experimented in his back yard, it was successful. But when he tried on the golf course, it failed.

normal 1 2 3 4 5 6 7 not normal

11. Jack bought an old factory and spent the whole day fixing all the equipment that wasn't working. Later, he discovered that everything broke down the instant he left.

normal 1 2 3 4 5 6 7 not normal

12. There were hundreds of bushes in front of the house and Mr. Lewis, the owner, hired two men to remove them. The men used a special machine to remove the bushes. When Mr. Lewis arrived, it had cleared up the hill in front of the house.

normal 1 2 3 4 5 6 7 not normal

13. The actress was making money and decided to buy a computer stock. She hoped to double her money very quickly and after a week, she called her broker on Wall Street. She was told it would go up the expected five percent, that's all.

normal 1 2 3 4 5 6 7 not normal

14. It was Joseph's secretary's fiftieth birthday and the office staff was organizing a big celebration. Everyone was asked to contribute to the gift and write something on the border of the card. Before the party, he signed in the middle of the card and refused to contribute for the gift.

normal 1 2 3 4 5 6 7 not normal

15. The doctor told the patient he was working too hard and needed to do more exercise or he would get a heart attack. He didn't have any choice, so he signed up the next day for an exercise class.

normal 1 2 3 4 5 6 7 not normal

16. A poisonous gas made its way into all the houses in the area and the Petersons were notified of the danger. They were asked to stay up the street at the local school with the other families.

normal 1 2 3 4 5 6 7 not normal

17. The twins wouldn't cooperate with the babysitter. When the babysitter told them what they had to do, they talked back and made her very angry.

normal 1 2 3 4 5 6 7 not normal

18. Peter shocked everyone at the party. He broke in a million pieces a $5,000 antique lamp.

normal 1 2 3 4 5 6 7 not normal

19. The detergent was too strong, and Paul had a problem when he washed the delicate tablecloth. It came apart from the strong detergent.

normal 1 2 3 4 5 6 7 not normal

20. The little boy got scared when the strangers asked him for directions. He ran away as fast as he could.

normal 1 2 3 4 5 6 7 not normal

21. The night of the mission, the terrorists met outside the embassy and were given the new plans. They were carried out the way the leader hoped they would be.

normal 1 2 3 4 5 6 7 not normal

22. The drug dealers were finally caught by the police in an apartment in Queens. They were dragged out the door and taken away in police vans.

normal 1 2 3 4 5 6 7 not normal

23. Everyone at home was waiting for the new refrigerator but it didn't come. Somebody said it was dropped off the day before at the wrong house.

normal 1 2 3 4 5 6 7 not normal

24. On their camping trip, the boys found a rabbit and killed it. Then it was hung up the hill near the tent.

normal 1 2 3 4 5 6 7 not normal

25. Dorothy and Paul always invite very strange guests to their home each evening. It's hard to imagine who they will have over that evening for dinner.

normal 1 2 3 4 5 6 7 not normal

26. Nobody checked the audience when the mayor came to the town meeting. During the last meeting, a young man held in his hand a loud radio that disrupted the meeting.

normal 1 2 3 4 5 6 7 not normal

27. The American journalist wrote about people in the poor farming areas who wanted to fight for their freedom. They were kept down the whole 20th century by their poverty and illiteracy.

normal 1 2 3 4 5 6 7 not normal

28. Barbara moved from a house to an apartment. She didn't have any room in her apartment for her bicycle. It was kept up the street at her mother's house.

normal 1 2 3 4 5 6 7 not normal

29. Everone who knew him said he was a liar and a manipulator, except his girlfriend. He was leading on the woman, and she didn't even realize it.

normal 1 2 3 4 5 6 7 not normal

30. Helen was afraid her house might be robbed, so she didn't want anyone to know she was going away for a few weeks. When she left out the back door, nobody saw her go.

normal 1 2 3 4 5 6 7 not normal

31. Jimmy wanted to buy a new house with a big yard. He spent months looking, but everything he saw looked worse and worse. What he passed up the first few weeks was the best, but it was too late.

normal 1 2 3 4 5 6 7 not normal

32. A 1965 Chevrolet got stuck on the bridge during rush hour, but somebody called a tow truck quickly. It had to be pulled off the bridge as soon as possible.

normal 1 2 3 4 5 6 7 not normal

33. The boy's parents were really upset about the car accident. The police said he ran over an old man on the way home from the party and didn't even stop.

normal 1 2 3 4 5 6 7 not normal

34. The new anchorwoman on CBS News goes to every party in town. She wants to be seen off the air as much as on.

normal 1 2 3 4 5 6 7 not normal

35. One of the doctoral students failed the comprehensive exam. He couldn't spell out loud and clear the most difficult theory in his field.

normal 1 2 3 4 5 6 7 not normal

36. The candidate was angry during the interview with the press and didn't care who knew it. When he swore in the middle of the press conference, he surprised the reporters.

normal 1 2 3 4 5 6 7 not normal

37. Donald insulted his girlfriend at the party, and thought she hadn't noticed. He was told off the minute they were alone.

normal 1 2 3 4 5 6 7 not normal

38. Whenever they went to the beach, Jack and his father liked to throw a ball back and forth after swimming. That day, the beach was crowded with sunbathers. Just to be safe, Jack threw away from the sunbathers as much as possible.

normal 1 2 3 4 5 6 7 not normal

39. Everybody enjoyed the turkey on Thanksgiving, and Wendy couldn't wait to eat some more of it. She was surprised that it was thrown out the next day.

normal 1 2 3 4 5 6 7 not normal

40. It was the first time little Joe met a blind child. He was quite happy when they were just talking. But when she touched up his face and across his head, he got scared and began to cry.

normal 1 2 3 4 5 6 7 not normal

41. This was the second time he was playing the chess champion. After an hour, he was losing. He tripped up the champion with a surprise move.

normal 1 2 3 4 5 6 7 not normal

42. It was the first time Dennis was taking Marie on a date. He sat in his car for a while thinking of what he would say when he met her. After a while, he turned down the street and pulled into her driveway with anxiety.

normal 1 2 3 4 5 6 7 not normal

43. Corinne asked the personnel manager why she wasn't given an interview. He said she had turned in the application after the deadline.

normal 1 2 3 4 5 6 7 not normal

44. The surgeons had to work on his chest and the back of his legs during the surgery. He was turned on the table by the surgeons after two hours.

normal 1 2 3 4 5 6 7 not normal

45. The man kept talking to Laura all the time they were in the store together. It was a surprise when he turned up the next day at her house.

