

This is to certify that the

thesis entitled

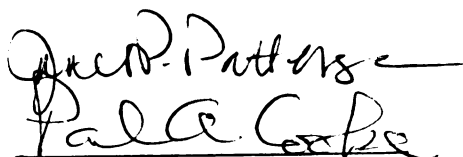
THE INFLUENCE OF IDIOM TYPE AND PRIOR LINGUISTIC
CONTEXT IN THE INTERPRETATION OF IDIOMS BY
INDIVIDUALS WITH UNILATERAL RIGHT CEREBRAL
HEMISPHERE DAMAGE

presented by

Laurie Nickole Priestap-Clausen

has been accepted towards fulfillment
of the requirements for

M.A. degree in Audiology and
Speech Sciences



Major professor

Date, August 23, 2000

PLACE IN RETURN BOX to remove this checkout from your record.
TO AVOID FINES return on or before date due.
MAY BE RECALLED with earlier due date if requested.

DATE DUE	DATE DUE	DATE DUE

**THE INFLUENCE OF IDIOM TYPE AND PRIOR LINGUISTIC CONTEXT IN THE
INTERPRETATION OF IDIOMS BY INDIVIDUALS WITH UNILATERAL RIGHT
CEREBRAL HEMISPHERE DAMAGE**

By

Laurie Nickole Priestap-Clausen

A THESIS

**Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of**

MASTER OF ARTS

Department of Audiology and Speech Sciences

2000

ABSTRACT

THE INFLUENCE OF IDOM TYPE AND PRIOR LINGUISTIC CONTEXT IN THE INTERPRETATION OF IDIOMS BY INDIVIDUALS WITH UNILATERAL RIGHT CEREBRAL HEMISPHERE DAMAGE

By

Laurie Nickole Priestap-Clausen

This study examined interpretation of semantically and syntactically derived idioms presented in isolation and with prior linguistic context by persons with mild right hemisphere disorder. Eight participants provided a verbal interpretation for four types of idioms and for literal statements. Responses were scored for accuracy of idiom interpretation and type of error.

Participants made fewer errors than anticipated. Neither factor of type of idiom or presence of prior linguistic context influenced accuracy of interpretation. Examination of error patterns showed an effect of error type and idiom type, but not of context. In contrast to expectations, few errors were literal interpretations of idioms and many errors were incorrect responses. Participants made fewer errors on metaphorically opaque idioms, which were predicted to be the most difficult, than on the other three idiom types.

Three primary conclusions are drawn from this work: 1) the common clinical maxims that persons with right hemisphere disorder cannot process nonliteral meaning, and typically provide literal interpretations of nonliteral phrases, such as idioms, and that linguistic context will facilitate processing of idioms is called into question, 2) research that refines the process of creating stimulus groups of types of idioms is warranted, and 3) future studies should carefully define the severity level of participants, and include groups that vary in severity of right hemisphere disorder.

Copyright by
Laurie Nickole Priestap-Clausen
2000

To my parents, whose guidance, confidence, devotion, and encouragement have helped me to attain this important milestone in my life. I am proud to be your daughter.

To my husband, whose love, patience and support have been endless throughout the past eight years. I couldn't have done it without you, honey.

To my sister...without you, growing up would not have been the same.

I love you all.

ACKNOWLEDGMENTS

I would like to thank my academic and thesis advisor, Dr. Janet Patterson, for her invaluable support in the completion of this research project. I also extend my appreciation to Dr. Ida Stockman and Dr. Paul Cooke for serving as members on my thesis committee.

A special note of thanks to my judges, Diane Fairfield and Sara Orjada, for their furtherance in this project. I would also like to thank Chad McCarney for giving me the opportunity to see what research is all about.

My appreciation is extended to the speech-language pathologists who offered their time and energy recruiting participants for this study.

A special note of appreciation to my participants for volunteering to participate in this research project. This project would not have been possible without you.

TABLE OF CONTENTS

	PAGE
LIST OF TABLES.....	viii
INTRODUCTION.....	1
CHAPTER I – REVIEW OF THE LITERATURE.....	3
Right Cerebral Hemisphere Damage	3
Models of Idiom Comprehension.....	7
Context.....	11
Idiom Types.....	14
Clinical Relevance.....	16
Research Questions.....	18
CHAPTER II – METHODOLOGY.....	19
Participants.....	19
Pre-experimental Testing.....	21
Materials.....	25
Stimulus Preparation.....	26
Ease of Understanding Idioms.....	26
Ease of Understanding Stimulus Stories.....	27
Procedure.....	29
Data Collection.....	30
Transcription Reliability.....	30
Training Judges.....	31
Scoring Protocol for Experimental Stimuli.....	32

Inter-judge Reliability.....	32
CHAPTER III – RESULTS.....	33
CHAPTER IV – DISCUSSION.....	36
Predictions.....	36
Interpretation of Idioms and Literal Statements.....	37
Accuracy of Interpretation of Idiom Type.....	41
Contextual Effects On Accuracy of Interpretation of Idioms.....	45
Error Analysis.....	48
Severity of Right Hemisphere Disorder.....	50
Clinical Relevance.....	51
Considerations For Future Research.....	52
Summary.....	53
APPENDICES	
A. Idiomatic and Literal Experimental Stimuli.....	55
B. Stimulus Stories.....	61
C. Judges’ Instructions and Idiom Definitions.....	68
D. Raw Data-Correct Responses and Error Responses.....	72
E. Participant Responses.....	76
REFERENCES.....	150

LIST OF TABLES

TABLE	PAGE
1. Demographic Characteristics of Participants.....	20
2. Pre-experimental Procedures Data.....	23

INTRODUCTION

Idiom comprehension and expression add grace, precision, beauty, and depth to language. The use of idioms allows individuals to be creative with their language. In the book entitled, Usage and Abusage: A Guide to Good English, Partridge (1973) expresses the importance of idioms by describing them as “the life and spirit of language” (p.149).

Figurative language is defined as:

“expression of a thought by referring to one thing in terms of another that it actually or symbolically resembles. Figurative language includes similes-comparing two referents that are very dissimilar, using terms such as “like” or “as” to indicate the comparison. (“She ran like a gazelle.” “He is as transparent as a window pane.”) Figurative language also includes metaphors-which compare two referents that are very dissimilar without using phrases such as “like” or “as.” (“She is a gazelle on the indoor track.” “He is an open book.”) (Lane & Molyneaux, 1992, p.13).

Idioms are figurative language. An idiom is described in Webster’s II New Riverside

University Dictionary (1988) as a “speech form or expression of a language that is

peculiar to itself grammatically or that cannot be understood from the individual

meanings of its elements” (p.607). For example, “shoot the breeze” cannot be understood

by putting together *shoot*, *the*, and *breeze* in the same way in which “eat the soup” can be

understood from analysis of its component words.

“Thus, idiomatic expressions defy the standard view of language comprehension according to which understanding a sentence entails at least recognizing the individual words in the sentence, retrieving their meanings from the mental lexicon, and combining them according to their grammatical relations.” (Cacciari & Tabossi, 1988, p.668).

Idioms are sophisticated symbols whose meaning transcends a literal or superficial

reading (Myers & Linebaugh, 1981).

Figurative language, particularly idiomatic expressions, is an important part

of everyday English. Research has suggested that as much as one quarter to one third of spoken language can be classified as figurative, or non-literal (Baxter & Brorson, 1998). Taking this into account, an individual who has difficulties comprehending figurative language may be at a communication disadvantage in his/her everyday life. Researchers have suggested that right hemisphere brain damage may affect the ability to comprehend figurative language (Winner & Gardner, 1977). Therefore, individuals with unilateral right cerebral hemisphere damage may experience communication difficulties in the comprehension and use of idiomatic expressions. This body of literature however, has examined idiomatic expressions as a unitary group. Recent literature (Fraser, 1970; Gibbs, 1987) suggested that subgroups of idiom types exist, with differing levels of difficulty affecting comprehension and production. The purpose of this study is to determine whether different types of idioms cause specific difficulties in idiom interpretation, and, additionally whether context has an effect on idiom interpretation for individuals with right hemisphere damage.

CHAPTER I

REVIEW OF THE LITERATURE

Right Cerebral Hemisphere Damage

Clinical observation has suggested that many patients with unilateral right cerebral hemisphere damage have a literal-minded, concrete response to conversations, situations, and events (Collins, 1975; Myers, 1979). Some patients with right hemisphere damage show impairment in the appreciation of the implicit or intended meaning either in pictured situations (Myers, 1979; Myers, Linebaugh & Mackisack-Morin, 1985) or in visually and orally presented stories (Rivers & Love, 1980; Myers & Linebaugh, 1981). These studies suggest that difficulties in moving beyond explicit or literal meaning may reflect a failure to appreciate and integrate contextual cues in verbal and pictorial stimuli.

There is other evidence which proposes that right hemisphere damage also impairs the ability to appreciate connotative or implied meaning. Gardner and Denes (1973) discovered that the ability to appreciate connotative or implied meaning in single words was impaired in individuals with right hemisphere damage. Winner and Gardner (1977) found similar results using phrases containing idiomatic expressions. These findings suggest that right hemisphere damage affects the ability to appreciate figurative language, regardless of surrounding linguistic context.

Brownell, Potter, Michelow and Gardner (1984) investigated the sensitivity of adults with brain damage to the connotative versus denotative meaning of single words. Denotative meaning refers to a single, literal, dictionary-like definition in which the word

“hawk,” for example, would be defined as a type of bird. Connotative meaning refers to alternate meanings that are less explicit and less literal. One connotative meaning of “hawk,” for example, would be “predator.” In the Brownell et al. (1984) studies, the researchers asked subjects to group two out of three words that were closest in meaning. The words could be grouped according to connotative or denotative meaning. They found that subjects with right hemisphere damage relied on denotative meaning in clustering words, while subjects with left hemisphere damage relied significantly more on connotative word meanings.

These findings led Brownell et al. (1984) to conclude that “a normal individual’s knowledge of word meanings is, in reality, a sum of separable lexical stores that are (1) mediated by different parts of the brain, and (2) devoted to different orders of semantic information” (p.263). This possibility has significant implications for the diagnosis and treatment of patients with right hemisphere damage and patients with aphasia (Myers & Mackisack, 1986). The tendency for adults with right hemisphere damage to relate more readily to the denotative rather than to the connotative aspects of language may prevent them from adequately grasping intended or implied meanings embedded in an utterance (Myers & Linebaugh, 1981).

The right hemisphere is necessary for the identification of connotative language (Gardner & Denes, 1973), the mapping of figurative language on to appropriate situations, and the detection of humorous or absurd content (Gardner, Ling, Flamm & Silverman, 1975). Winner and Gardner (1977) demonstrated that subjects with right hemisphere damage did not appreciate absurdity. In their study, subjects with right hemisphere damage were more impaired than subjects with aphasia in a task requiring

them to match a spoken metaphor to one of the four pictures. Among the four picture choices was one in which the metaphor was appropriately represented and one that was depicted literally (representing absurd content). The subjects with right hemisphere damage chose literal pictures significantly more often than did subjects with aphasia or normal controls. Winner and Gardner (1977) also reported that patients with right hemisphere damage typically saw nothing strange about the literal pictures. Unlike normal controls or patients with aphasia, individuals with right hemisphere damage did not find the literal pictures of metaphoric content amusing or absurd.

Adults with right hemisphere damage may have difficulty assessing or using scripts of world knowledge to make pragmatic judgments (Hirst, LeDoux & Stein, 1984). For instance, Gardner and Denes (1973) and Gardner et al. (1975) have shown that adults with right hemisphere damage prefer the literal interpretation of a metaphor over its indirect reading. Thus, they interpret “a heavy heart” to mean a heart that weighs a lot as opposed to a sad mood. Adults with right hemisphere damage simply do not realize that it does not make much sense to talk about a heart that weighs a lot, except under the most specialized circumstances. Building on this idea, Myers and Linebaugh (1981) stated that figurative or metaphoric language would be a useful tool for investigating a subject’s ability to comprehend intended meaning expressed in a variety of linguistic forms. In support, Tompkins (1991a) concluded that,

“metaphoric interpretation difficulties do not reflect a loss of relevant knowledge; rather, they occur because right hemisphere damage impairs the ability to carry out the most effortful cognitive operations on an activated knowledge base” (p.821).

Some research studies disagree with the hypothesis that adults with right hemisphere damage respond to idiomatic expressions in a literal manner. For example,

Myers and Mackisack (1986) concluded that there were no group differences between adults with right hemisphere damage and normal subjects on an idiom definition task. Although, the adults with right hemisphere damage averaged twice as many errors as the control group, the high error rate for the control group raised a question about their familiarity with the idiomatic stimuli, leading to this conclusion. The majority of studies indicate that right hemisphere damage may impair the ability to comprehend the idiomatic meaning of idioms. However, it has been shown that there are different types of idioms (Gibbs, 1987). Linguists have acknowledged that idioms do not form a homogeneous class with regard to the syntactic or semantic transformations they may undergo. Linguists have also suggested that idioms can be organized into a 'frozenness hierarchy' (Fraser, 1970). That is, some idioms can undergo nearly all traditional transformations (i.e., passivization; clefting) without losing their idiomatic meanings (e.g., *throw in the towel*) while others cannot undergo even the most simple transformations and still retain their idiomatic interpretations (e.g., *face the music*) (Gibbs & Gonzales, 1985).

The literature suggests that individuals with right hemisphere damage have difficulty comprehending and producing idioms. These studies have examined idioms as a single class of items however, and not considered the possibility of a differential effect of types of idioms. Prior to discussing idiom types, literature on idiom comprehension and the effect of context will be presented.

Models of Idiom Comprehension

Several models of idiom comprehension have been proposed. These models differ in how the idiomatic meaning of an idiom is processed.

Swinney and Cutler (1979) proposed that idioms are stored in (and accessed from) a special list which is not part of the normal lexicon. This model has been referred to as the Idiom List Hypothesis. Access from this list takes place via what has been called a special “idiom mode” of processing (Bobrow & Bell, 1973). A necessary condition of the Idiom List Hypothesis is that a literal analysis is always attempted on a word string before an idiom mode of processing is undertaken (Swinney & Cutler, 1979).