normal 1 2 3 4 5 6 7 not normal

46. After washing the rug, Ed discovered that the washing machine was filthy. He wiped out the machine with a sponge.

normal 1 2 3 4 5 6 7 not normal

47. When her parents went away Friday morning, Martha started fighting with her brothers, and refused to eat. She continued acting up the whole day.

normal 1 2 3 4 5 6 7 not normal

48. Judith was just learning to play tennis and was having trouble keeping her eye on the ball. She couldn't believe how fast it bounced back after her partner hit it.

normal 1 2 3 4 5 6 7 not normal

49. William knew the relationship was in trouble because Brenda never had time to see him anymore. He had a feeling they would break up the next time they saw each other.

normal 1 2 3 4 5 6 7 not normal

50. After the race, one of the horses collapsed. The veterinarians got a trailer for the horse, but couldn't decide how to get the horse into the trailer. One of them got an idea. It would be carried on a big stretcher to the trailer.

normal 1 2 3 4 5 6 7 not normal

51. One of the students got the flu in the beginning of the semester and couldn't do the homework the first three weeks. After a few weeks, he was caught up the way he hoped to be.

normal 1 2 3 4 5 6 7 not normal

52. Sandra was waiting for the package to arrive all week. Finally, it came through the mail on Friday.

normal 1 2 3 4 5 6 7 not normal

53. The parents didn't want to discuss their son's drug problem at the family gathering because it was a sensitive issue. It had come up the minute the relatives arrived.

normal 1 2 3 4 5 6 7 not normal

54. When the carpenter saw the wall, he said there was the beginning of a hole in it. He said he would crack down the wall and rebuild it.

normal 1 2 3 4 5 6 7 not normal

55. The party was lively as long as Paul was there telling stories. We discovered it died down the moment he left.

normal 1 2 3 4 5 6 7 not normal

56. The new gardener couldn't wait to start working the day he was hired. He wanted to dig in the garden before it got too dark.

normal 1 2 3 4 5 6 7 not normal

57. Ronald was upset about failing the midterm. Everybody was shocked when he dropped out of the course the week after he received his grade.

normal 1 2 3 4 5 6 7 not normal

58. The hunter was thrilled when he spotted a deer. But it was hard to follow through the woods, and he lost it in ten minutes.

normal 1 2 3 4 5 6 7 not normal

59. He had been president of that country for twenty years, but a younger man challenged him for the presidency. They arranged a debate and everyone said the president did very well. The aging president got across his big plans for the country successfully.

normal 1 2 3 4 5 6 7 not normal

60. The little boys didn't know what they were going to do at the parade. But they knew they wanted to get along the route to see the marchers clearly.

normal 1 2 3 4 5 6 7 not normal

61. Brenda withdrew all her money before the trip. During her vacation, her wallet was stolen with all her money in it. She got by the first night of the trip but had no money for food the next day.

normal 1 2 3 4 5 6 7 not normal

62. It was raining very hard when the bicycle riders reached a steep hill. They didn't know how they would get up the hill in such bad weather.

normal 1 2 3 4 5 6 7 not normal

63. The students in the course wanted to write a paper, but the professor said he would give an exam. Everyone was surprised when he gave in a week before the end of class, and said a paper would be okay.

normal 1 2 3 4 5 6 7 not normal

64. June wanted to learn wind-surfing, but it wasn't as easy as she expected. After an hour, she gave up and went swimming instead.

normal 1 2 3 4 5 6 7 not normal

65. It wasn't surprising that he was selected for the position as ambassador. He had held on a temporary basis an important position in the government and was well respected.

normal 1 2 3 4 5 6 7 not normal

66. The weatherman predicted rain for most of the holiday. It would only let up to give us some relief in the evening.

normal 1 2 3 4 5 6 7 not normal

67. The visiting Prime Minister was greeted by a big crowd in Washington. After an hour, he passed away from the crowd and went to the White House.

normal 1 2 3 4 5 6 7 not normal

68. Joe felt good at the beginning of the race, but then he got more and more tired. He passed out the minute he reached the finish line and was taken to a hospital.

normal 1 2 3 4 5 6 7 not normal

69. During the snowstorm, Annette walked to the store with a sled. Nobody thought she would pull, through the snow, three bags of groceries.

normal 1 2 3 4 5 6 7 not normal

70. Somebody wanted to park behind Joanna, but there wasn't enough space. Joanna didn't want to pull up a little because she would be too close to the fire hydrant.

normal 1 2 3 4 5 6 7 not normal

71. Everybody wanted to see the new Australian runner at the Olympics. The race was very exciting from start to finish. With incredible speed, he raced around the track and won by two seconds.

normal 1 2 3 4 5 6 7 not normal

72. Ellen was in her first year of college and she became friends with two very wild girls. We couldn't believe what rubbed off the first semester she was there.

normal 1 2 3 4 5 6 7 not normal

73. The woman asked the jeweler to combine two rings into one large one. She asked him to put the diamond in the center and the rubies all around it. But it was set off the center and looked awful.

normal 1 2 3 4 5 6 7 not normal

74. The couple wanted to have a picnic lunch at noon and they had a five-hour drive ahead of them. Therefore, they set out in the early morning and stopped only once on the way.

normal 1 2 3 4 5 6 7 not normal

75. The student in the sculpture class was almost finished with the marble figure. He was told to shape up very close to the head to make the figure look more realistic.

normal 1 2 3 4 5 6 7 not normal

76. After the President's speech, the Secret Service agents discovered a woman with a gun in the middle of the audience. Fortunately, he slipped away from the crowd and didn't get hurt.

normal 1 2 3 4 5 6 7 not normal

77. Virginia could hardly walk after her first accident. Then she slipped up the hill near the trail and her ankle was very sore.

normal 1 2 3 4 5 6 7 not normal

78. John is one of the best athletes in the country. He even stands out in the international competitions.

normal 1 2 3 4 5 6 7 not normal

79. The last scene was the most dramatic one for the star. She stepped down the road to her death.

normal 1 2 3 4 5 6 7 not normal

80. Our new neighbors came for dinner on Friday night. Then they stopped by a few days later just to say "hello."

normal 1 2 3 4 5 6 7 not normal

81. Because we were in a hurry to get to our country house, we ate breakfast in the car. Then we stopped off the highway to stretch our legs and get some fresh air.

normal 1 2 3 4 5 6 7 not normal

82. Everyone was surprised when Edith and Henry said they planned to buy the company and become the president and vice-president. Nobody knew what they had taken over the year before they joined this company.

normal 1 2 3 4 5 6 7 not normal

83. Jack wasn't bowling the way he usually played. Suddenly he threw up the lane one ball after another.

normal 1 2 3 4 5 6 7 not normal

84. After she was told she had cancer, she began to see changesin herself. In a short time, she had wasted away from 130 pounds to 80.

normal 1 2 3 4 5 6 7 not normal

85. It was so difficult to say "goodbye" to her boyfriend at the train station. When she got on the train, she couldn't read or eat. All she could do was watch out the window.

normal 1 2 3 4 5 6 7 not normal

86. While going north, the sports car hit another car at 70 miles per hour. The sports car wound up, the next moment, on the other side of the highway.

normal 1 2 3 4 5 6 7 not normal

87. Sam was very smart and creative. Every week, he had another invention. Last night, what he dreamed up to the surprise of everyone was a new way to water the grass.

normal 1 2 3 4 5 6 7 not normal

88. Cynthia wanted to inherit her greatgrandmother's dishes, but over the years, everything had broken except the plates. The plates were handed down to each generation until Cynthia got them.

normal 1 2 3 4 5 6 7 not normal

89. Sales didn't go well at the first street festival. Only a few items were bought up and down the street.

normal 1 2 3 4 5 6 7 not normal

END OF PART TWO

Ending Time: _____

Thank you for your help with this study.

APPENDIX D
Transparency Judgments

NAME: _____
(Please print)

Address: _____
Street City State Zip Code

Telephone number: ( ) _____ ( ) _____
(day) (evening)

Today's date: _____ (month) (day) (year)

Native language: _____

Are you bilingual (i.e., did you learn two languages in childhood)? Yes ( ) No ( )

Which other language? _____

Directions: The items listed below are phrasal verbs (verb + adverbial particle) for example, run over, which means 'hit with a car.'

Please rate each phrasal verb according to how idiomatic its meaning is (that is, how figurative its meaning is). If the two words have their ordinary meaning, the phrasal verb is not idiomatic, and you would rate it '1.' If the two words have a meaning that is completely different from their ordinary meaning, the phrasal verb is idiomatic, and you would rate it '7.' If the meaning of the two words is somewhat idiomatic, you would rate it between 1 and 7.

In your judgments, please rate only the verb and adverbial particle, not the subject or object given in parentheses. The subject and object are given merely to help you understand the intended meaning.

		Meaning	TRANSPARENCY very transparent meaning 1 2 3 4 5 6 7 very idiomatic meaning
1)	blow out (the candles)	(extinguish)	1 2 3 4 5 6 7
2)	call in (the order) (the results of the meating)	(report, request information by phone)	1 2 3 4 5 6 7
3)	call off (the meeting)	(cancel)	1 2 3 4 5 6 7
4)	call up (their parents)	(telephone)	1 2 3 4 5 6 7
5)	cheer on (the football team)	(encourage demonstratively)	1 2 3 4 5 6 7
6)	do over (the dresses) (the essay)	(do again, change)	1 2 3 4 5 6 7
7)	keep in (the secret)	(repress)	1 2 3 4 5 6 7
8)	look over (the estimate)	(examine)	1 2 3 4 5 6 7

	Meaning	very transparent meaning						very idiomatic meaning
9) look up (the number)	(search for on a list)	1	2	3	4	5	6	7
10) try on (the new suit)	(put clothes on to check size or style	1	2	3	4	5	6	7
11) break down (the equipment ... the instant he left)	(stop functioning, stop working)	1	2	3	4	5	6	7
12) clear up (the weather ... the way she predicted)	(become sunny, improve)	1	2	3	4	5	6	7
13) go up (the stock ... the the expected 5%)	(increase)	1	2	3	4	5	6	7
14) sign in (the relatives)	(register in a hotel	1	2	3	4	5	6	7
15) sign up (for an exercise class)	(enroll)	1	2	3	4	5	6	7
16) stay up (the campaign manager ... the night of the election)	(not sleep)	1	2	3	4	5	6	7

		Meaning	very transparent meaning							very idiomatic meaning
17) talk back	(the children ... to the babysitter)	(respond rudely)		1	2	3	4	5	6	7
18) break in	(the burglar ... the day before we returned)	(burglarize)		1	2	3	4	5	6	7
19) come apart	(the tablecloth ... from the strong detergent)	(disintegrate)		1	2	3	4	5	6	7
20) run away	(from home)	(leave home deliberately)		1	2	3	4	5	6	7
21) carry out	(the plans were ... the way the leader hoped)	(execute, complete)		1	2	3	4	5	6	7
22) drag out	(the investigators were ... the whole year)	(delay)		1	2	3	4	5	6	7
23) drop off	(the refrigerator/the package)	(deliver)		1	2	3	4	5	6	7
24) hand up,	(the telephone)	(end phone conversation, disconnect the line)		1	2	3	4	5	6	7

		Meaning	very transparent meaning							very idiomatic meaning
25) have over	(who they will ... that evening)	(invite to one's home, entertain)	1	2	3	4	5	6	7	
26) hold in	(his anger)	(repress, hide)	1	2	3	4	5	6	7	
27) keep down	(the people in the poor farming areas)	(suppress)	1	2	3	4	5	6	7	
28) keep up	(the work schedule)	(continue)	1	2	3	4	5	6	7	
29) lead on	(the woman)	(deceive, manipulate)	1	2	3	4	5	6	7	
30) leave out	(the prices)	(omit)	1	2	3	4	5	6	7	
31) pass up	(the houses that were for sale)	(not take, forfeit, reject)	1	2	3	4	5	6	7	
32) pull off	(the arrest of the drug dealers)	(succeed, accomplish)	1	2	3	4	5	6	7	

	Meaning	very transparent meaning							very idiomatic meaning
33) run over (an old man)	(crash into, hit with car)	1	2	3	4	5	6	7	
34) see off (her aunt)	(say "farewell" at the dock)	1	2	3	4	5	6	7	
35) spell out (the theory)	(explain, elaborate)	1	2	3	4	5	6	7	
36) swear in (the governor)	(inaugurate, administer oath)	1	2	3	4	5	6	7	
37) tell off (her boyfriend)	(insult, scold, criticize)	1	2	3	4	5	6	7	
38) throw away (all the pills)	(discard)	1	2	3	4	5	6	7	
39) throw out (the turkey)	(discard, put in the garbage)	1	2	3	4	5	6	7	
40) touch up (his watercolor painting)	(fix, improve, re-do)	1	2	3	4	5	6	7	