Bobrow and Bell (1973) investigated this hypothesis by employing a perceptual set paradigm. In this paradigm, subjects read an ambiguous sentence (i.e., *Mary fed her dog biscuits.*). They were then asked to think of the two possible meanings for the sentence (i.e., *Mary gave biscuits to her dog* and *Mary gave dog biscuits to some woman.*). Then they were asked to read two interpretations of the ambiguous sentence and mark which meaning they thought of first. The experiment examined priming for perception of the literal or idiom meaning by exposing subjects to either a set of four literal ambiguous sentences (followed by two literal interpretations) or a set of four idiomatic ambiguous sentences (followed by a literal and an idiom interpretation). For example, a stimulus sentence was *John gave Mary the slip.* The fifth sentence in each set contained an idiomatic ambiguous sentence, which was a literal and an idiomatic interpretation. Results of this study showed that a literal priming set decreased the probability of the idiomatic interpretation being “first perceived”, while an idiomatic

priming set increased this probability. The results were interpreted as existence of distinct processing modes for idioms and literal sentences, because when subjects were biased to a specific interpretation process, they used it. These results led the researchers to claim support for a special “idiom mode” of processing.

Swinney and Cutler (1979) also offered an alternative model of idiom comprehension. They referred to this model as the Lexical Representation Hypothesis. The Lexical Representation Hypothesis states that idioms are stored and retrieved from the lexicon in the same manner as any other word, that is, as lexical items. Therefore, there is no special idiom list nor any special processing mode under this hypothesis. The Lexical Representation Hypothesis states that computation of both idiomatic and literal meanings is simultaneously initiated upon occurrence of the first word in the idiom string, much as appears to occur for lexical ambiguities. Swinney and Cutler (1979) suggested that to some extent idioms are unified, and treated as a unit with respect to access, retrieval, and representation in the lexicon. Swinney and Cutler’s (1979) research study investigated college undergraduate students’ abilities to decide as quickly as possible whether grammatical idiomatic word strings and grammatical control word strings that appeared on a display screen formed a meaningful, “natural” phrase in English. For example, they used grammatical idiomatic word strings such as *kick the bucket* and grammatical control word strings such as *lift the bucket*. Subjects indicated their decision by pressing one of two buttons that were in front of them. The subjects’ reaction times were measured, and results indicated that grammatical idioms were judged to be acceptable English phrases far more quickly than the grammatical control word strings. On the basis of these results, Swinney and Cutler concluded that idioms are

represented as long words in the lexicon, supporting the Lexical Representation Hypothesis (Swinney & Cutler, 1979). Subjects' performance was explained by suggesting that they may have perceived each idiom as a whole versus each individual word, whereas in the control word strings, individual words are processed.

Gibbs (1980) reported that because of the strong conventional, figurative meaning an idiom has, the literal meaning of the idioms is of less importance in idiom comprehension. Gibbs' research supported the hypothesis that when an idiom is encountered it is first processed figuratively and then only if the figurative meaning is inappropriate for the context is it processed literally. This model of idiom comprehension has been referred to as the Idiomatic Processing Model. Schweigert and Moates (1988) tested this hypothesis with idiom target sentences in which each idiom was used figuratively in one sentence (idiom-figurative sentence) and literally in the other (idiom-literal sentence). Stimulus items were idioms presented in isolation, idiom target sentences in either their idiomatic or literal interpretations, and idioms presented at the end of a paragraph, again in either their idiomatic or literal interpretations. In the isolation condition, subjects saw only the target idiom. In the paragraph condition, subjects read a short story then saw the target idiom. In both conditions, presentation of the target idiom (idiomatic or literal interpretation) was accomplished by repeated 100-msec presentations of the target via a slide projector, and subjects were asked to read the target item. The researchers recorded the number of presentations required to read the sentences in full and found that sentences containing idioms used literally required more presentations for complete reading than sentences containing idioms used figuratively. This was true for both the sentence context condition and the paragraph context

condition. At a later date, cued recall was measured, and was better for idioms used literally than for those used figuratively. This result was explained by the greater number of exposures to idioms used literally than idioms used figuratively. Results of this experiment support the Idiomatic Processing Model of idiom comprehension. The processing advantage in number of exposures to complete reading of idiom-figurative sentences could be the result of the figurative meaning being stored as a whole, whereas the literal meaning, must be constructed each time, at a processing cost (Schweigert & Moates, 1988). Just as words are perceived as wholes, perhaps idioms are too (Reicher, 1969).

In summary, the Idiom List Hypothesis, the Lexical Representation Hypothesis, and the Idiomatic Processing Model differ in how the idiomatic meaning of an idiom is processed. The Idiom List Hypothesis believes that idioms are processed consecutively, that is, a literal analysis is always attempted before a figurative analysis. The Lexical Representation Hypothesis states that idioms are processed in parallel, that is, the computation of both idiomatic and literal meanings is simultaneously initiated upon occurrence of the first word in the idiom string. The Idiomatic Processing Model believes that idioms are processed consecutively, that is, when an idiom is encountered it is first processed figuratively and then only if the figurative meaning is inappropriate for the context is it processed literally. Regardless of the model of comprehension, evidence suggests that idioms are stored as lexical units. Comprehension of these lexical units may be influenced by the context in which they are embedded, or by their syntactic or metaphoric properties.

Context

The context in which the idiom is embedded has received little attention in the idiom literature. In general, studies support the positive effect of context on speed and accuracy of idiom interpretation. Gibbs (1980) reported that appropriate context was important in the interpretation of idiomatic expressions.

Schweigert and Moates (1988) examined idioms that were presented as phrases in isolation, in sentences, and at the end of paragraphs. They reported:

“An assumption of all of the comprehension models is that adequacy of the processed meaning of an idiom is determined by considering the context of the phrase; thus, it might be expected that different contexts could lead to different results. Since idioms are rarely used in the absence of context, presenting idioms in isolation seems so unnatural that it might evoke misleading results. Presenting idioms within sentences supplies some contextual cues to the appropriate meaning, and it would follow that presenting idioms after a short paragraph would supply additional contextual cues to aid in the comprehension process” (p.283).

Schweigert and Moates (1988) predicted that, in their methodology, contextual cues provided by a paragraph preceding the idiom would aid in processing (see p.9 for description of method). The results of their research study supported this prediction.

Cacciari and Tabossi (1988) used a cross-modal priming task in a sentence context to study idiom comprehension in a lexical decision task. They found that reaction time was fastest under conditions when the target word was related to the last word in the priming sentence (idiomatic or literal), and when the idiom was either predicted by prior verbal context or when the lexical decision task was delayed until idiom processing was complete.

While not directly addressing context, Cacciari and Tabossi (1988) concluded that:

“The well-known role of context in literal language comprehension is probably more crucial with idioms. In fact, what is peculiar about these expressions is that if taken literally they sometimes make no sense but, nevertheless, they do fit in an appropriate context. It is very likely therefore that the detection of this incongruity can play a role in the identification of an idiomatic expression” (p.680).

The role of context appears important. Gibbs (1980) stated that the story context provides a more realistic test of normal sentence understanding than isolated sentences.

Gibbs (1980) reported:

“Under most situations of language use, the presence of appropriate contextual information should affect ease of comprehension. If the context in which an utterance is spoken is sufficient, it will provide the listener a semantic framework in which to understand the sentence” (pp.149-150).

Gibbs (1980) believed that without appropriate context, subjects would occasionally interpret idiomatic expressions according to their literal meaning. Gibbs researched subjects who had no prior history of brain damage. The performance of these non-brain-damaged subjects was similar to the way adults with right hemisphere damage have been shown to respond to an idiomatic expression, that is interpreting an idiom in a literal manner.

Gibbs (1980) further suggested:

“that ease of comprehension for nonliteral language may be more a matter of how conventional a sentence is than how literal or metaphoric it may be. The more conventional an utterance, the easier it will be for a person to find an appropriate interpretation in the right context. Unconventional utterances, like the literal use of idiomatic expressions, will require additional processing in order to find and verify some schemata in memory to account for the sentence” (p.152).

Nippold and Martin (1989) researched idiom interpretation under the two different presentation modes of isolation and context, for adolescents between the ages of 14 and 17. Their results confirmed that accuracy was greater for idioms in context than

idioms in isolation. Nippold and Martin's study supported the view that linguistic contextual information enhances adolescents' interpretation of idioms.

Ortony, Schallert, Reynolds & Antos (1978) also supported the utility of context in the comprehension of idioms. They believed that what determines the difficulty of processing is not nonliteralness, but relatedness to context. When individuals are exposed to less familiar idioms, conversational contexts (i.e., surrounding sentences) seem to facilitate the comprehension of figurative meanings (Brasseur & Jimenez, 1989).

Two studies examined idiom interpretation in context. Cohen and Faulkner (1983) concluded that individuals coping with a deterioration in stimulus quality (as a result of brain damage) need to compensate by relying more heavily on contextual information than those individuals with no neurological impairment.

Myers and Linebaugh (1981) examined contextual effects in idiom comprehension in individuals with right hemisphere damage. The experimenter read two-sentence stories aloud to the following groups: individuals with right hemisphere damage, individuals with aphasia, and neurologically unimpaired control subjects. Each story ended with an idiomatic expression. The subjects looked at an array of five pictures while the experimenter read aloud each story. The subjects' task was to point to the picture that best represented what happened in the story. The results indicated that individuals with right hemisphere damage had significantly more errors than non-neurologically impaired individuals or aphasic individuals and their errors demonstrated a literal interpretation of the material. Myers and Linebaugh (1981) reported that individuals with right hemisphere damage were less adept at comprehending figurative speech than neurologically unimpaired individuals, even when supportive contextual cues

are available. This difficulty in transcending literal meaning suggests a disorder in grasping the implication or intention behind more sophisticated and subtle language use (Myers & Linebaugh, 1981). In summary, the following points can be made: individuals with right hemisphere damage have difficulty comprehending non-literal language; context may or may not facilitate interpretation in individuals with right hemisphere damage; idioms appear to be stored as lexical units.

Idiom Types

Gibbs (1987) investigated the effect of two linguistic factors on children's understanding of idioms; syntactic frozenness and linguistic relationships between literal and idiomatic interpretations of idioms. Kindergarten, first, third, and fourth graders listened to idioms either alone or at the end of short story contexts. Their task was to verbally explain the intended meanings of these idioms and then to choose the accurate idiomatic interpretations of these phrases. Gibbs (1987) discovered that in the presence of supporting context, younger children (kindergarten and first graders) understood idioms that were syntactically frozen (see next paragraph) better than they did idioms which can occur in a variety of syntactic forms. Older children (third and fourth graders) comprehended both types of idioms equally well. However, with context, children at all grade levels were better at explaining the figurative meanings of idioms whose idiomatic and literal interpretations were closely related than they were at explaining idioms whose figurative and literal meanings were not closely related.

The figurative meaning of idioms is created through syntactic or semantic manipulation. Gibbs (1987) and Fraser (1970) identified the following four types of idioms: syntactically frozen, syntactically flexible, metaphorically opaque, and metaphorically transparent. Syntactically created idioms differ in the extent to which they can be syntactically transformed and still maintain their figurative interpretations. For example, *John kicked the bucket* can be interpreted as ‘John died’, but its passive form, *The bucket was kicked by John*, is usually not interpreted as idiomatic. This is an example of a ‘syntactically frozen’ idiom (Gibbs, 1987). Syntactically flexible idioms, in contrast, can be passivized and retain their idiomatic interpretation. For example, *John will lay down the law* (meaning ‘John will enforce the rules’) can be passivized, as in *The law was laid down by John*, and still be thought of as idiomatic. These idioms can be viewed as ‘syntactically flexible’ (Gibbs, 1987).

Semantically created idioms differ in the extent to which their literal meanings relate to their figurative interpretations (Gibbs, 1987). Metaphorically opaque idioms have little relation between their figurative and literal meaning (Gibbs, 1987). For example, the literal meaning of the expression *kick the bucket* has little to do with its idiomatic meaning ‘to die’. Other idioms have figurative interpretations that closely relate to, and perhaps metaphorically extend from, their literal meanings. For example, the figurative interpretation of *skating on thin ice* (meaning ‘to be in a precarious situation’) can be perceived as a metaphorical extension of its literal meaning. Expressions like this are ‘metaphorically transparent’, since their conventional, idiomatic interpretations are transparent extensions of their literal meanings (Gibbs, 1987).

Gibbs and Gonzales (1985) concluded that adults are sensitive to the syntactic frozenness of idiomatic expressions, which affects processing and memory for idioms. They showed that adults process syntactically frozen idioms faster than they do syntactically flexible idioms. These data suggest that idioms are represented differentially in the mental lexicon, at least, according to their degree of syntactic frozenness.

Clinical Relevance

Idiom comprehension in individuals with neurological impairments has received attention by some researchers over the past few years with the general conclusion that idioms pose difficulty in interpretation for individuals with right hemisphere damage, but not for individuals with no neurological impairments. Speech-language pathologists typically assess idiom comprehension of individuals with right hemisphere damage using the paradigm, “What does [specific idiom] mean?” as a demonstration of communication deficit. One question that might be raised is how helpful is the general result that individuals with right hemisphere damage have difficulty interpreting idioms. Although, four types of idioms (syntactically frozen, syntactically flexible, metaphorically opaque, and metaphorically transparent) have been identified, speech-language pathologists typically do not assess at this level of information. More specific diagnostic information with respect to a deficit in syntactically and/or semantically created idioms would aid in focusing treatment.

Considering the above information, the following three possibilities arise: (1) If the lexicon is intact in individuals with right hemisphere damage, and idioms are stored as lexical units, then it would be expected that individuals with right hemisphere damage would not have difficulties with idiom comprehension. It would be expected that the performance of individuals with right hemisphere damage would be similar to the performance of non-neurologically impaired individuals. However, data show that individuals with right hemisphere damage do have difficulty comprehending idioms, so another explanation must be considered; (2) If the lexicon and syntax are intact in individuals with right hemisphere damage, and idioms are stored as lexical units, then individuals with right hemisphere damage should have fewer difficulties with idioms that are tightly tied to the syntax and lexicon, yet may show performance deficits with the idioms that are loosely tied to the syntax and lexicon. Therefore, individuals with right hemisphere damage may have better comprehension of metaphorically transparent idioms than metaphorically opaque idioms, and better comprehension of syntactically frozen idioms than syntactically flexible idioms; and (3) If the lexicon and syntax are intact in individuals with right hemisphere damage, and idioms are stored as lexical units, but for an unknown reason idioms cannot be accessed by individuals with right hemisphere damage, these individuals may default to a syntactic strategy (word by word comprehension of idioms), which may lead to poor comprehension of all idioms, regardless of type. This research project is designed to disambiguate among these alternatives.

The context in which an idiom is embedded is important because, “we have further seen that idioms are very seldom used in isolation; they nearly always point back

to elements in the preceding context and are again referred to in the immediate development of the conversation. In the few instances where they occur on their own, probably as an attempt to change the topic, they lose their communicative function.” (Strassler, 1982, p.104). Previous data have been inconclusive with respect to contextual effects in individuals with right hemisphere damage. This project is also designed to investigate whether context facilitates or interferes with idiom comprehension in individuals with right hemisphere damage.