	Meaning	very transparent meaning						very idiomatic meaning
41) trip up (the champion)	(trick)	1	2	3	4	5	6	7
42) turn down (the scholarship)	(reject)	1	2	3	4	5	6	7
43) turn in (the application)	(submit, return)	1	2	3	4	5	6	7
44) turn on (by the paintings)	(excite)	1	2	3	4	5	6	7
45) turn up (the next day at her house)	(appear unexpectedly, visit)	1	2	3	4	5	6	7
46) wipe out (the whole village)	(destroy, demolish)	1	2	3	4	5	6	7
47) act up (the child ... the whole day	(misbehave)	1	2	3	4	5	6	7
48) bounce back (after the surgery)	(recover)	1	2	3	4	5	6	7

		Meaning	very transparent meaning	1 2 3 4 5 6 7	very idiomatic meaning
49) break up	(the couple ... the next time they saw each other	(end relationship)		1 2 3 4 5 6 7	
50) carry on	(the special project to fight crime)	(continue)		1 2 3 4 5 6 7	
51) catch up	(with the homework)	(overtake, reach level)		1 2 3 4 5 6 7	
52) come through	(the last day possible)	(be received, arrive)		1 2 3 4 5 6 7	
53) come up	(their son's drug problem ... the minute the relatives arrived)	(be mentioned, raised, discussed)			
54) crack down	(the candidate would ... on the drug dealers)	(get tough, attack)		1 2 3 4 5 6 7	
55) die down	(the party ... the moment he left)	(become quieter)		1 2 3 4 5 6 7	
56) dig in	(the minute he walked in the house)	(eat vigorously)		1 2 3 4 5 6 7	

	Meaning	very transparent meaning						very idiomatic meaning
57) drop out of (the course)	(stop attending, withdraw)	1	2	3	4	5	6	7
58) follow through (on the project)	(continue, complete)	1	2	3	4	5	6	7
59) get across (his plans)	(communicate)	1	2	3	4	5	6	7
60) get along (the way they used to)	(be friends, interact)	1	2	3	4	5	6	7
61) get by (the first night of the trip)	(manage, survive)	1	2	3	4	5	6	7
62) get up (the second day of practice)	(rise, awaken)	1	2	3	4	5	6	7
63) give in (the teacher ... a week before the end of class	(succumb, change one's mind)	1	2	3	4	5	6	7
64) give up (and went swimming instead)	(abandon, stop trying)	1	2	3	4	5	6	7

	Meaning	very transparent meaning	1 2 3 4 5 6 7	very idiomatic meaning
65) hold on (a few minutes then put down the receiver	(wait)		1 2 3 4 5 6 7	
66) let up (the rain ... in the evening)	(diminish, improve)		1 2 3 4 5 6 7	
67) pass away (from the pressure on his heart)	(die)		1 2 3 4 5 6 7	
68) pass out (the minute he reached the finish line)	(faint)		1 2 3 4 5 6 7	
69) pull through (the way she did)	(survive)		1 2 3 4 5 6 7	
70) pull up (her car)	(drive forward)		1 2 3 4 5 6 7	
71) race around (the minute he got home)	(rush, hurry)		1 2 3 4 5 6 7	
72) rub off (what ... the first semester she was there)	(affect, influence)		1 2 3 4 5 6 7	

	Meaning	very transparent meaning 1 2 3 4 5 6 7	very idiomatic meaning
73) set off (the bomb)	(trigger, detonate)	1 2 3 4 5 6 7	
74) set out (in the early morning)	(start journey)	1 2 3 4 5 6 7	
75) shape up (very soon or he would be fired)	(improve)	1 2 3 4 5 6 7	
76) slip away (from the crowd)	(disappear, vanish)	1 2 3 4 5 6 7	
77) slip up (the day before yesterday)	(err, make a mistake)	1 2 3 4 5 6 7	
78) stand out (in the international competitions)	(be exceptional)	1 2 3 4 5 6 7	
79) step down (the mayor ... the day before yesterday)	(resign)	1 2 3 4 5 6 7	
80) stop by (to say "hello")	(visit informally)	1 2 3 4 5 6 7	

		Meaning	very transparent meaning							very idiomatic meaning
81) stop off	(at my sister's house)	(visit informally)	1	2	3	4	5	6	7	
82) take over	(the company)	(assume control, buy)	1	2	3	4	5	6	7	
83) throw up	(the minute the car stopped)	(vomit)	1	2	3	4	5	6	7	
84) waste away	(from 130 pounds to 80)	(deteriorate)	1	2	3	4	5	6	7	
85) watch out	(the next time she came to the city)	(be careful)	1	2	3	4	5	6	7	
86) wind up	(on the other side of the highway)	(end up, find oneself)	1	2	3	4	5	6	7	
87) dream up	(to water the grass)	(invent, create)	1	2	3	4	5	6	7	
88) hand down	(to each generation)	(bequeath, will)	1	2	3	4	5	6	7	
89) buy up	(a few items)	(purchase all or purchase quickly)	1	2	3	4	5	6	7	

APPENDIX E
Script I and II for the Processing Study: Sentences, Probes, and Probe Points

SCRIPT I

1 Ellen was working too hard. She needed a long vacation. Finally, she decided to ▲ go to Hawaii for a few weeks.

PAPER

2 Paul got an interesting book as a birthday present. He couldn't stop reading it until he finished it. Then he bought another book ▲ by the same author.

WINDOW

3 Eric's new apartment had a dishwasher and a washing machine. But the best thing about the apartment was the terrace. It had a magnificent ▲ view.

STORY

4 The secretary knew that she had to learn to type on a computer or she would lose her job. She tried to learn but ▲ just didn't like it.

PICTURE

5 Nobody watered the plants while Dolores was on vacation. When she returned, they were all dead ▲ so she had to buy some new ones.

SLOWLY

1 6 Tom bought a new suit, but then gained a lot of weight. He went on a diet and lost over ten pounds. But when he tried on ▲ the new suit, it didn't fit.

ATTEMPT WEATHER CLOTHES STRANGE

7 Jack didn't like his piano lessons. He tried to practice every day, but got bored after ten minutes. He told his parents they were wasting their money ▲ by giving him private lessons.

TRIP

2 8 Ruth didn't think she could see the swimming pool from her house. When she looked over ▲ the fence, she was able to see the pool.

WATCH RIGHT REVIEW CREATE

9 The newspaper had a terrible story about a murder in lower Manhattan today. It said that a woman Δ had been pushed onto the subway tracks by a stranger.

LONELY

3 10 The doctor told the patient he was working too hard and needed to do more exercise or he would get a heart attack. He didn't have any choice, so he signed up Δ the next day for an exercise class.

NAME FOOT ENROLL INVADE

4 11 Betsy's dog disappeared and she searched the house for him. When she finally looked up Δ the road, the dog was standing there.

WATCH CROSS WORD LONG

12 Dolores wanted to be a doctor, but was afraid it would take. too long to get her medical degree. Instead, she decided to go to nursing Δ school.

HUNGRY

13 The children never wanted to eat their vegetables. Their mother had to find new ways to cook them so the children didn't know they were the same old vegetables. It wasn't always easy to find new Δ ways to prepare the vegetables.

NEWSPAPER

5 14 Joseph's mother was going to be 75 next Saturday. The family organized a big party at a fancy hotel. Joseph brought a few relatives and said he would pay for them to stay at the hotel. Before the party, he signed in Δ the relatives and went to find a cheaper room for himself.

PEN BAT REGISTER FESTIVAL

6 15 A man stole the actress' bag and she ran after him, but he got on a bus. She asked somebody where the bus would go. She was told it would go up Δ the street and turn right at the first light.

COME LAST RISE MASS

16 Denise always wanted to live in the country. She liked gardening, and cooking what she grew in her own garden. After twenty years in the city, she finally Δ moved to a farmhouse upstate.

STUDY

17 Everybody liked the new student in class. She was smart and friendly. Every day after class, she played in the gym Δ with the other students.

SOFTLY

18 It was a hot day for a game of tennis. At first, Jeff wanted to cancel, but then he decided to play. After the game, he was really tired, but because Δ he had won, he was happy.

BEAUTIFUL

7 19 When their parents went on a business trip, they left their number at the hotel in case of an emergency. The babysitter called up Δ the parents to ask them what to do because the children wouldn't stop fighting.

SHOUT SWELL FRIEND CHOICE

8 20 Nobody realized that the fan was on and the window was open. First the papers flew off the table and landed on the windowsill. After that, they blew out Δ the window.

WIND FATE EXTINGUISH COMPLICATE

9 21 According to the police, the criminals trained a monkey called "Joe" to enter apartment and steal money. It was while we were on vacation that he broke in Δ a policeman said.

CRACK SMART ROBBERY MARITAL

22 After ten years of teaching third grade in a public school, the teacher was tired and needed a change. He asked for a leave-of-absence for a year Δ to explore some new jobs.

SISTER

10 23 The night of the mission, the terrorists met outside the embassy and were given the new plans. They were carried out Δ the way the leader hoped they would be.

BAG CUP COMPLETE RESPOND

11 24 Everyone at home was waiting for the new refrigerator but it didn't come. Some said it was dropped off Δ the day before at the wrong house.

FALL MEET DELIVER ABANDON

12 25 Everyone who knew him said he was a liar and a manipulator, except his girlfriend. He was leading on Δ the woman, and she didn't even realize it.

FOLLOW PRETTY DECEIVE STAGGER

26 Greg was a good chess player. He liked to play in the park. with strangers. He made a lot of friends $_{\Delta}$ that way and also improved his game.

MOVIE

27 Monica liked to travel so she took a job with the airlines. Whenever she wanted, she could take a trip for free. She said it was the best $_{\Delta}$ job she ever had.

WATER

13 28 The drug dealers were finally caught by the police in an apartment in Queens. They were dragged out $_{\Delta}$ the door and taken away in police vans.

PULL SALT LENGHTEN SCRAMBLE

29 The prisoner wanted to protest his treatment by the guards. He said they beat him and often didn't give him his meals. The guards $_{\Delta}$ said the prisoner was lying.

BOX

30 The ballet was a big success. The choreography was original, the costumes were unusual, and the lighting was interesting. Everything $_{\Delta}$ was in harmony.

FUNNY

14 31 The little boy got scared when he strangers asked him for directions. He ran away $_{\Delta}$ as fast as he could.

WALK MASS HOME HIGH

15 32 Most people put family portraits over their fireplace, but Dorothy and Paul are different. Each month they display a different movie star. It's hard to imagine who they will have over $_{\Delta}$ their fireplace next.

OWN OLD ENTERTAIN VOLUNTEER

16 33 Helen was afraid her house might be robbed, so she didn't want anyone to know she was going away for a few weeks. When she left out $_{\Delta}$ the back door, nobody saw her go.

STAY FIRE OMIT TIDY

34 Kay always wanted to write a novel. One day, she quit her job and started writing. A year later, she $_{\Delta}$ finished her book and found a publisher.

DANCE

35 Jeannette wanted to learn how to ski. She went to the mountains with some friends and took skiing lessons. After a week of lessons, she still couldn't ski Δ even on the beginner's slope.

COMPUTER

36 After college, Marie got a job as a social worker. She worked for an agency Δ that helped drug addicts.

LIGHT

17 37 The FBI was in Miami on a big drug case. They had a really difficult job to do. It had to be pulled off Δ that morning before the drug dealers left the country.

PUSH WIRE ACHIEVE CORRECT

38 John hates to do exercise. He tried bicycle riding, but didn't like it. Then he tried running, but it was too hard. After that, he started swimming in a pool Δ nearby, but didn't like that either.

FILE

18 39 A prisoner escaped on foot from Rikers Island last night. The police said he ran over Δ an old bridge that wasn't used anymore, and disappeared.

WALK THIN HIT AID

40 The weather was beautiful the day of the race. It was sunny but there was a good breeze. It stayed like that Δ all day long.

PHOTOGRAPHY

41 Richard really believed he would win the lottery. He bought several tickets regularly. Two years after he started buying tickets, he Δ won a million dollars.

TABLE

19 42 Everybody enjoyed the turkey on Thanksgiving, and Wendy couldn't wait to eat some more of it. She was surprised that it was thrown out Δ the next day.

CATCH PROOF GARBAGE BUTCHER

20 43 It was the first time Dennis was taking Marie on a date. He sat in his car for a while thinking of what he would say when he met her. After a while, he turned down Δ the street and pulled into her driveway with anxiety.

LEFT ONCE REFUSE CLOSET

44 Jane decided to make Thanksgiving dinner for her whole family. She bought a big turkey and plenty of vegetables. Everybody liked the meal Δ and congratulated her on her first big family dinner.

CRY

21 45 Judith was afraid her dog would never be well again. She couldn't believe how fast it bounced back Δ after surgery.

REBOUND STAGGER RECOVER NOMINAL

46 The new jacket was very pretty, but the sleeves were too long. Laura brought it to a tailor and had the sleeves shortened. It looked great Δ after it was fixed.

HEALTHY

22 47 After the race, one of the horses collapsed. The veterinarians got a trailer for the horse, but couldn't decide how to get the horse into the trailer. One of them got an idea. It would be carried on Δ a big stretcher to the trailer.

LEFT PACK CONTINUE WHATEVER

48 The little girl seemed to be very artistic. She loved to paint and draw. Her parents found a special school Δ for artistic children and enrolled her in classes there.