Research Questions

The research questions addressed in this study were:

- 1) Does idiom type influence accuracy in interpretation of idioms by individuals with right hemisphere damage?
- 2) Does prior linguistic context affect interpretation of idioms by individuals with right hemisphere damage?

CHAPTER II

METHODOLOGY

Participants

Eight individuals were recruited as participants for this research study. Speech-language pathologists throughout the state of Michigan assisted in recruiting these individuals. Each of the participants demonstrated a mild communication deficit secondary to unilateral right hemisphere cerebrovascular accident (CVA). Neuro-imaging data were obtained to confirm the presence of a lesion. Each participant was at least one month post-onset of his/her cerebrovascular accident.

Each of the participants was between the ages of 55 and 84 (mean age = 67.5) and was a monolingual native speaker of American English. Gender, race, and socioeconomic status were not factors in this research study and were not recorded. Through self-report or report from referring speech-language pathologist, each participant had hearing within functional limits for daily activities. Through self-report, the participants had no history of language or cognitive impairments prior to CVA. Table 1 shows the participants' demographic characteristics.

Five individuals who were non-neurologically impaired were recruited to participate in a pilot study of the stimulus materials. These participants had normal hearing and were native speakers of English. Demographic information for these participants is shown in Table 1.

Table 1. Demographic Characteristics of Participants

Participant #	Group	Age (years:months)	Time Post Onset (in months)	Education (in years)
1	NBD	56:6	N/A	13
2	NBD	56:6	N/A	14
3	NBD	35:1	N/A	14
4	NBD	64:8	N/A	14
5	NBD	52:2	N/A	14
6	RHD	55:10	11	18
7	RHD	70:3	4	14
8	RHD	64:11	2	12
9	RHD	74:8	1	12
10	RHD	61:9	120	14
11	RHD	84:7	5	12
12	RHD	64:2	5	12
13	RHD	68:10	204	15

RHD = Right Hemisphere Damage

NBD = No Brain Damage

Pre-experimental Testing

Each participant passed several pre-experimental tests to determine eligibility for this study. Data from these pre-experimental procedures are presented in Table 2.

The Rehabilitation Institute of Chicago Evaluation of Communication Problems in Right Hemisphere Dysfunction (RICE) (Burns, Halper, & Mogil, 1985) was administered to each participant to confirm the presence and severity of the communication disorder secondary to right hemisphere CVA. Pre-experimental testing began with the first subtest of the RICE, the Behavioral Observation Profile. The Behavioral Observation Profile was scored on-line. Participants scoring 24 or greater were considered to have mild right hemisphere dysfunction. Those participants continued in the pre-experimental testing phase. Three subtests of the RICE were administered: Visual Scanning and Tracking, Writing, and Pragmatic Communication Skills. Performance on these subtests further confirmed the behavioral deficit secondary to right hemisphere damage.

To rule out the presence of dementia, each participant was given screening subtests from the *Arizona Battery for Communication Disorders of Dementia (ABCD)* (Bayles & Tomoeda, 1991): Story Retelling (Immediate & Delayed) and Word Learning (Free Recall, Total Recall, and Recognition). Each participant was required to obtain a summary score of at least 4.0 from each of the following ABCD subtests: Story Retelling-Immediate; Story Retelling-Delayed; Word Learning-Free Recall; Word Learning-Total Recall; and Word Learning-Recognition.

The *Western Aphasia Battery (WAB)* (Kertesz, 1982) was administered to each participant to rule out the presence of aphasia. Each participant had an Aphasia Quotient

(AQ) above the cutoff score of 93.8. To rule out the presence of a motor speech disorder, each participant was given *Tasks for Assessing Motor Speech Programming Capacity* (TAMSPC) (Duffy, 1995). Across all eleven sections of the TAMSPC, each participant showed no more than two instances of response characteristics of a motor speech disorder (distortion, groping {audible or visible}, substitution, attempt at articulatory self-correction, delayed response initiation, awareness of errors, sequencing errors, slow rate, and syllable by syllable production of multisyllabic words/phrases). Each participant had an average of at least fourteen in each section of the TAMSPC.

The *Geriatric Depression Scale* (GDS) (Parmalee & Katz, 1990) was administered to each participant to rule out the presence of depression. Each participant scored between zero and ten on the GDS to demonstrate the absence of depression.

Table 2. Pre-experimental Procedures Data

Participant #	BOP	VST	W	PCS	SRI	SRD	WLF	WLT	WLR
1	N/A	N/A	N/A	N/A	5	5	5	5	5
2	N/A	N/A	N/A	N/A	5	5	5	5	5
3	N/A	N/A	N/A	N/A	5	5	5	5	5
4	N/A	N/A	N/A	N/A	5	5	5	5	5
5	N/A	N/A	N/A	N/A	5	5	5	5	5
6	45	1/123	54	60	5	5	5	5	5
7	45	16/123	55	60	4	5	5	5	4
8	45	48/123	54	60	5	5	5	5	5
9	45	17/123	52	60	5	5	5	5	5
10	45	1/123	55	60	5	5	5	5	5
11	45	21/123	54	60	5	5	4	4	4
12	45	17/123	53	60	5	5	5	4	5
13	45	6/123	54	60	5	5	5	4	4

RICE

BOP = Behavioral Observation Profile

VST = Visual Scanning and Tracking (# of errors/total # of possible errors)

W = Writing

PCS = Pragmatic Communication Skills

ABCD

SRI = Story Retelling-Immediate

SRD = Story Retelling-Delayed

WLF = Word Learning-Free Recall

WLT = Word Learning-Total Recall

WLR = Word Learning-Recognition

Table 2. Pre-experimental Procedures Data, Cont'd.

Participant #	WAB	TAMSPC	GDS
1	100	15	0
2	100	15	0
3	100	15	0
4	100	15	0
5	100	15	0
6	99.1	15	10
7	99.4	15	5
8	99.0	15	7
9	98.8	14.87	8
10	100	15	6
11	97.6	15	5
12	100	15	2
13	100	15	0

Five non-neurologically impaired volunteers were administered the experimental battery; each scored at ceiling level. This step was included to increase confidence that any performance deficit seen in the right hemisphere damaged participants can be attributed to behavior following neurological insult rather than to characteristics of the stimuli. The performance level of the five non-neurologically impaired individuals on the experimental session was 100% accuracy (210/210).

Materials

Experimental materials consisted of 32 idioms and ten literal sentences; these items appear in Appendix A. The idioms were taken from Gibbs (1987) and represent four types: syntactically frozen (SR), syntactically flexible (SL), metaphorically opaque (MO), and metaphorically transparent (MT). A syntactically frozen idiom is one that can be interpreted in an idiomatic manner in its regular form, but is usually not seen as idiomatic in its passive form (i.e., *John kicked the bucket*). A syntactically flexible idiom is one that can be passivized and still be thought of as idiomatic (i.e., *John will lay down the law*). A metaphorically opaque idiom is one whose literal meaning has little to do with its idiomatic meaning (i.e., *spill the beans*). Whereas, a metaphorically transparent idiom is one whose conventional, idiomatic interpretation is a transparent extension of its literal meaning (i.e., *skating on thin ice*) (Gibbs, 1987). The following sections describe stimulus preparation of idiom lists, stimulus stories, and literal sentences.

Stimulus Preparation

Ease of Understanding Idioms

To ensure that the idioms were equally comprehensible, ratings of ease of understanding were obtained from fifteen non-neurologically impaired college students. Each student was given a list of 40 idioms (ten in each of the following types: SR, SL, MO, and MT) and ten literal sentences, randomized for order of occurrence of type of idiom and literal sentence. The ten literal sentences were included for confirmation of comprehension and were not used in any other task. The students were asked to indicate how easy it was for them to understand the idioms or sentences, by circling a number from 1 to 5. The number one represented very difficult to understand, two represented somewhat difficult to understand, three represented neither easy nor difficult to understand, four represented somewhat easy to understand, and five represented very easy to understand.

The means and standard deviations for ease of understanding were calculated across raters and idioms. The overall mean for all idioms was 4.05 (S.D. = .39). In visual inspection of the data, it appeared that two participants might have reversed the scale, that is, using 1 for 5, and vice versa. One of these participants rated 92.5% (37/40 idioms) as one and 7.5% (3/40 idioms) as five. A second participant rated 95% (38/40 idioms) as one, two, or three and 5% (2/40 idioms) as four or five. These ratings were in clear opposition to all other raters and a decision was made to exclude them. The means and standard deviations were recalculated with thirteen raters. The overall mean across

forty idioms and thirteen raters was 4.45 (S.D. = .49); the overall mean for literal sentences was 4.46 (S.D. = .26).

In an effort to create a homogeneous stimulus item pool with all items being easily understood, a decision rule was applied that would omit any idiom with a mean value below one standard deviation below the overall mean, that is, any idiom with a mean value below 3.96. Four idioms were dropped for this reason. To equalize the number of stimuli across idiom type, the experimenter randomly omitted idioms until there were eight idioms within each idiom type.

Ease of Understanding Stimulus Stories

Half of the stimulus items were presented in a story context. For each stimulus item to be presented in context, a five-sentence story was created. Stories ranged from 44 to 107 words with a mean of 73.8 (S.D. = 17.9). The last sentence of each story contained either an idiom or a literal statement, presented within similar syntactic structures. The length of final sentences containing an idiom ranged from 7 to 40 words, with a mean of 17.35 (S.D. = 9.03). The length of final sentences containing literal statements ranged from 9 to 17 words, with a mean of 14.6 (S.D. = 3.29).

Stimulus stories and their corresponding final sentences were subjected to additional testing to ensure that they were easy to understand and that the story and final sentence matched. For idioms, the story-sentence match was determined by pairing a story with the idiomatic final sentence, and with an idiomatic/definitional (non-idiomatic version of the idiom) final sentence.

Ratings of ease of understanding of the story and match of the last sentence were obtained from twenty-one non-neurologically impaired college students. Each student was given a packet containing twelve or thirteen stories. Five of the stories were paired with their idiomatic endings, five with their definitional endings, and two or three with their literal endings. Note that only the idiomatic and literal endings will be experimental materials. The idiomatic/definitional endings were created solely for the purpose of insuring stimulus integrity.

Stories were randomized across packets, with the constraint that the idiomatic and idiomatic/definitional versions of the final sentence of a story could not be in the same packet. Students were asked to indicate how easily they understood each story, by circling a number from 1 to 5. The number one represented very hard to understand, two represented somewhat hard to understand, three represented neutral, four represented somewhat easy to understand, and five represented very easy to understand. The means and standard deviations for ease of understanding were calculated across raters and stories. The overall mean for ease of understanding for the idiomatic stories was 4.92 (S.D. = 0.16); the overall mean for the idiomatic/definitional stories was 4.89 (S.D. = 0.19); and the overall mean for the literal stories was 4.84 (S.D. = 0.36).

The students were also asked to indicate how well the last sentence of each story matched the body of the story, by circling a number from 1 to 5. The number one represented a very bad match, two represented a somewhat bad match, three represented “don’t know”, four represented a somewhat good match, and five represented a very good match. The means and standard deviations were calculated across raters and last sentence matches. The overall mean for last sentence matches of idiomatic stories was

4.77 (S.D. = 0.39); and the overall mean for last sentence matches of literal stories was 4.63 (S.D. = 0.68).

Across idioms and last sentence matches, those stories with mean values below 4.5 were rewritten in such a way to improve clarity. Five stories (three idiomatic and two literal) required alteration.

Procedure

Participants were seen at a speech and hearing clinic, a hospital, or in their respective homes for one or two sessions. The first section required approximately one to two hours and consisted of pre-experimental testing (obtaining informed consent and administering the RICE, ABCD, WAB, TAMSPC, and GDS). The experimental section followed and required approximately one hour. The experimenter and the participant were the only people present during the sessions.

Each experimental section was divided into two segments: presentation of stimulus items in a story context, and presentation of stimulus items in isolation. Stories, idioms in isolation, and literal sentences were randomized across subjects, with the constraint that no two idiom types appeared consecutively.

For the context condition, each story was read to the subjects, who were then asked to provide a verbal interpretation of the idiom or literal sentence. The instructions were: "I'm going to read you some stories. After I finish reading each story, I will ask you a question pertaining to that story. Listen carefully to each story because it will help you to understand the question. Ready?". Prior to each story, the experimenter used a

consistent starter phrase (i.e., “Here’s the next story”). The stimulus stories are presented in Appendix B.

For the isolation condition, each idiom or literal sentence was read to the subjects, who were then asked to provide a verbal interpretation of the idiom or literal sentence. The instructions were: “I’m going to read you some phrases. After I finish reading each phrase, I will ask you to tell me the meaning of the phrase. Ready?”. Prior to each phrase, the experimenter spoke a consistent starter phrase (i.e., “Here’s the next phrase”). The experimenter told the participant that his/her answers would be audio-taped to monitor his/her progress.

Data Collection

Transcription Reliability

All sessions were audio-taped for later analysis. Following a session, the experimenter orthographically transcribed the participants’ responses. To establish transcription reliability, another individual orthographically transcribed 10% of the participants’ responses. Point-to-point agreement for transcription of words was 100%. Thus, transcription reliability was considered established.

Training Judges

Accuracy of stimulus interpretation was rated for each stimulus item (idiom or literal sentence, embedded in a story context or presented in isolation). Two individuals served as judges and used the NTC'S American Idioms Dictionary (Spears, 1987); Handbook of Commonly Used American Idioms (Makkai, Boatner & Gates, 1995); and Slang American Style (Spears, 1997) as the references for determining accuracy of interpretation rating. The following categories (adapted from Ackerman (1982) in Gibbs (1987)) comprised the Idiomatic Rating Scale used in the scoring process: (A) *Correct*- describing the conventional idiomatic use of the sentence as stated by Makkai et al. (1995); (B) *Literal*- describing a compositional, literal use of the sentence; (C) *Incorrect non-literal*- describing a non-literal interpretation of the final sentence that was not in agreement with the conventional idiomatic interpretation, but was a possible interpretation; (D) *Incorrect*- describing instances where the participants gave no response, a semantically incorrect response, or an uninterpretable response.

Prior to rating participant responses, the judges were instructed in using the Idiomatic Rating Scale, and were given practice opportunities. Eight idioms, not used in the experiment, were selected from the Handbook of Commonly Used American Idioms (Makkai et al., 1995). The experimenter created an example response for each idiom. Two of these examples represented correct responses, two represented literal interpretations, two were incorrect non-literal, and two were incorrect. Each judge independently rated these idioms. Both judges achieved 100% accuracy and were considered competent to use the rating scale.