SODA

23 49 Corinne asked the personnel manager why she wasn't given an interview. He said she had turned in Δ the application after the deadline.

SPIN MINT SUBMIT HUMBLE

24 50 Ken called his roommate and asked him to have dinner ready when he got home. He waited to dig in Δ the minute he walked in the house.

HOLE WILD EAT HIT

51 During the summer, the two boys made money by cutting the grass for all their neighbors. In the fall, they Δ bought new hockey equipment.

JUDGE

25 52 The old dog disappeared and couldn't be found for a week. We discovered it died down Δ the road behind the house.

DEATH BOARD QUIET SOLID

26 53 The hijackers opened the door of the plane while it was in the air and pushed one of the passengers out. Everybody was shocked when he dropped out Δ of the plane.

FALL CLUB SCHOOL CHURCH

54 The people in the small town lost their homes because of the earthquake. The government Δ provided temporary shelter and loans to help them re-build.

ENJOY

55 When Ellen and Marie went to the new restaurant for dinner, then met an old friend from high school. She was working there as the manager Δ in the evening.

CARPET

56 Beverly loved to go to the movies. Every Saturday she went to see two movies. She knew all the latest movies and Δ actors.

BOOK

27 57 The computer experts started a project developing a new computer. This group had a reputation for completing anything they started. The first week went extremely well. But it was hard to follow through Δ the second week because several staff members were out sick with the flu.

LEAD GAME FINISH SERIES

58 The book fair covered ten blocks this year. There were a lot more books Δ than last year and twice as many people attended.

WINTER

28 59 It wasn't surprising that he was selected for the position as ambassador. It was an important position in the government that he had held on Δ a long-term basis.

CARRY EQUAL WAIT FAST

60 Nobody could find the old woman's bank accounts when she died. When the whole house was cleaned out, they were found Δ in the attic.

BEACH

29 61 Somebody wanted to park behind Joanna, but there wasn't enough space. Joanna didn't want to pull up Δ a little because she would be too close to the fire hydrant.

PUSH WISE DRIVE SPEAK

62 After his car accident, George didn't want to drive anymore. He got nervous whenever he came to an intersection because he was afraid Δ the other cars wouldn't stop.

WET

63 Don did a lot of volunteer work in the evening after his regular job. He helped in a soup kitchen Δ and also taught adults how to read.

CONTROL

64 Douglas described himself as "quite neat" on the application form for a college roommate. His mother couldn't believe it when she saw it. She thinks he Δ is very messy.

TOPIC

30 65 Everybody on the tour bus expected the driver to go straight back to the office. It was a surprise when he turned up Δ the hill and took a scenic route back.

RIGHT GREAT APPEAR CORNER

66 Michael had been riding a horse since he was a child. When he got older, he bought his own horse and kept it in a stable. That way Δ he could ride whenever he wanted.

AIRPLANE

31 67 The couple wanted to have a picnic lunch at noon and they had a five-hour drive ahead of them. Therefore, they set out Δ in the early morning and stopped only once on the way.

PUT RUN LEAVE SOUND

68 Dick thought his surgery would be a simple matter and he would be back to work in a week. Unfortunately, the operation was quite Δ serious and it took about four weeks to recover.

AUTOMOBILE

32 69 There's a homeless man who is always outside the church on the corner. He even stands out Δ in the rain without an umbrella.

SIT PAY EXCEPTIONAL SUPERVISION

70 The school building could not be built because there weren't enough funds for the construction. The work had to be delayed for two years until the school Δ raised more money for the project.

TREES

33 71 Our new neighbors came for dinner on Friday night. Then they stopped by Δ a few days later just to say "hello."

GO SO VISIT AHEAD

34 72 Brenda withdrew all her money before the trip. During her vacation, her wallet was stolen with most of her money in it. She had very little money, but she got by Δ the first night of the trip.

RECEIVE MISSION SURVIVE PRECISE

73 The farewell party for Joseph was a big success. Somebody played the piano Δ and there was singing and dancing.

STREET

35 74 It was so difficult to say "goodbye" to her boyfriend at the train station. When she got on the train, she couldn't read or eat. All she could do was watch out Δ the window.

SEE OWN CARFUL BASEBALL

36 75 Because we were in a hurry to get to our country house, we ate breakfast in the car. Then we stopped off Δ the highway to stretch our legs and get some fresh air.

SO ONE HELLO ALARM

37 76 Barbara moved from a house to an apartment, but she didn't have any room in her department for her bicycle. It was kept up Δ the street at her mother's house.

SAVE SPOT CONTINUE SPECIFIC

77 Patrick needed to buy a new appointment book. He had a lot of meetings every day and had to list each Δ one or he might forget one of them.

UGLY

38 78 The couple couldn't tell the marriage counselor exactly how they wanted each other to change. But they knew they wanted to get along Δ the way they used to.

GIVE SIDE FRIEND SQUARE

79 One of the senators from Arizona was interviewed on television last night. He discussed the problems in his state and the economic problems Δ of the entire country.

LITTLE

80 Janice didn't know what to do about her history course. She had to read three Δ books in a week and prepare for her midterm exam.

INTERESTING

81 Margaret wanted to go to see a Broadway show. She checked the newspaper and found a play she heard was good. But when Δ she called for tickets, there weren't any left.

STORE

39 82 Everybody wanted to see the new Australian runner at the Olympics. The race was very exciting from start to finish. Quickly, he raced around Δ the track and won by two seconds.

WIN ACT RUSH NEXT

83 Robert needs to start training for the bicycle races in the spring. He's going to ride his bike Δ every day for about an hour in the park.

SPECIAL

40 84 The boy's mother didn't want to discuss her son's drug problem at the family gathering because it was a sensitive issue. To her dismay, it had come up Δ the minute the relatives arrived.

GO OLD MENTION MEASURE

85 It wasn't easy for Jimmy to find a new job. He checked the advertisements in the paper Δ every day, but he couldn't find a job he wanted.

SILVER

SCRIPT II

P 1 Ellen was working too hard. She needed a long vacation. Finally, she decided to Δ go to Hawaii for a few weeks.

PAPER

P 2 Paul got an interesting book as a birthday present. He couldn't stop reading it until he finished it. Then he bought another book Δ the same author.

WINDOW

P 3 Eric's new apartment had a dishwasher and a washing machine. But the best thing about the apartment was the terrace. It had a magnificent Δ view.

STORY

P 4 The secretary knew that she had to learn to type on a computer or she would lose her job. She tried to learn but Δ just didn't.

PICTURE

P 5 Nobody watered the plants while Dolores was on vacation. When she returned, they were all dead Δ, so she had to buy some new ones.