Scoring Protocol for Experimental Stimuli

Each judge was given the following: transcriptions of participants' responses; audiotapes of participant's responses; and definitions of idioms used in the experimental session. Judges were asked to read, listen to, and rate each response. Refer to Appendix C for the judges' instructions and idiom definitions.

Inter-judge Reliability

Inter-judge reliability was calculated by comparing independent ratings from each judge. Those responses for which both judges agreed were subjected to further analysis. For any responses where there was disagreement between the judges, a third judge rated the response. The experimenter and the third judge reviewed those responses for which there was disagreement among all judges, and disagreement was resolved by discussion. On the initial ratings, the two judges agreed for 202/336 (60%) of the responses. Disagreements between the two judges occurred on 127/336 (38%) of the responses, and were resolved by a third judge. Initial ratings of three judges were in disagreement for 7/336 (2%) of items; disagreement was resolved by discussion for each of these items. The result was a data set of agreed upon responses to every stimulus.

CHAPTER III

RESULTS

The experimental design in this investigation (within-subjects design) was implemented to determine the effect of idiom type and linguistic context on comprehension of idioms by individuals with right hemisphere brain damage. Four idiom types were included - metaphorically transparent (MT), metaphorically opaque (MO), syntactically flexible (SL), and syntactically frozen (SR). The two contextual conditions were presence of prior linguistic context consistent with the idiom, and no prior linguistic context (i.e., the idiom was presented in isolation). Raw data for accuracy of response and error responses are shown in Appendix D; transcriptions of participants' verbal responses are shown in Appendix E.

The first analysis examined the accuracy rate for interpretations of literal statements and idioms. The prediction was that accuracy of interpretation would be greater for literal statements than for idioms. The percent accuracy for the literal statements was 78.8% (63/80) and the percent accuracy for the idiomatic statements was 71.1% (182/256). Data for each participant were in the form of number of correct responses per category (idioms or literal statements). Raw data were converted to proportions, as the maximum possible number of responses varied (4 for idiom categories and 5 for literal statements). T test results showed no significant difference between accuracy rates for idiom responses and responses to literal statements ($t=.918$ [one-tailed], $df=78$, $p=.18$).

The dependent variable of accuracy of idiom interpretation was examined using a two-factor (idiom type x context) analysis of variance with replication for the main effects of idiom type and context. The interaction was not significant ($F [3,56] = .244, p = .86$). Neither main effect was significant (idiom type: $F [3,56] = .709, p = .55$; context: $F [1,56] = 2.64, p = .11$). One prediction of this study was that accuracy would vary across idioms, being greater for metaphorically transparent idioms than metaphorically opaque idioms and greater for syntactically frozen idioms than syntactically flexible idioms. A second prediction was that the presence of prior linguistic context would facilitate accurate interpretation. Neither prediction was supported.

Error data were not subjected to inferential analysis given the high number of zero entries in individual data cells. Examining error data for idioms, the dependent variable was number of errors for each error type and idiom type, and of 192 data cells, 138, or 71.88%, contained a zero entry. Errors in response to idiom stimuli were examined for distribution pattern across error type (correct, literal, incorrect nonliteral, and incorrect), idiom type (metaphorically transparent, metaphorically opaque, syntactically flexible, and syntactically frozen), and context (prior linguistic context and no prior linguistic context).

The first analysis examined errors according to the type of error produced: literal interpretation of an idiom, nonliteral but incorrect interpretation, or incorrect interpretation. 63 (85%) of the total errors on responses to idioms were made when participants gave an incorrect interpretation of the target idiom. In contrast, seven (10%) of the errors occurred when a participant provided an incorrect, but nonliteral interpretation of the target idiom, and four errors (5%) occurred when a participant

provided a literal interpretation of the idiom. Chi square analysis showed this distribution to be significantly different from the expected distribution ($X^2=89.78$, $df=2$, $\alpha=.05$, $X^2_{crit}=5.99$). This distribution pattern contradicts previous reports showing the greatest number of errors in idiom interpretation occurring when respondents provided a literal interpretation of the nonliteral, idiomatic stimuli.

Next error responses were examined for distribution according to category of idiom. Participants made 14 errors on metaphorically opaque idioms, 19 errors on metaphorically transparent idioms, 20 errors on syntactically flexible idioms, and 21 errors on syntactically frozen idioms. Chi square analysis revealed this distribution to be significantly different from the expected distribution ($X^2=29$, $df=3$, $\alpha=.05$, $X^2_{crit}=7.82$). The greatest number of errors occurred on metaphorically opaque idiom stimuli.

Finally, errors were examined across the two contextual conditions. Participants made 43 errors when idioms were presented in isolation and 31 errors when idioms were presented in a story context. T-test results showed no significant difference between number of errors in context condition ($t=1.27$ [one tailed], $df=190$, $p=.10$). This result was contrary to the prediction that the presence of prior linguistic context would facilitate comprehension of idioms.

CHAPTER IV

DISCUSSION

This research study examined the effect of types of idioms and the presence of prior linguistic context on interpretation of idioms and literal statements. Participants were requested to listen to idioms and literal statements presented in isolation or at the end of a short story. They were then asked to explain the meaning of the idiom or statement. Accuracy of interpretation of idioms was examined using analysis of variance. Neither the main effects of idiom type or context, nor the two-way interaction was significant. An error analysis showed a differential response pattern according to type of error and type of idiom.

Predictions

The following predictions were made: (1) accuracy of interpretation would be greater for literal statements than for idioms, (2) accuracy of interpretation across idiom types would vary, (3) prior linguistic context would facilitate accurate interpretation, and (4) errors would be predominantly literal interpretations of idioms.

Interpretation of Idioms and Literal Statements

It was predicted that accuracy of interpretation would be greater for literal statements than for idioms. Accuracy rates of interpretation were similar for literal statements and idioms (literal statements = 78.8%; idioms = 71.1%), and the prediction was not supported. This finding suggests that for participants in this study, the nonliteral nature of idioms did not pose greater difficulty for interpretation than literal statements. Additionally the results lend evidence to the observation that individuals with right hemisphere damage can distinguish between literal statements and idiomatic expressions.

The accuracy rate for literal statements for participants in the current study was surprisingly low (78%). It was expected that the participants would have no difficulty with the literal statements, and attain an accuracy rating of near 100%. Literal statements should have been easy to interpret because only one possible interpretation existed for each. One explanation for this low accuracy rating could be the participants' puzzlement as to why they were being asked to define literal statements. For example, on several occasions some participants asked the experimenter, "What do you mean?". It seemed that participants were questioning why they were being asked to define something that was self-evident; as if they were being asked to restate the obvious. However, none of the participants asked, "What do you mean?" when asked to interpret the idioms. It is possible that the participants were trying to "read into" the literal stimuli, or thought them "trick questions", or odd requests. If this is the case, then perhaps participants offered creative responses in an attempt to match the perceived nature of the question. Two observations support this point. One is that individuals with right hemisphere damage

asked the question for literal statements and not idioms, and the other is that the non-neurologically impaired individuals did not pose the question at all.

Perhaps this result is not as surprising as it initially appeared. Previous evidence suggested that individuals with right hemisphere damage are often not sensitive to the structure of discourse (Gardner et al., 1975; Myers, 1979). It is possible that upon encountering an unusual discourse occurrence, that is being asked to explain the self-evident, they were unable to adjust and provide an appropriate response. This is a speculative statement that is not supported by data.

While it is possible that participants may have had linguistic deficits accompanying right hemisphere brain damage that interfered with interpretation of the literal statements, that hypothesis was rejected based on the pre-experimental findings that ruled out the presence of aphasia and dementia. Participants were judged to have comprehension that was adequate for understanding stimulus items. It is possible however, that participants had subtle linguistic deficits that were not identified in the pre-experimental testing, but nonetheless interfered with comprehension. In summary, the low accuracy rate for interpretation of literal statements is puzzling.

Equally puzzling was the rate of accuracy of interpretation of idioms by participants with right hemisphere damage, which was higher than anticipated (71.1%). This finding is contrary to previous data reported by Myers and Linebaugh (1981) and Winner and Gardner (1977), however similar to data from Tompkins, Boada, and McGarry (1992). Participants in that study averaged a 75% accuracy rate for idiom interpretation in an off-line task. Tompkins et al. (1992) used both on-line and off-line tasks and reported that individuals with right hemisphere damage could activate and

retrieve familiar idioms (on-line task), but showed a deficit in interpretation (off-line task). Data from the current study and from Tompkins et al. (1992) present a pattern that is contradictory to the pattern derived from previous data. If the common, clinical assumption, that people with right hemisphere disorder have difficulty interpreting idioms, is true, then the accuracy rate of participants should have been low, certainly less than 25%. Alternatively, if previous data were misleading, and idioms present no difficulty for persons with right hemisphere disorder, then an accuracy rate near 100% would be expected. The accuracy rate from the current study (71%) and Tompkins et al. (75%) match neither situation, suggesting that another factor may be influencing performance. Thus presenting the clinical picture that all persons with right hemisphere disorder have difficulty with idioms oversimplifies the case.

One reason for the contradictory results could be elements of the research design. At least two elements have varied across several previous studies, the method of assessing severity of participants' right hemisphere disorders, and the severity of participant's right hemisphere disorders. Most commonly, individuals were included in studies because they showed right hemisphere damage on neural imaging examination and performance deficit on the assessment battery selected for the study. A consistent battery to classify type and severity of right hemisphere disorder does not exist, thus making it difficult to determine participant similarity across studies. In previous studies, participants were typically not classified according to severity of right hemisphere disorder (behaviorally or neurologically) nor were they grouped by severity levels. The range of accurate performance in the current study and in Tompkins et al (1992) was 0 - 100% suggesting that perhaps participants in these, and other studies, may be mixed with

respect to severity of disorder. Therefore, conflicting results across studies are not as surprising as they initially appeared. Future studies might seek to classify and systematically manipulate severity of right hemisphere disorder.

The current study addressed the issue of varying levels of severity by selecting participants such that they were described as mildly impaired, under the belief that these participants should easily understand linguistic elements of the stimuli, and that errors could be attributed to idiomatic processing errors. Two possible performance outcomes were identified, with the first being predicted from previous research. The predicted outcome is for good comprehension of literal statements and poor comprehension of idioms; in the other outcome, participants may show good comprehension for both literal statements and idioms. Any other outcome (i.e., the outcome in the current study of equivalent accuracy rates for literal statements and idioms) would be contrary to expectations from research or clinical practice.

The accuracy rate of 71% is, in itself, problematic, as predictions would specify high or low, but not middle-range, accuracy rates. Consider the following juxtaposition: idiom processing models purport that idioms are accessed as lexical units; participants in the current study demonstrated good linguistic skills, suggesting that they should understand all linguistic elements of the stimulus items. If participants appreciated nonliteral meaning then accuracy rates should have been near 100%; alternatively, if participants did not appreciate nonliteral meaning then accuracy rates should have been very low. An accuracy rate of 71% is not consistent with either prediction.

Taken together, data from the first analysis, accuracy of interpretation of literal statements and idioms by persons with right hemisphere disorder, call into question the

common clinical presumption that individuals with right hemisphere disorder do not accurately interpret idioms. Data from the current study do not fit a model that suggests linguistic performance is adversely affected by presence of a particular linguistic structure, i.e. idioms. Nor do they fit a model that suggests that linguistic performance deficit is a function of severity of disorder. Two other factors that may affect performance are considered next: idiom type and the presence of context.

Accuracy of Interpretation of Idiom Type

It was predicted that accuracy of interpretation across idiom types would vary; accuracy should be greater for metaphorically transparent idioms (MT) than metaphorically opaque idioms (MO), and greater for syntactically frozen idioms (SR) than syntactically flexible idioms (SL). Metaphorically transparent idioms were predicted to be the easier to understand for individuals with right hemisphere damage than metaphorically opaque idioms because the conventional, idiomatic interpretation and the literal interpretation of metaphorically transparent idioms are closely related. In contrast, idiomatic meanings of metaphorically opaque idioms have little to do with their literal meanings. Syntactically frozen idioms were predicted to be easier to understand than syntactically flexible idioms because syntactically frozen idioms can be interpreted in only one syntactic form, and as a result should be more familiar in that form than syntactically flexible idioms. The results of the current study did not support this prediction. There was no significant difference in accuracy rates among idiom types.

The predictions of differential response rate to idioms that differed in semantic or syntactic derivation was proposed in contrast to a generalized clinical assumption that all persons with right hemisphere disorder have difficulty interpreting all idioms. It was postulated that some idioms, those with nonliteral and literal meanings that are closely related, or with a single syntactic form, would prove easier to understand than their more difficult counterparts. Such a finding would suggest that participants are indeed able to process nonliteral meaning, however only those items that are linguistically easy (i.e., metaphorically transparent and syntactically frozen).

Speculating further, such a result might imply that a simplification effect may be operative when participants with right hemisphere damage interpret idioms. This speculation was based on the finding that there is a developmental hierarchy for learning idioms (Gibbs and Gonzales, 1985; Gibbs, 1987), with semantically or syntactically simple idioms learned earlier than complex idioms. If individuals with right hemisphere damage showed difficulties processing idioms, it may be with the later learned idioms. The current data did not support this speculation. There may be a semantic or syntactic complexity hierarchy of idioms, but it does not extend beyond the developmental period of learning idioms.

Accuracy rates may have been affected by the ease of understanding of the stimulus idioms. Stimulus idioms were purposely selected to be easy to understand, and homogeneous on this variable; all had similar ratings in pilot work. Idioms were selected in this manner to isolate the factors of idiom type and the presence of linguistic context, however the idioms may have been so easy to understand that they created a ceiling effect that obscured any influence of semantic or syntactic complexity. The ceiling effect

may have been accentuated given the mild impairment of all participants. In this case however, an accuracy rate of near 100% would have been expected. The accuracy rate of 71% indicates that other factors are likely exerting an influence. Future studies that systematically vary the ratings of ease of understanding, as well as the semantic or syntactic complexity of stimulus items may produce a differential effect in accuracy rates.

Idiom complexity and ease of understanding of stimulus idioms may be confounded. Stimulus idioms were selected from the list created by Gibbs (1987). Idioms on that list had been identified as syntactically or semantically derived, and placed in mutually exclusive categories. It is possible that an individual idiom may have been both semantically and syntactically derived, or that some syntactically derived idioms may also have been metaphorically opaque while others were metaphorically transparent, or that some semantically derived idioms were also syntactically frozen or flexible. The current study accepted the idiom list of Gibbs (1987) and Gibbs and Gonzales (1985) as a basis for this investigation, but may have contributed to stimulus confounding. The confounding of the complexity and ease of understanding characteristics of the stimulus items in turn may have obscured an effect of idiom type. Future studies might disentangle these stimulus conditions.

If indeed the stimulus items were confounded, that may have contributed to groups of stimulus items that were not orthogonal. That is, a group of stimulus items (i.e., the metaphorically opaque idioms) may not have been equivalent on another variable (i.e., syntactic form). If stimulus groups lacked orthogonality, an effect of idiom type may also have been obscured. Each group of idioms was examined post hoc for

orthogonality for the factors of metaphoric transparency and syntactic flexibility. Within each group of metaphorically created idioms, some were syntactically flexible and some were syntactically frozen. Similarly, within each group of syntactically derived idioms, some were metaphorically transparent and some syntactically opaque. Although this distribution was evident for idioms presented in isolation and with prior linguistic context, the stimulus groups were not apriori equated for orthogonality.

As a result, the grouping of the stimulus items may have biased the response pattern in a manner presently unknown. Although no effect of idiom type was revealed in the current study, further refinement of stimulus materials to remove potential confounding and ensure orthogonality may indeed reveal an effect.

All participants demonstrated a mild right hemisphere disorder that may have contributed to the lack of significant difference in accuracy rates across idiom types. In this study, the factors of idiom type and linguistic context were placed at the foreground of investigation and severity of behavioral deficit was held constant. Participants were selected to be mildly impaired on the assumption that if the common clinical belief was true, that is, if persons with right hemisphere disorder have difficulty processing idioms, then some differential accuracy rate across idiom types should have appeared. This effect was not observed, suggesting that idioms may not be problematic for persons with right hemisphere impairment after all, or that deficits in interpretation only surface in more severely impaired individuals, or that persons with mild hemisphere disorder are more like non-neurologically impaired individuals when interpreting idioms and show few errors.

The initial speculation is weakened considering the preponderance of previous evidence that suggests some idiom-processing deficit exists in persons with right hemisphere disorder. The latter speculation is weakened in the face of an accuracy rate of 71% for participants in the current study, which is lower than the 100% rate achieved by non-neurologically impaired participants. It is possible that a differential effect in accuracy rates would appear if participants showed a greater variation in communication disorder.

Contextual Effects On Accuracy of Interpretation of Idioms

Prior linguistic context was expected to facilitate accurate interpretation of idioms and literal statements. The presence of linguistic context should provide a framework for interpretation of both idioms and literal statements, however the evidence for this point is inconsistent (Gibbs, 1980; Myers and Linebaugh, 1981). In the current study, if context did facilitate interpretation of idioms and literal statements, there should have been greater accuracy rates and lower error rates for stimulus items presented in story context than for stimulus items presented in isolation, and there were not. Accuracy rates and error rates were similar within each contextual condition.

The nature of the stimulus items may explain the lack of contextual effects. The idioms were selected to be commensurate for ease of understanding, and the lack of effect may have occurred because there was no syntactical or lexical feature (i.e., complexity, ambiguity) that posed difficulty for the participants. Participants in the pilot studies were asked to rate ease of understanding, but not given specific instructions on

how to accomplish the task. The ratings they gave may have reflected simplicity in the linguistic elements of the idioms, general familiarity with the idioms, or a combination of factors. Perhaps the stimulus idioms were easy enough to understand, even though the source of ease of understanding was unclear, that the presence of prior linguistic context did not add value during the task. Additionally, characteristics of the stimulus groups may have obscured any contextual effect. Similar to the discussion in the previous section on accuracy of interpretation, stimulus items may have been confounded on semantic or syntactic derivation, or stimulus groups may have lacked orthogonality. Either of these conditions alone or in combination with ease of understanding may have masked an effect of context.

Linguistic context may not affect accuracy of interpretation in off-line tasks, such as the one in the current study, however Tompkins et al. (1992) found an effect during an on-line interpretation task. The context effect was present at the earliest point in processing an idiom, but not at later points. That study cannot be directly compared with the current study however, as there was no isolation condition in the Tompkins, et al. (1992) task. One clinically relevant conclusion that can be drawn from the current study and Tompkins et al. (1992) is that in treatment tasks that represent off-line processing (as most treatment tasks do), delivering stimulus items in isolation should be as effective as presenting items in linguistic context. Clinical efficiency is an important factor in treatment planning and any effort to streamline the treatment process and increase efficiency is welcome.

The severity level of the participants may also have masked a contextual effect. Participants had linguistic comprehension skills which may have been sophisticated

enough to derive meaning of the idioms without relying on multiple sources of cues that would be provided by prior linguistic context. This explanation is appealing, and leads to the speculation that a contextual effect may appear in a study that included participants with varying levels of severity of right hemisphere disorder. Alternatively, as previously suggested, persons with mild right hemisphere disorder may process idiomatic nonliteral meaning in a manner similar to non-neurologically impaired persons. In this case a context effect should not appear, however the accuracy rate should be near 100%, (similar to non-neurologically impaired control participants) and it was not.

In summary, the expectation of this study was that the accuracy rate for interpretation of literal statements would be high and the accuracy rate for interpretation of idioms would be low and differ according to type of idiom and/or presence of prior linguistic context. This result did not occur and several explanatory factors were examined: syntactic and lexical complexity of the idiom stimuli, ease of understanding of idioms, confounding of stimulus characteristics, orthogonality of stimulus groups, and severity of communication disorder in participants. None of these factors adequately explained the pattern of results. Accuracy data from the current study suggest that, at the very least, the common clinical assumption, that persons with right hemisphere disorder have difficulty processing idioms, can no longer be accepted without question.

Error Analysis

At the outset of this project, the error analysis was expected to be the most interesting result. Many errors were anticipated, the majority of errors were predicted to be literal interpretations of the idioms, and effects of idiom type and/or prior linguistic context were predicted. None of these predictions was confirmed. The data should be interpreted cautiously however, as another surprising result was that participants made so few errors. Many data cells contained a zero entry, potentially weakening proposed conclusions. Errors were analyzed across error type, idiom type, and presence of errors in context.

The most surprising result was in the analysis of error type. Examining the frequency of the three error types (incorrect, incorrect non-literal, and literal) by far the greatest number of errors was incorrect interpretations of the idiom stimuli, that is, a semantic error of some sort. This finding is inconsistent with the preponderance of previous evidence, where literal interpretations of the idiom stimuli predominated the error pattern. This suggests that the source of the comprehension deficit was in a linguistic aspect of the idiom rather than the nonliteral meaning. It is counterintuitive to speculate that the error pattern was a result of the severity level of participants, and their language comprehension scores would argue also against this interpretation. Perhaps participants misunderstood an element of the idiom and provided what they thought was a correct response, or they were not familiar with the idiom and again, provided what they thought was a correct response. The explanation for this unexpected error pattern remains unclear.

Error data from the current study are consistent with error data from Tompkins et al. (1992), in that a very small number of the errors were literal interpretations of the target idiom (6% in Tompkins et al. and 5% in the current study). The current data differ from Tompkins et al. (1992) in that the majority of their participants' error responses were related-nonliteral (78%) whereas the most frequent error type (85%) made by participants in the current study was an incorrect interpretation of the target idiom. Although the reason for the difference in error type between the two studies is unclear, two notable points emerge. First, the number of errors made by each set of participants is low (and accuracy rates unexpectedly high), and caution is prudent when interpreting the error data. Second, data from both studies call into question the common assumption that adults with right hemisphere disorder have a deficit in processing nonliteral information and error predominantly by providing literal interpretations of idioms.

Another interesting finding was that metaphorically opaque idioms, which were predicted to be the most difficult to interpret, were in fact the easiest. This may have been an artifact of stimulus factors such as linguistic confounding, stimulus groups that lacked orthogonality, or stimulus idioms that were rated as easy to understand. Metaphorically opaque idioms were predicted to be most difficult on the basis of previous research (Gibbs and Gonzalez, 1985; Gibbs, 1987) and intuitive reasoning. The prediction may have been in error however, as it was derived from research describing developmental patterns with children and was not confirmed in pilot work with adults.

In summary, errors made by participants in this study were contrary to predictions both in pattern of error and error rate. While caution is urged in interpreting the data, they nonetheless serve to redirect thinking about previous assumptions, particularly the

assumption that most processing errors occur when nonliteral meaning is interpreted in its literal version.

Severity of Right Hemisphere Disorder

At several points in this discussion the nature of the severity of right hemisphere disorder of participants has been invoked as an explanation for performance patterns. Three issues emerge in thinking about the influence of severity of participants' right hemisphere disorder on performance on the experimental task. First is the research design and clinical issue of determining severity of right hemisphere disorder. At present no psychometrically sound instrument for assessing right hemisphere disorder and determining severity exists. That being the case, participants' characteristics will likely differ across the several studies investigating processing of nonliteral stimulus items, thus inducing a source of variance and potentially obscuring experimental effects.

The current study addressed this issue by formulating a method of determining severity of right hemisphere disorder and including only participants who met the behavioral requirements. This decision allowed severity level to be held constant across participants, minimized the likelihood that participants would have difficulty with linguistic elements of the experimental materials, and allowed isolation of the factors of interest, which were idiom type and prior linguistic context. The high accuracy rate (and corresponding low error rate) leads to the speculation that perhaps participants showed a ceiling effect that was a result of the decision to include only participants with mild right hemisphere disorder. Stimulus items were selected to be easy to understand, which may

have interacted with participants' severity levels and further induced a ceiling effect. It is likely that performance differences would occur in the presence of differing severity levels of participants. The second issue raised in this study, and related to severity of right hemisphere disorder then, is the consideration of the possible confounding effects of severity and stimuli.

Finally, data from the current study suggest that persons with mild right hemisphere disorder may be similar to non-neurologically impaired persons in the manner in which they process idioms. It is also possible that a differential effect will surface in other processing areas as well, for example, narrative text. While speculative, this issue directs future research to comparisons of persons with mild right hemisphere disorder and non-neurologically impaired persons in their performance on several linguistic processing tasks.

Clinical Relevance

Three clinical implications arise from the data in this study. One implication is that a client's performance in providing interpretations of idioms appears to be equivalent in conditions of isolation or prior linguistic context. As such, in assessment and treatment activities that require idiom interpretation, clinicians may confidently present idiom stimuli in isolation only, omitting the need to construct linguistic context.

A second implication is that idiom derivation or complexity does not appear to affect processing, at least for persons with mild right hemisphere disorder. Accuracy rates were commensurate across idiom types, few errors were produced, and the idiom

type predicted to be most difficult (metaphorically opaque) was the type on which fewest errors were made. Therefore, when clinicians select idiomatic stimuli for assessment or treatment activities, idiom complexity, reflected in attributes of syntactic flexibility and metaphoric transparency may not be the most critical factor in stimulus selection, at least for clients with mild right hemisphere disorder.

Finally, and perhaps the most valuable implication, is that clinicians should not automatically accept the assumptions that all individuals with right hemisphere damage have difficulty processing idioms and will always err by providing literal interpretations. This implication illuminates a crack in the foundation of our knowledge base about linguistic behavior observed in persons with right hemisphere disorder.

Considerations For Future Research

Two sets of considerations for future research present themselves. One set of considerations centers on participant characteristics. Future studies should carefully define participant characteristics using psychometrically sound procedures, and include participant groups that vary in severity, including participants who are non-neurologically impaired. Certainly increasing the size of the participant groups would add increased power to uncover any effect that might exist.

The second set of considerations relates to stimulus characteristics. Stimuli in the current study were selected from previously published research and equated for ease of understanding. They were blocked on semantic and syntactic derivation and complexity, but not examined for potential confounding effects within stimulus blocks, or

orthogonality. Any of these factors, or a combination, may have created a ceiling effect for the current participants who had mild right hemisphere disorder, or interacted in some way so as to obscure an effect. One result of the current study was to highlight this issue, which in previous work had not been considered. Future studies should address it by carefully creating stimulus item pools that are homogeneous across several factors.

Summary

Participants in this study listened to idioms presented in isolation and in context, and were asked to explain the meaning of the idioms. The results were contrary to predictions in that accuracy of performance and error response pattern were not influenced by the linguistic variables of syntactic flexibility and metaphoric transparency, or by presentation in a story context or isolation. In contrast to a great deal of published literature, participants did not make many errors, nor was the predominant error type one where they provided a literal interpretation of the nonliteral meaning of the idioms. The results are interpreted in light of calling to question research and clinical assumptions about the performance of persons with right hemisphere disorder when processing nonliteral material.

APPENDIX A

Appendix A

Idiomatic and Literal Experimental Stimuli

Syntactically Frozen Idioms (SR)

Context

Take under your wing

Wait on hand and foot

Go against the grain

Sitting on pins and needles

Isolation

Jump down my throat

Breathe down my neck

Turn back the clock

Put on some weight

Idioms that were omitted from the stimulus pool

Cut down to size

Pull up stakes

Syntactically Flexible Idioms (SL)

Context

Turn over a new leaf

Throw in the towel

Keep up your end

Make up your mind

Isolation

Put down my foot

Wear out your welcome

Blow off some steam

Bite off more than you can chew

Idioms that were omitted from the stimulus pool

Beat around the bush

Roll out the red carpet

Metaphorically Opaque Idioms (MO)

Context

Gets under my skin

Shoot the breeze

Spill the beans

Flip her lid

Isolation

Chip off the old block

Come apart at the seams

At the drop of a hat

Beat around the bush

Idioms that were omitted from the stimulus pool

Straight from the horse's mouth

Get down to brass tacks

Metaphorically Transparent Idioms (MT)

Context

Back is against the wall

Take a shot in the dark

Burning the candle at both ends

Follow in her mother's footsteps

Isolation

Cry over spilled milk

Right under our noses

Slap in the face

Hold your tongue

Idioms that were omitted from the stimulus pool

Get off on the wrong foot

Kept a straight face

Literal Sentences

Context

Mary called her guests and told them to dress warm because it was cold in her house.

Emily told her son, "The best way to get rich is to save your money."

Jennifer's mother finally told Jennifer to finish her breakfast and go to the bus stop.

When Jane looked out her window she was very happy to see that it was finally sunny outside.

Susan's dad couldn't get down from the ladder, so he had to yell at Susan, "The telephone is ringing."

Isolation

The librarian told Mike and Rob to stop talking because they were bothering the people next to them.

It is not polite to listen to other people's conversations.

The students were talking to each other and the teacher said, "Please, pay attention to me."