SLOWLY

1 6 Tom loved to play golf. He even invented a new way to hit the ball. When he experimented in his back yard, it was successful. But when he tried on Δ the golf course, it failed.

ATTEMPT WEATHER CLOTHES STRANGE

7 Jack didn't like his piano lessons. He tried to practice every day, but got bored after ten minutes. He told his parents they were wasting their money Δ by giving him private lessons.

TRIP

2 8 Ruth examined all her bills for the kitchen equipment, trying to find where the mistake had been made. When she looked over Δ the estimate for the kitchen cabinets, she found the error.

WATCH RIGHT REVIEW CREATE

9 The newspaper had a terrible story about a murder in lower Manhattan today. It said that a woman Δ had been pushed onto the subway tracks by a stranger.

LONELY

10 The soldier was writing to his girlfriend and he had a lot to tell her that day. When he finished, there wasn't enough space for his name at the bottom of the letter. He didn't have any choice, so he signed up Δ the side of the paper.

NAME FOOT ENROLL INVADE

11 Betsy knew her old friend lived in Chicago, but she didn't have her telephone number. When she finally looked up Δ the number, she discovered it wasn't listed.

WATCH CROSS WORD LONG

12 Dolores wanted to be a doctor, but was afraid it would take too long to get her medical degree. Instead, she decided to go to nursing Δ school.

HUNGRY

13 The children never wanted to eat their vegetables. Their mother had to find new ways to cook them so the children didn't know they were the same old vegetables. It wasn't always easy to find new Δ ways to prepare the vegetables.

NEWSPAPER

5 14 It was Joseph's secretary's fiftieth birthday and the office staff was organizing a big celebration. Everyone was asked to contribute to the gift and write something something on the border of the card. Before the party, he signed in Δ the middle of the card and refused to contribute for the gift.

PEN BAT REGISTER FESTIVAL

6 15 The actress was making money and decided to buy a computer stock. She hoped to double her money very quickly and after a week, she called her broker on Wall Street. She was told it would go up Δ the expected five percent, that's all.

COME LAST RISE MASS

16 Denise always wanted to live in the country. She liked gardening, and cooking what she grew in her own garden. After twenty years in the city, she finally Δ moved to a farmhouse upstate.

STUDY

17 Everybody liked the new student in class. She was smart and friendly. Every day after class, she played in the gym Δ with the other students.

SOFTLY

18 It was a hot day for a game of tennis. At first, Jeff wanted to cancel, but then he decided to play. After the game, he was really tired, but because Δ he had won, he was happy.

BEAUTIFUL

7 19 The children were supposed to come down for dinner at 6:00 but they didn't appear. The babysitter called up Δ the stairs to tell them it was time to eat.

SHOUT SWELL FRIEND CHOICE

8 20 The twins were so happy about their birthday party. First they opened their presents, then they ate lunch. After that, they blew out Δ the candles on their cake and everybody sang "Happy Birthday."

WIND FATE EXTINGUISH COMPLICATE

9 21 Peter shocked everyone at the party. It was a $5,000 antique lamp that he broke in Δ a million pieces.

CRACK SMART ROBBERY MARITAL

22 After ten years of teaching third grade in public school, the teacher was tired and needed a change. He asked for a leave-of-absence for a year Δ to explore some new jobs.

SISTER

10 23 The terrorists searched the building and found the weapons that were supposed to be taken to the secret camp. They were carried out Δ the door and put into the truck.

BAG CUP COMPLETE RESPOND

11 24 Nobody knew where the refrigerator in front of the house had come from. Somebody said it had dropped off Δ the back of a truck yesterday afternoon.

FALL MEET DELIVER ABANDON

12 25 It was the horse's first big race and he wasn't used to running in the front. He was leading on Δ the second lap of the race, but lost in the end.

FOLLOW PRETTY DECEIVE STAGGER

26 Greg was a good chess player. He liked to play in the park with strangers. He made a lot of friends Δ that way and also improved his game.

MOVIE

27 Monica liked to travel so she took a job with the airlines. Whenever she wanted, she could take a trip for free. She said it was the best Δ job she ever had.

WATER

13 28 The senator hoped the investigations about his finances and his contacts with the Mafia would be done quickly, but he wasn't so lucky. They were dragged out Δ the whole year.

PULL SALT LENGTHEN SCRAMBLE

29 The prisoner wanted to protest his treatment by the guards. He said they beat him and often didn't give him his meals. The guards Δ said the prisoner was lying.

BOX

30 The ballet was a big success. The choreography was original, the costumes were unusual, and the lighting was interesting. Everything Δ was in harmony.

FUNNY

14 31 The police couldn't understand what happened to the teenager. He ran away Δ as his parents said, or he had been kidnapped.

WALK MASS HOME HIGH

15 32 Dorothy and Paul always invite very strange guests to their home each evening. It's hard to imagine who they will have over Δ that evening for dinner.

OWN OLD ENTERTAIN VOLUNTEER

16 33 When people would write asking about the company's products, Joan always forgot to give certain information. When she left out Δ the prices, customers were always furious.

STAY FIRE OMIT TIDY

34 Kay always wanted to write a novel. One day, she quit her job and started writing. A year later, she Δ finished her book and found a publisher.

DANCE

35 Jeannette wanted learn how to ski. She went to the mountains with some friends and took skiing lessons. After a week of lessons, she still couldn't ski Δ even on the beginner's slope.

COMPUTER

36 After college, Marie got a job as a social worker. She worked for an agency Δ that helped drug addicts.

LIGHT

17 37 A 1965 Chevrolet got stuck on the bridge during rush hour, but somebody called a tow truck quickly. It had to be pulled off Δ the bridge as soon as possible.

PUSH WIRE ACHIEVE CORRECT

38 John hates to do exercise. He tried bicycle riding, but didn't like it. Then he tried running, but it was too hard. After that, he started swimming in a pool Δ nearby, but didn't like that either.

FILE

18 39 The boy's parents were really upset about the car accident. The police said he ran over Δ an old man on the way home from the party and didn't even stop.

WALK THIN HIT AID

40 The weather was beautiful the day of the race. It was sunny but there was a good breeze. It stayed like that Δ all day long.

PHOTOGRAPHY

41 Richard really believed he would win the lottery. He bought several tickets regularly. Two years after he started buying tickets, he Δ won a million dollars.

TABLE

19 42 When Linda got off the train in Chicago, she waited for her bag near the door of the train. She was surprised that it was thrown out Δ the window.

CATCH PROOF GARBAGE BUTCHER

20 43 David got a scholarship to New York University but wanted to go to Columbia. He couldn't decide what to do. After a while, he turned down Δ the scholarship and got a student loan so he could go to Columbia.