The children could not go outside to play because it was raining.

The new employee is an honest person.

APPENDIX B

Appendix B

Stimulus Stories

Tyler is the type of person who always has to be right, nobody can ever dispute him or he will embarrass you in public. Tyler is a very negative and argumentative person, a trait he gets from his mother. He will almost always contradict whomever he is speaking with and will never be found on the side of the majority. Tyler's attitude and way of thinking has not made him many friends throughout the years. Tyler will always **go against the grain**.

Linda had just graduated from high school with high honors and felt extremely lucky to have been hired by an automobile company. She was overwhelmed by the number of people that she would be working with. During Linda's tour of the office, a co-worker who was about thirty years older than Linda was, approached her. This lady introduced herself as Veronica, the "office mother". Linda felt more comfortable and relaxed when she heard her boss tell Veronica, "Here is another young girl you can **take under your wing**."

Doug and his wife Betty have been married for twenty-five years and Doug was very much in love with his wife. He would always cook dinner when he got home from work. He also did the laundry and all of the cleaning in the house. Even though Doug worked hard at his job, he thought more of his wife and did not want her to do anything around the house. Betty was truly **waited on hand and foot** by Doug.

One morning, Paul took his wife, Melissa, to the hospital because his wife was pregnant and was going into labor. Melissa was in labor for an extremely long time. The doctor told Paul that it would be quite awhile before Melissa delivered the baby. Paul was anxiously awaiting the birth of their first child. In the waiting room, another soon to be father said to Paul, "I know what you are going through, it's like **sitting on pins and needles.**"

Bob started swimming at a very young age and has participated in a variety of swimming competitions for many years. Throughout the years, Bob has won several gold medals in these swimming competitions. His youth and constantly keeping himself in shape has helped him to win many of the competitions. Although, for the past few years, the results of his competitions have been upsetting to him. Due to his aging and poor performance, Bob has decided to **throw in the towel.**

Jim and Keith have grown up together as they are neighbors and they have always been competitive toward one another. One day after they got home from work they decided to have a race with their dirt bikes. Keith already knew that Jim was a much more experienced rider than he was. Although, for this race, they decided to compete for twenty dollars (the loser must pay the winner twenty dollars). Jim told Keith, "You **better keep up your end of the deal.**"

One day Tom was called into his boss's office. Tom's boss told him that due to the automotive company's need to downsize; he was going to have to lay him off permanently. This news came as a surprise to Tom and he became worried about finding another job. After work, Tom went home and told his wife the bad news. Tom's wife responded by saying, "being laid off is not the end of the world, just **turn over a new**

leaf and you will soon be cheerful again.”

Elizabeth’s mother asked Elizabeth what she would like to do for her tenth birthday. Elizabeth told her mother that she would like to go bowling with her friends from school. Then, five minutes later Elizabeth said she would like to go to the movies with her friends instead. Before she went to bed for the evening, Elizabeth changed her mind again and said that she would like to go roller-skating with her friends. Elizabeth’s mother finally said, “**Make up your mind.**”

Michele was driving to work when she noticed there was more traffic than usual. Michele was being especially careful this morning because she was driving her new car that she bought last night. All of a sudden, Michele had to slam on her brakes because the cars in front of her had come to a complete stop. However, the car behind Michele did not stop in time and it crashed into Michele’s new car. When this happened, Michele really **flipped her lid**.

Kerrie was planning a surprise birthday party for her husband, Joe. While making telephone calls regarding the party, she noticed her son standing in the doorway. Her son kept saying, “I’m going to tell Dad that you are having a surprise birthday party for him.” Kerrie couldn’t believe what her son was saying and warned him not to tell his father. As soon as Joe walked in the door their son yelled, “Mom is having a surprise birthday party for you” and Joe replied angrily, “Thanks for **spilling the beans.**”

Sara is a girl who loves to sing. Sara has been singing in her church choir for five years and she also sings in her high school choir. Sara’s brother, Tommy, does not think that Sara has a beautiful voice and he gets very annoyed when she sings around the house. Ever since they were children, Sara and Tommy have had arguments about Sara’s

singing. One day, Tommy couldn't take Sara's singing any longer and he yelled, "Sara, your singing **gets under my skin.**"

John is in the same profession that his father and grandfather were in and that profession is being a farmer. John, a farmer of twenty-five years, is a man who really enjoys talking. All of his closest friends that live in the area are also farmers. John will never miss a chance to talk to his friends about anything dealing with farming and whatever else. On rainy days when he can't farm, John visits his friends to **shoot the breeze.**

Matt can never sit still for more than a minute. Monday through Friday, for ten hours a day, Matt works at a local restaurant and then goes to the gym to exercise for another two hours. Not only is Matt busy during the week, but on the weekends he helps his brother build houses. Matt averages only four hours of sleep per night. Matt's doctor recently told him that he has a good chance of becoming really sick if he continues to **keep burning the candle at both ends.**

In school, Kevin excelled in all of his classes and he was very knowledgeable about each of his subjects in school. One day, Kevin was a participant on a game show. He was asked several questions and answered them all correctly, but the next question was for the championship. Kevin was under a lot of pressure and he was uncertain of what the answer to the championship question was. Therefore, the game show host told Kevin to **take a shot in the dark.**

Ever since she was a young girl, Jeri has been devoted to her mother. Jeri was a lovely child and she grew up to be the most wonderful daughter. Jeri has never had any angry words with her mother, even in troubled times they supported and comforted one

another. Jeri is an excellent cook and loves to read, just like her mother. Also like her mother, Jeri is a superior tennis player. Jeri has always said that she will **follow in her mother's footsteps.**

Chuck is an excellent worker at the company he works for. He has worked there for thirty-two years. His co-workers and bosses really respect him for his work and for the person he is. He contributes more than his position calls for. One day, Chuck approached his boss in regards to getting a raise in pay. His boss regrettably told Chuck that money is not available in his department for any raises and therefore, his **back is against the wall.**

Mary recently moved out of her apartment and into a house. The only problem was that the house was fifty years old and the furnace needed to be replaced. She was skeptical about whether or not to have a birthday party at her house for her niece because she worried that the old furnace would breakdown. Mary decided to have the party anyway. **Mary called her guests and told them to dress warm because it was cold in her house.**

Jane cannot believe that the state in which she lives has had a whole month of no sun. At work, Jane's desk is located next to a large window. Jane has been very depressed this past month and it has been so dark and gloomy in her office. One day while she was sitting at her computer, the whole room lit up. **When Jane looked out her window she was very happy to see that it was finally sunny outside.**

Emily's ten-year-old son kept telling her that when he got older he was going to be rich. Emily told him that there was more to getting rich than just talking about it. Emily told her son that you do not need a lot of money to start out. Emily took her son to

the bank with the money that he had saved over the past year. **Emily told her son, “The best way to get rich is to save your money.”**

Jennifer always gives her mother a hard time about eating her breakfast. She does not like to take time to eat in the morning, but her mother always makes her eat breakfast. Jennifer sometimes sleeps late or dawdles, and has to eat quickly so she won't miss her school bus. One morning, Jennifer was sitting in her bedroom watching television instead of in the kitchen eating her breakfast. **Jennifer's mother finally told Jennifer to finish her breakfast and go to the bus stop.**

Susan is a teenager who always has her stereo blasting in the house. Her dad constantly has to tell her to turn the volume down on the stereo. One day, Susan's father was standing on a ladder because he was painting the kitchen walls when the telephone rang. Once again, Susan had her stereo blasting and she could not hear the telephone ringing. **Susan's dad couldn't get down from the ladder, so he had to yell at Susan, “The telephone is ringing.”**

APPENDIX C

Appendix C

Judges' Instructions and Idiom Definitions

Instructions: Please, read each of the attached idioms/sentences and participant responses. Then, ask yourself the following question: In your judgement, does the participant's response represent the content of the definition (using the following definitions)? Then, rate each idiom/sentence by circling one of the following categories. There can only be one rating for each idiom/sentence.

- (A) **Correct-** describing the conventional idiomatic use of the sentence
- (B) **Literal-** describing a compositional, literal use of the sentence
- (C) **Incorrect non-literal-** describing a non-literal interpretation that is not in agreement with the conventional idiomatic interpretation, but is a possible interpretation
- (D) **Incorrect-** describing instances where the participants gave no response, a semantically incorrect response, or an uninterpretable response

IDIOM	DEFINITION
Take under your wing	Under the care or protection of
Make up your mind	To choose what to do; decide
Shoot the breeze	To talk
Follow in her mother's footsteps	To follow someone's example; follow someone exactly
Keep up your end	To do one's part as agreed; to attend to one's responsibilities as agreed
Back is against the wall	In a trap, with no way to escape; in bad trouble
Go against the grain	To go against the natural direction or inclination
Flip her lid	To lose one's temper; to lose your mind; become insane; to become unreasonably enthusiastic
Throw in the towel	To admit defeat; accept loss
Burning the candle at both ends	To work or play too hard without enough rest
Wait on hand and foot	To serve in every possible way; do everything for someone

Get under my skin	To bother; upset
Sitting on pins and needles	Anxious; in suspense
Take a shot in the dark	An attempt without much hope or chance of succeeding; a wild guess
Turn over a new leaf	To start afresh; to have a new beginning
Spill the beans	To tell a secret to someone who is not supposed to know about it
Wear out your welcome	To visit somewhere too long or come back too often so that you are not welcome anymore
Breathe down my neck	To follow closely; threaten from behind; watch every action
Cry over spilled milk	To cry or complain about something that has already happened; be unhappy about something that cannot be helped
Beat around the bush	To talk about things without giving a clear answer; avoid the question or the point
Turn back the clock	To return to an earlier point
Hold your tongue	To be silent; keep still; not talk--may be considered rude
Bite off more than you can chew	To try to do more than you can; be too confident of your ability
Chip off the old block	A person whose character traits closely resemble those of his parents
Jump down my throat	To suddenly become very angry at someone; scold severely or angrily
Put down my foot	To become adamant (firm) about something
At the drop of a hat	Without waiting; immediately; promptly
Slap in the face	An insult; a rejection
Blow off some steam	To release excess energy or anger

Right under our noses

In sight of; in an easily seen or noticeable place

Put on some weight

To gain weight; to grow fat

Come apart at the seams

To become upset to the point where one loses self-control and composure as if having suffered a sudden nervous breakdown

APPENDIX D

Appendix D

Raw Data-Correct Responses and Error Responses

Raw Data – Correct Responses

Participants with Right Hemisphere Damage

(Accuracy for participants with no neurological damage achieved 100% accuracy on all idiom and literal statement stimuli)

Participant Number								
	1	2	3	4	5	6	7	8
Literal Statements								
Isolation	5	5	5	5	2	2	5	5
Context	4	0	5	5	4	1	5	5
Idioms								
Isolation								
MO	3	3	4	2	3	2	2	4
MT	3	2	4	4	2	2	3	2
SL	4	3	3	3	2	2	2	2
SR	2	2	4	1	2	1	3	4
Context								
MO	3	3	4	3	4	3	4	3
MT	4	3	3	3	3	3	2	2
SL	4	2	4	3	4	1	3	2
SR	1	4	2	4	4	2	3	4

Note: MO = Metaphorically Opaque, MT = Metaphorically Transparent, SL = Syntactically Flexible, SR = Syntactically Frozen

Raw Data – Error Responses on Idiom Stimuli

Participants with Right Hemisphere Damage

		Participant Number							
		1	2	3	4	5	6	7	8
Isolation									
Literal Interpretation									
MO		0	0	0	0	0	0	0	0
MT		0	0	0	0	1	0	0	0
SL		0	0	0	0	0	0	1	0
SR		0	0	0	0	0	0	0	0
Incorrect, Non-literal									
MO		1	0	0	2	1	1	1	0
MT		1	1	0	0	1	2	1	2
SL		0	1	1	0	2	2	1	2
SR		2	2	0	3	2	2	1	0
Incorrect Interpretation									
MO		0	1	0	0	0	1	1	0
MT		0	1	0	0	0	0	0	0
SL		0	0	0	1	0	0	0	0
SR		0	0	0	0	0	1	0	0

Continued on next page

Context								
Literal								
Interpretation								
MO	1	0	0	0	0	0	0	0
MT	0	0	0	0	0	0	0	0
SR	1	0	0	0	0	0	0	0
SL	0	0	0	0	0	0	0	0
Incorrect, Non-literal								
MO	0	1	0	1	0	1	0	1
MT	0	1	1	1	1	1	2	2
SR	2	0	1	0	0	2	1	0
SL	0	2	0	1	0	3	1	2
Incorrect Interpretation								
MO N	0	0	0	0	0	0	0	0
MT N	0	0	0	0	0	0	0	0
SR N	0	0	1	0	0	0	0	0
SL N	0	0	0	0	0	0	0	0

Note: MO = Metaphorically Opaque, MT = Metaphorically Transparent, SL = Syntactically Flexible, SR = Syntactically Frozen

APPENDIX E

Appendix E

Participant Responses

Transcription and coding sheet/Experimental Stimuli (Isolation)

Response Form

Participant #1

Sheet 1/5

<u>Idiom/Sentence</u>	<u>Response</u>
Wear out your welcome	It means...um...whoever is invited you to stay as a guest has...um...has...uh...has become...uh...has become...um...in causing the guest, not the guest, the host to...um...to become upset, to become...um...exhausted with the...uh...the guest. Usually because someone does things in excess.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Breathe down my neck	Um...it means put pressure on an individual. Make demands on, on an individual.
----------------------	---

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Cry over spilled milk	Um...it means...when an accident happens it's done innocently...it's...it's...it's not...it's ok because...um...you did not do it maliciously or did it...uh...on purpose.
-----------------------	--

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Idiom/Sentence**Response**

The librarian told Mike and Rob to stop talking because they were bothering the people next to them.

Um...well they, they're...they're...they're talking and causing...uh...other people to lose...uh...their attention or their...their quietness...quiet time and...um...being disruptive.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Beat around the bush

Mostly what I've been doing today in giving...giving my explanations. Not being direct. Not being concise. Um...beating around the bush is...is...is...um...is trying to get to your...trying to get somewhere using not direct means.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Turn back the clock

Um...it means to...to look at the past. To...um...to think about what...what events...whats happened in order to go back versus being in the present or being in the future.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Hold your tongue

Control your...um...your speech. Control...you might have thoughts, but you...you...don't exercise those thoughts in speech, in talking to...um...an individual.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Idiom/Sentence**Response**

It is not polite to listen to other people's conversations.

It means...uh...when you hear other...other individuals talking...um...it's...it's...polite or it's...it's proper to shut out that...that conversation, to direct your...your listening and your thoughts in a...in a...different direction.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Bite off more than you can chew

Taking on more tasks...more...um...more responsibility than one is responsible for...capable of...one is capable of.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Chip off the old block

Um...it means...someone has...uh...the same characteristics as...as...um...as a sibling...um...a child or a son or a daughter...they have the same kind of mannerisms, moods, attitudes that the...the parent has.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

The students were talking to each other and the teacher said, "Please, pay attention to me."

It means...um...give the...the...um...students...the teachers undivided attention. No, just the opposite. It means for the students to give the un...undivided attention. I think that's what I said.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Idiom/Sentence	Response
Jump down my throat	It means being...um...being forceful, to be...um...angry. To be dominating. To make demands...strong demands.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Put down my foot	It means to put...uh...to lay down the rule. To...to...let someone know what the laws are and...uh...that this is...these are the conditions.
------------------	---

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

At the drop of a hat	You got me. Drop of a hat. Um...immediate response...uh...takes action.
----------------------	---

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Slap in the face	Um...it means an indignation. Um...it's a wrong...doing the wrong to someone.
------------------	---

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

The children could not go outside to play because it was raining.	It means it was raining outside. They...they can't play...they can play...they can't play outside...they can play inside.
---	---

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Idiom/Sentence	Response
Blow off some steam	Um...someone's under pressure and the...the advice is to relax...to...um... take it easy. To get away from the pressure...to relieve the...the pressure.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Right under our noses	Um...it's obvious. If we're solving a problem...that a...it's...it's right there. It's...it's very...it was there all the time.
-----------------------	---

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Put on some weight	Add pounds...to...to get...to have additional pounds.
--------------------	---

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

The new employee is an honest person.	The individual has integrity. Is true to his word...doesn't lie...doesn't tell the truth...or doesn't tell...doesn't bend the truth.
---------------------------------------	--

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Come apart at the seams	Lose control...um...not...not being able to...um...maintain stability or focus.
-------------------------	---

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Transcription and coding sheet

Experimental Stimuli (Stories)

Response Form

Participant #1

Sheet 1/6

Idiom/Sentence	Response
-----------------------	-----------------

Take under your wing	Um...watch over, help,...um...and support
----------------------	---

CORRECT	LITERAL	INCORRECT NON-LITERAL	INCORRECT
----------------	----------------	------------------------------	------------------

Make up your mind	Decide a course of action
-------------------	---------------------------

CORRECT	LITERAL	INCORRECT NON-LITERAL	INCORRECT
----------------	----------------	------------------------------	------------------

Shoot the breeze	Um...to converse, to talk, to communicate
------------------	---

CORRECT	LITERAL	INCORRECT NON-LITERAL	INCORRECT
----------------	----------------	------------------------------	------------------

Follow in her mother's footsteps	To be the same...to... [long pause] I can...I can...see the word...what I want to say, but...um...to be the same
----------------------------------	--

CORRECT	LITERAL	INCORRECT NON-LITERAL	INCORRECT
----------------	----------------	------------------------------	------------------

Idiom/Sentence**Response**

Mary called her guests and told them to dress warm because it was cold in her house.

The...the...furnace wasn't...wasn't working properly and giving off the warmth...that...that's needed in the house and because it was...it was...an old home, it probably wasn't well insulated and um....probably a lot of, a lot of drafts, a lot of areas that were, allow the cold to come in. So, um...have a hard time keeping the...the house warm.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Keep up your end

Um...it means if you make an agreement, that you, that you stay, that you stand up for the commitment of that agreement, no matter what happens. You...you... don't back down, you agree to the terms of the...of the...the winnings.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Back is against the wall

It means you have no, no room for flexibility. You don't have any room to move. You're...you're pushed against the wall. There's no where else to go...no options.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Idiom/Sentence**Response**

Emily told her son, "The best way to get rich is to save your money."

It means make...use your money so that it it works and it earns...continues to grow versus...um...not saving your money, but spending it or...um...investing it in, in...um...unsafe...um...institutions and...um...create risk and potentially lose the money that you're, that you, that you are saving. So, the best way to...um...to get rich is to, to save your money, to, to allow it to work and grow...build.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Go against the grain

Um...it, it means the, the popular or society...um...agrees with the, with the majority a certain, a certain attitude and to go against that grain is, is to, um...disagree with the society...disagree with the attitudes. So, you're basically negative towards the positive direction that society...um...presents...its attitude.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Flip her lid

It means...um...to, to get angry. To, to lose your control. Lose, lose control of your emotions...um...become upset.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Idiom/Sentence	Response
Throw in the towel	It means...um...quit, stop...um...stop competing. Go in a different direction. Take a...take a...different course of action.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Burning the candle at both ends	Um...it...it means...not...not allowing yourself to rest...um...by burning at both ends, your body continue, continues to exercise and doesn't...it...um...it doesn't allow you to rest. Burning the candle at both ends means, being...having more, doing things with excessive, not allowing it to, not allowing yourself to adjust, but to just continue in one direction, and eventually...um...a crisis or a catastrophe could occur or would occur.
---------------------------------	---

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Wait on hand and foot	Take...take care of...of...all...all the chores. Take care of support. Do...um...do everything that's expected.
-----------------------	---

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Jennifer's mother finally told Jennifer to finish her breakfast and go to the bus stop.	It just means finish your breakfast, don't stay and watch television. Sit down and eat your breakfast and then go to the bus stop.
---	--

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Idiom/Sentence	Response
Gets under my skin	Upset, irritated, anxious. I think what it probably means is if you get a bite or something, it gets under your skin and it's...it's...it's irritable. It's hard to scratch it, itch, it won't go away.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Sitting on pins and needles	Um...being anxious...being excited or being on...um...being emotional. Being...um...pins and needles, if you're sitting, you're just, it's...it's gonna cause, it's gonna cause a pain or cause some, some sharpness...on, on edge.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
When Jane looked out her window she was very happy to see that it was finally sunny outside.	It means that the...the.. clouds have separated and let, let the sun through, opening up brightness and, and warmth.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Take a shot in the dark	Guess...use your gut feel and go with your best feeling towards...um...answering or making the decision.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

Idiom/Sentence**Response**

Turn over a new leaf

Start...start in a new direction. Make a...a new decision. Look at the...don't look at the past, look at the future.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Spill the beans

Giving...giving out information that is considered to be privileged. It's considered to be...um...a secret. It's...um...it's information that someone knows and is giving that information to someone that doesn't know.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Susan's dad couldn't get down from the ladder, so he had to yell at Susan,
"The telephone is ringing."

Um...it...it means that...um... Susan needs to answer the telephone...um...and she, she can't hear her, her father yelling to her...to, to answer the phone, so he...um...no one can answer the telephone 'cause they can't hear it ringing.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Transcription and coding sheet

Experimental Stimuli (Isolation)

Response Form

Participant #2

Sheet 1/4

Idiom/Sentence	Response
Right under our noses	Exactly what it says. Whatever is right there in front of you.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

The librarian told Mike and Rob to stop talking because they were bothering the people next to them.	Shut your mouth or get out of here. Silence. I shouldn't say that.
--	---

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Beat around the bush	Not coming forward. Honestly coming forward.
----------------------	--

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Turn back the clock	Wish you could re, re-live it...a situation.
---------------------	--

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Idiom/Sentence	Response
Wear out your welcome	You stay too long, honey. You know what they say... fish and, and company start to smell after three days.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
The new employee is an honest person.	He's trustworthy, I guess.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Bite off more than you can chew	Take on too much.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Chip off the old block	Like father like son.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
The students were talking to each other and the teacher said, "Please, pay attention to me."	Be quiet.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Cry over spilled milk	It's too late. The deed is done, huh?
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Jump down my throat	Like don't rip into me...don't...I don't know...it's so self-explanatory.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

Idiom/Sentence**Response**

It is not polite to listen to other people's conversations.

Don't snoop.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Slap in the face

I don't know how to say it. I don't know how to say that...slap in the face. I really don't.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Breathe down my neck

Get out of my...out of my way. I don't know how to say it...get out of my face.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

The children could not go outside to play because it was raining.

You'll get wet if you go outside when it's raining.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Blow off some steam

To vent.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Come apart at the seams

To blow your cool...I guess.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Idiom/Sentence**Response**

Put on some weight

You got fat.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Hold your tongue

Don't say it. You know the old saying...if you don't say it, they can't hold it against you.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

At the drop of a hat

Very quick.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Put down my foot

A hard decision...I guess. I don't know what else to say. A final decision like.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Transcription and coding sheet

Experimental Stimuli (Stories)

Response Form

Participant #2

Sheet 1/5

Idiom/Sentence	Response
Sitting on pins and needles	Nervous, tense, anxious
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Follow in her mother's footsteps	Probably just what it says, uh, to be like her mother. To be kind and gentle, and understanding. And probably have the same skills as tennis and cooking and things of that nature.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Mary called her guests and told them to dress warm because it was cold in her house.	She was, she wanted her guests to be comfortable...forewarned is what forearmed or something...I don't know.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Keep up your end	Do your best and pay up if you lose.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

Idiom/Sentence**Response**

Back is against the wall

There's absolutely nothing he can do. If there's no money, there's no money.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Take under your wing

Pretty much like the word mother. It's just help her, be nice to her. That's the first thing is being kind and help her along the way.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Emily told her son, "The best way to get rich is to save your money."

Exactly what it says. If you're...to me getting rich is getting rich in other ways, too...character, goodness, and stuff like that.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Go against the grain

Kind of against the crowd, but I don't like that. If, uh, if I'm right, therefore, you must be wrong type of thing.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Flip her lid

Got really mad. I don't blame her.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Idiom/Sentence	Response
Throw in the towel	Give it up.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Susan's dad couldn't get down from the ladder, so he had to yell at Susan, "The telephone is ringing."	What do you mean...what does it mean? He had, that was his only means of communication, I guess and he had to yell it because she was blasting.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Shoot the breeze	To talk
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Make up your mind	Decide already and make a decision on it.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Gets under my skin	It's bothering me.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

Idiom/Sentence**Response**

When Jane looked out her window she was very happy to see that it was finally sunny outside.

She was just...I don't know. She was so sick of the darkness...it could...it could light up anybody's light...life.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Take a shot in the dark

Just answer anything.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Turn over a new leaf

Get on with your life... ya know...get on with it.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Spill the beans

Tell everything

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Burning the candle at both ends

Working too hard, too many hours.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Wait on hand and foot

Just what it says...no, he just did everything. It's a fairy tale, believe me.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Idiom/Sentence**Response**

Jennifer's mother finally told Jennifer to finish her breakfast and go to the bus stop.

I don't know what that means...I would tell her to get out. I would be so frustrated by that time. I would just ignore her. I don't know...I don't know what that really means, other than what it says.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Transcription and coding sheet

Experimental Stimuli (Isolation)

Response Form

Participant #3

Sheet 1/4

<u>Idiom/Sentence</u>	<u>Response</u>
At the drop of a hat	That means immediately or right now.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Cry over spilled milk	To make a fuss over something that you...that's already happened that you can do nothing about.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Beat around the bush	That means to stall or mislead.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Turn back the clock	That's something you can't do. You can't go back in time.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
It is not polite to listen to other people's conversations.	That means it's not..uh...you shouldn't eavesdrop...listen in to someone else's private conversation. You are infringing on their privacy.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

Idiom/Sentence	Response
Bite off more than you can chew	Take on more than you can handle. To be greedy.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Chip off the old block	It means uh...in the case of a son it would be more like his father.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Wear out your welcome	That means if you're...if you're a guest, you have done something that...uh...doesn't...uh...enhance your presence there anymore.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
The students were talking to each other and the teacher said, "Please, pay attention to me."	That means shut up and listen up...you might learn something.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Put down my foot	That means to stop whatever is going on.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Breathe down my neck	That means somebody is too close and...uh...pushing.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

Idiom/Sentence	Response
Hold your tongue	That means if you don't have anything constructive to say, don't say anything.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
The children could not go outside to play because it was raining.	That means the weather is not good enough for the kids to go out.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Blow off some steam	That means to get mad at something and...uh...tell somebody about it. Tell somebody how you feel about it.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Right under our noses	Obviously, quite close
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Put on some weight	It means to gain weight.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
The new employee is an honest person.	That means they're trustworthy, can be trusted.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Come apart at the seams	That means to uh...go spastic.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

Idiom/Sentence	Response
Slap in the face	That has to do with an insult.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Jump down my throat	That means that somebody gets mad at you and they tells you...tell you about it.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
The librarian told Mike and Rob to stop talking because they were bothering the people next to them.	That means if you're in a library you should be quiet because you might be disturbing people that are trying to read.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

Transcription and coding sheet

Experimental Stimuli (Stories)

Response Form

Participant #3

Sheet 1/4

Idiom/Sentence	Response
Back is against the wall	Do very little for him, in regard to a raise.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Mary called her guests and told them to dress warm because it was cold in her house.	It means her furnace wasn't working properly and they should expect to have it cold in the house.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Keep up your end	You have to accept your responsibility. You made a bet and if you lose you have to pay off.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Take under your wing	To give somebody the benefit of your knowledge and experience.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

Idiom/Sentence**Response**

Emily told her son, "The best way to get rich is to save your money."

You can't make money by spending it.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Go against the grain

You'll always go the easiest way... agree with the, with the easiest way, so he doesn't have to compete with anybody.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Flip her lid

She got very irate.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Burning the candle at both ends

In this case, it means he's pushing himself too hard and trying to do too much all at once.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Wait on hand and foot

That means to take care of a person's every wish and demand... can't do enough for them.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Idiom/Sentence**Response**

Gets under my skin

It means it bothers you greatly.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Sitting on pins and needles

Very anxious and full of anxiety.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

When Jane looked out her window she was very happy to see that it was finally sunny outside.

After thirty days of gloom it's nice to see a ray of sunlight every once in awhile.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Shoot the breeze

It means just talk and converse with friends.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Make up your mind

Decide what you want to do and then do it all through.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Take a shot in the dark

Take a guess.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Idiom/Sentence**Response**

Jennifer's mother finally told Jennifer to finish her breakfast and go to the bus stop.

It means to eat what you've got and get ready to go to school.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Turn over a new leaf

It means start fresh. Change the way of, change your way of thinking and doing.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Spill the beans

To tattle or tell.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Susan's dad couldn't get down from the ladder, so he had to yell at Susan, "The telephone is ringing."

It means that she should answer the telephone.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Follow in her mother's footsteps

She would use her mother as a role model.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Throw in the towel

Give up or quit.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Transcription and coding sheet

Experimental Stimuli (Isolation)

Response Form

Participant #4

Sheet 1/5

Idiom/Sentence

Response

It is not polite to listen to other people's conversations.