LEFT ONCE REFUSE CLOSET

44 Jane decided to make Thanksgiving dinner for her whole family. She bought a big turkey and plenty of vegetables. Everybody liked the meal Δ and congratulated her on her first big family dinner.

CRY

21 45 Judith was just learning to play tennis and was having trouble keeping her eyes on the ball. She couldn't believe how fast it bounced back Δ after her partner hit it.

REBOUND STAGGER RECOVER NOMINAL

46 The new jacket was very pretty, but the sleeves were too long. Laura brought it to a tailor and had the sleeves shortened. It looked great Δ after it was fixed.

HEALTHY

22 47 After the mayor died in office, everyone wondered about his special project to fight crime. It would be carried on Δ a year longer by his successor as it turned out.

LIFT PACK CONTINUE WHATEVER

48 The little girl seemed to be very artistic. She loved to paint and draw. Her parents found a special school Δ for artistic children and enrolled her in classes there.

SODA

23 49 Corinne wasn't sure why the policeman had stopped her car. He said she had turned in Δ the middle of the block illegally.

SPIN MINT SUBMIT HUMBLE

24 50 The new gardener couldn't wait to start working the day he was hired. He wanted to dig in Δ the garden before it got too dark.

HOLE WILD EAT HIT

51 During the summer, the two boys made money by cutting the grass for all their neighbors. In the fall, they Δ bought new hockey equipment.

JUDGE

25 52 The party was lively as long as Paul was there telling stories. We discovered it died down Δ the moment he left.

DEATH BOARD QUIET SOLID

26 53 Ronald was upset about failing the midterm. Everybody was shocked when he dropped out Δ of the course the week after he received his grade.

FALL CLUB SCHOOL CHURCH

54 The people in the small town lost their homes because of the earthquake. The government Δ provided temporary shelter and loans to help them re-build.

ENJOY

55 When Ellen and Marie went to the new restaurant for dinner, they met an old friend from high school. She was working there as the manager Δ in the evenings.

CARPET

56 Beverly loved to go to the movies. Every Saturday she went to see two movies. She knew all the latest Δ movies and actors.

BOOK

27 57 The hunter was thrilled when he spotted a deer. But it was hard to follow through Δ the woods, and he lost it in ten minutes.

LEAD GAME FINISH SERIES

58 The book fair covered ten blocks this year. There were a lot more books Δ than last year and twice as many people attended.

WINTER

28 59 Jeff called his wife from overseas but he reached their answering machine. It was with annoyance that he had held on Δ a few minutes to see if she would answer.

CARRY EQUAL WAIT FAST

60 Nobody could find the old woman's bank accounts when she died. When the whole house was cleaned out, they were found Δ in the attic.

BEACH

29 61 It was the first time Joanna was going fishing, and there was a lot of garbage in the water. Joanna didn't want to pull up Δ a soda can instead of a fish.

PUSH WISE DRIVE SPEAK

62 After his car accident, George didn't want to drive anymore. He got nervous whenever he came to an intersection because he was afraid Δ the other cars wouldn't stop.

WET

63 Don did a lot of volunteer working the evening after his regular job. He helped in a soup kitchen Δ and also taught adults how to read.

CONTROL

64 Douglas described himself as quite neat on the application form for a college roommate. His mother couldn't believe it when she saw it. She thinks he Δ is very messy.

TOPIC

30 65 The man kept talking to Laura all the time they were in the store together. It was a surprise when he turned up Δ the next day at her house.

RIGHT GREAT APPEAR CORNER

66 Michael had been riding a horse since he was a child. When he got older, he bought his own horses and kept it in a stable. That way Δ he could ride whenever he wanted.

AIRPLANE

31 67 The couple decided to have a garage sale because they had a lot of clothes and furniture they didn't use. Therefore, they set out Δ in the driveway, all the things they didn't want.

PUT RUN LEAVE SOUND

68 Dick thought his surgery would be a simple matter and he would be back to work in a week. Unfortunately, the operation was quite Δ serious and it took about four weeks to recover.

AUTOMOBILE

32 69 John is one of the best athletes in the country. He even stands out Δ in the international competitions.

SIT PAY EXCEPTIONAL SUPERVISION

70 The school building could not be built because there weren't enough funds for the construction. The work had to be delayed for two years until the school Δ raised more money for the project.

TREES

33 71 Elaine and Bob had a picnic near a waterfall. Then they stopped by Δ a lake to take pictures.

GO SO VISIT AHEAD

34 72 Dolores contacted American Express and applied for a credit card as soon as she began to work. It was the welcome letter that she got by Δ mail that convinced her to become a member.

RECEIVE MISSION SURVIVE PRECISE

73 The farewell party for Joseph was a big success. Somebody played the piano Δ and there was singing and dancing.

STREET

35 74 The last time the poet came to New York, her pocketbook was stolen in a restaurant. She was nervous about returning to the city. All she could do was watch out Δ the next time she came to the city.

SEE OWN CAREFUL BASEBALL

36 75 When we arrived in Ohio, we visited an old friend from childhood. Then we stopped off Δ the next day at my sister's house.

SO ONE HELLO ALARM

37 76 When the owner came to see the progress on his house, he was disappointed, so the builder made a tough new work schedule. It was kept up Δ the next few days until the owner left.

SAVE SPOT CONTINUE SPECIFIC

77 Patrick needed to buy a new appointment book. He had a lot of meetings every day and had to list each Δ one or he might forget one of them.

UGLY

38 78 The little boys didn't know what they were going to do at the parade. But they knew they wanted to get along Δ the route to see the marchers clearly.

GIVE SIDE FRIEND SQUARE

79 One of the senators from Arizona was interviewed on television last night. He discussed the problems in his state and the economic problems Δ of the entire country.

LITTLE

80 Janice didn't know what to do about her history course. She had to read three Δ books in a week and prepare for her midterm exam.

INTERESTING

81 Margaret wanted to go to see a Broadway show. She checked the newspaper and found a play she heard was good. But when △ she called for tickets, there weren't any left.

STORE

39 82 There was an emergency at work when Victor was ready to leave the office. He got home an hour late and had to get ready for his date. Quickly, he raced around △ and got dressed and was ready to go.

WIN ACT RUSH NEXT

83 Robert needs to start training for the bicycle races in the spring. He's going to ride his bike △ every day for about an hour in the park.

SPECIAL

40 84 The woman screamed when she saw the burglar. To her dismay, he had come up △ the stairs with a gun in his hand.

GO OLD MENTION MEASURE

85 It wasn't easy for Jimmy to find a new job. He checked the advertisements in the paper △ every day, but he couldn't find job he wanted.

SILVER

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