It's not right, it's not nice to sit there and eavesdrop on what somebody else is saying. You should just walk out of the room or not just pay attention to what they are doing.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Bite off more than you can chew

Well, you take on something that you can't handle.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Turn back the clock

It means you have lived your life, you can't go backwards. You always gotta go forwards. No matter what you did last week, you still, you can't turn back... got to keep going forward.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Chip off the old block

It means you have the same habits as your mother or dad had. They call you a chip off the old block because you're almost on the same line as your parents.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Idiom/Sentence	Response
Wear out your welcome	It means like if you go visit somebody, don't, go for a couple of hours, don't stay for a couple of days. Over...over do your stay, your limit. People don't like that.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

The students were talking to each other and the teacher said, "Please, pay attention to me."	That means they're talking amongst themselves and the teacher is up there saying something and their not even listening to what she is telling them. So, you got to break up their conversation and say listen, listen to what is going on.
--	---

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Right under our noses	It means it's right before you... it's right there. Why can't you accept what's right there? It's right under your nose you should be able to see it or do what it says.
-----------------------	--

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Put down my foot	It means when I say something that's it.
------------------	--

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Cry over spilled milk	If something happens and it isn't to your liking or whatever. You can't sit there and pout about it. You just got to forget it and go on.
-----------------------	---

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Idiom/Sentence**Response**

The librarian told Mike and Rob to stop talking because they were bothering the people next to them.

Well, it means that they were disturbing the whole library or wherever they're at. You're suppose to be quiet in a library anyway.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Beat around the bush

Oh, like you're trying to tell somebody this is the way it is, that's the way it's got to be. Like they say, going in a round about way, just come straight out and tell them.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Breathe down my neck

Uh, like somebody's telling you and they keep repeating and repeating themselves. Tell them they are breathing down your neck. Just say it once or a couple of times and let it, let it go.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Hold your tongue

It means don't talk out of turn or keep your peace.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Come apart at the seams

Something looks easy, but it's probably a lot harder than what it looks like it's suppose to be. A lot of things look easy, but when you go to do it, it's not that way.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Idiom/Sentence**Response**

The children could not go outside to play
because it was raining.

It means that they can't go outside
because it's foul weather.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Blow off some steam

It means you get sort of frustrated
and you start blowing your mouth.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Slap in the face

Oh, like somebody might say
something that's kind of sharp and it
would be like a slap in the face.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

At the drop of a hat

Oh, some people do anything. The
minute they start something, then
stop everything and do whatever has
to be done.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Put on some weight

Just like it says. You gotta put on
some weight. You're too skinny.
You gotta start fattening up a little
bit. You're skin and bones.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

The new employee is an honest person.

Well, the new person is very honest.
You can trust him with anything.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Idiom/Sentence**Response**

Jump down my throat

Oh, like sometimes you'll say something and it doesn't come out right then they'll say well don't jump down my throat. Don't talk back to me.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Transcription and coding sheet

Experimental Stimuli (Stories)

Response Form

Participant #4

Sheet 1/5

Idiom/Sentence	Response
Wait on hand and foot	It means that...uh...they do everything for you. You don't have to do anything for yourself.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Keep up your end	That means if he loses he still has to pay, pay him the twenty-five bucks. You can't welch on a bet.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Emily told her son, "The best way to get rich is to save your money."	It means...uh...everytime you get some money, don't spend it, save it. So, that at the end you can be rich. Don't squander your money, hang on to it.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Go against the grain	It means he'll never go along with anybody. He always wants to contradict whatever they say and he doesn't want to change his ways.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

Idiom/Sentence	Response
Flip her lid	I guess she got very angry if she flipped her lid. She had a few things to say. She was not very calm.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Burning the candle at both ends	He doesn't let his body rest and that's not good. He has been working too hard. You gotta rest your body. You can't be doing everything and not, not taking the proper rest.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Spill the beans	Thanks for telling me about the surprise.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Turn over a new leaf	Forget about that job and concentrate on getting another one. Even if it's not the same kind of work. You can try a different, a different line. Just forget it and start over.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
When Jane looked out her window she was very happy to see that it was finally sunny outside.	The gloom had finally gone away and things were looking up. The sun was out, after being gone for so long. There was a big light in the sky. It lightens up the day, well her office anyway.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

Idiom/Sentence	Response
Sitting on pins and needles	It means that you're getting kind of jumpy. You don't know what's coming on and you're just sitting there waiting. The longer you sit the worse it gets.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Mary called her guests and told them to dress warm because it was cold in her house.	It means that she wasn't sure if her furnace was going to keep going or so that they bring some warm clothes just in case. Because her furnace wasn't working they would have to put a couple fires in.
--	---

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Back is against the wall	It means that if he wants to stay there then he can't get a raise because the company can't afford it. If he wants to stay, fine. If not, then he just has to take it as it is. If he doesn't want to stay then he just has to move on. But, he has been there for that many years, I'd imagine he would stay and approach them again at a later date.
--------------------------	--

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Gets under my skin	Really aggravating.
--------------------	---------------------

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Idiom/Sentence	Response
Take under your wing	It means to tell her what's happening here, how to cope with her employees...the girls she is going to work with. Tell her how she should act. She's going to watch over her, so that she doesn't make mistakes. If she does, she is going to help her. She is going to be her mother in other words.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Throw in the towel	He thought that he was getting older he couldn't compete with the younger athletes, so he decided that he was going to throw...quit...throw in the towel...call it quits.
--------------------	---

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Shoot the breeze	Talking about farming probably and other things. He likes to talk, so he likes to shoot the breeze...to talk.
------------------	---

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Follow in her mother's footsteps	It means that she wants to be like her mother an follow in her footsteps.
----------------------------------	---

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Jennifer's mother finally told Jennifer to finish her breakfast and go to the bus stop.	It means hurry up because you're going to be late. Quickly get with it.
---	---

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Idiom/Sentence**Response**

Make up your mind

It means stick to one thing don't keep changing all the time. Say you're going to do this then do this, not do this then five minutes later say you want to do something else.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Take a shot in the dark

Make a guess at it. Take a shot at it.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Susan's dad couldn't get down from the ladder, so he had to yell at Susan, "The telephone is ringing."

It means that she had her radio up so high that Susan didn't even hear it was ringing, so he had to call to her and evidently took himself down to get to the radio. I guess she finally heard it or evidently he had to get down from the ladder in order to get her attention.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Transcription and coding sheet

Experimental Stimuli (Isolation)

Response Form

Participant #5

Sheet 1/3

Idiom/Sentence	Response
Hold your tongue	Don't talk.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Turn back the clock	Start over
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Chip off the old block	Just like another person.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Wear out your welcome	Um...to be where you're, to be some place where you're not wanted.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Slap in the face	To hit somebody.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Bite off more than you can chew	To take, to start a bigger job than you think you can finish.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

<u>Idiom/Sentence</u>	<u>Response</u>		
At the drop of a hat	Impulsive		
CORRECT	LITERAL	INCORRECT NON-LITERAL	INCORRECT
Put down my foot	Stop		
CORRECT	LITERAL	INCORRECT NON-LITERAL	INCORRECT
Cry over spilled milk	Upset over something that didn't turn out the way you thought it should.		
CORRECT	LITERAL	INCORRECT NON-LITERAL	INCORRECT
Beat around the bush	Evasive		
CORRECT	LITERAL	INCORRECT NON-LITERAL	INCORRECT
Blow off some steam	Get mad.		
CORRECT	LITERAL	INCORRECT NON-LITERAL	INCORRECT
It is not polite to listen to other people's conversations.	Eavesdropping		
CORRECT	LITERAL	INCORRECT NON-LITERAL	INCORRECT
Come apart at the seams	Be a nervous wreck.		
CORRECT	LITERAL	INCORRECT NON-LITERAL	INCORRECT
The children could not go outside to play because it was raining.	That the children would be unhappy.		
CORRECT	LITERAL	INCORRECT NON-LITERAL	INCORRECT

<u>Idiom/Sentence</u>	<u>Response</u>			
Right under our noses	Something right in front of you.			
CORRECT	LITERAL	INCORRECT	NON-LITERAL	INCORRECT
Breathe down my neck	To keep harping on somebody.			
CORRECT	LITERAL	INCORRECT	NON-LITERAL	INCORRECT
The students were talking to each other and the teacher said, "Please, pay attention to me."	Listen			
CORRECT	LITERAL	INCORRECT	NON-LITERAL	INCORRECT
Put on some weight	Eat more.			
CORRECT	LITERAL	INCORRECT	NON-LITERAL	INCORRECT
The new employee is an honest person.	Trustworthy			
CORRECT	LITERAL	INCORRECT	NON-LITERAL	INCORRECT
Jump down my throat	To be angry at somebody...criticize.			
CORRECT	LITERAL	INCORRECT	NON-LITERAL	INCORRECT
The librarian told Mike and Rob to stop talking because they were bothering the people next to them.	Annoying			
CORRECT	LITERAL	INCORRECT	NON-LITERAL	INCORRECT

Transcription and coding sheet

Experimental Stimuli (Stories)

Response Form

Participant #5

Sheet 1/4

Idiom/Sentence

Response

Susan's dad couldn't get down from the ladder, so he had to yell at Susan, "The telephone is ringing."

Um...that he wanted Susan to answer the telephone.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Go against the grain

Um...not follow the rules.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Flip her lid

She got really angry.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Turn over a new leaf

Um...I would say...don't worry about it, just try to find something else...start again.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Idiom/Sentence**Response**

When Jane looked out her window she was very happy to see that it was finally sunny outside.

After all the dark and everything it was finally bright in her room. The sun was shining.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Sitting on pins and needles

That your anxious...nervous.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Mary called her guests and told them to dress warm because it was cold in her house.

It means that she wants her guests to be comfortable because her house was cold. To be comfortable they should bring a sweater or coat or something.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Back is against the wall

Nothing can be done.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Wait on hand and foot

Somebody that does everything for you.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Keep up your end

Do what you said you would do.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Idiom/Sentence	Response			
Gets under my skin	annoying			
CORRECT	LITERAL	INCORRECT	NON-LITERAL	INCORRECT
Burning the candle at both ends	Um...let me see. Doing more than you should be doing. Trying to do everything that is put in front of you.			
CORRECT	LITERAL	INCORRECT	NON-LITERAL	INCORRECT
Take under your wing	Um...to teach and guide I guess.			
CORRECT	LITERAL	INCORRECT	NON-LITERAL	INCORRECT
Emily told her son, "The best way to get rich is to save your money."	Put your money in the bank.			
CORRECT	LITERAL	INCORRECT	NON-LITERAL	INCORRECT
Shoot the breeze	Um...to talk.			
CORRECT	LITERAL	INCORRECT	NON-LITERAL	INCORRECT
Follow in her mother's footsteps	To be just like her mom.			
CORRECT	LITERAL	INCORRECT	NON-LITERAL	INCORRECT
Jennifer's mother finally told Jennifer to finish her breakfast and go to the bus stop.	Do what she's told.			
CORRECT	LITERAL	INCORRECT	NON-LITERAL	INCORRECT
Make up your mind	Make a decision.			
CORRECT	LITERAL	INCORRECT	NON-LITERAL	INCORRECT

Idiom/Sentence	Response
Spill the beans	To tell a secret.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Throw in the towel	To quit.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Take a shot in the dark	To go ahead and try.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

Transcription and coding sheet

Experimental Stimuli (Isolation)

Response Form

Participant #6

Sheet 1/4

Idiom/Sentence	Response
The students were talking to each other and the teacher said, "Please, pay attention to me."	She wanted their undivided attention.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Chip off the old block	If a child more or less is following in his father's footsteps, he is a chip off the old block.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Wear out your welcome	If you visit too frequently your welcome would be...
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Breathe down my neck	Don't tell me what to do.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
At the drop of a hat	Quick as a wink. Be quick about it.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Put down my foot	Either you behave or extreme measures.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

Idiom/Sentence	Response				
Turn back the clock	Let's not re-hatch something. What's done is done.				
CORRECT	LITERAL	INCORRECT	NON-LITERAL	INCORRECT	
Cry over spilled milk	If you make a mistake, let's not lament.				
CORRECT	LITERAL	INCORRECT	NON-LITERAL	INCORRECT	
Blow off some steam	When you get angry, unnecessarily so.				
CORRECT	LITERAL	INCORRECT	NON-LITERAL	INCORRECT	
It is not polite to listen to other people's conversations.	Don't eavesdrop.				
CORRECT	LITERAL	INCORRECT	NON-LITERAL	INCORRECT	
Come apart at the seams	Something that you think is carefully planned, but instead it doesn't come off as planned.				
CORRECT	LITERAL	INCORRECT	NON-LITERAL	INCORRECT	
Hold your tongue	Your response is not welcome.				
CORRECT	LITERAL	INCORRECT	NON-LITERAL	INCORRECT	
The children could not go outside to play because it was raining.	Well, that makes sense.				
CORRECT	LITERAL	INCORRECT	NON-LITERAL	INCORRECT	

<u>Idiom/Sentence</u>	<u>Response</u>
Right under our noses	Something that was quite obvious, but chose to ignore it.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Put on some weight	Does that have a double meaning? I was too thin.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
The new employee is an honest person.	Just what it implies.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Jump down my throat	Don't get angry at what I'm saying. If you don't agree, don't jump down my throat.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
The librarian told Mike and Rob to stop talking because they were bothering the people next to them.	Again, just as it implies.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Beat around the bush	Come right to the point.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Bite off more than you can chew	Don't promise anything more than you can make available.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

Idiom/Sentence

Response

Slap in the face

You didn't care for my response.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Transcription and coding sheet

Experimental Stimuli (Stories)

Response Form

Participant #6

Sheet 1/4

Idiom/Sentence	Response
Take a shot in the dark	Take a guess.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Flip her lid	I think she was angry.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Turn over a new leaf	Do what you haven't done before. Do something else.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
When Jane looked out her window she was very happy to see that it was finally sunny outside.	That's the way I feel, too. She was happy to see that it was sunny.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Sitting on pins and needles	Worried
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

<u>Idiom/Sentence</u>	<u>Response</u>
Shoot the breeze	Just a way of relaxing. Just to visit with his friends and relax.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Go against the grain	Contradict
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Make up your mind	It's got to be one thing or another. Your mind has to be made up.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Back is against the wall	Well, he's sorry, but he can't, can't afford a raise at this time.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Wait on hand and foot	Well, he did everything imaginable for his wife...everything.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Keep up your end	Let's be fair. Be fair about this.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Susan's dad couldn't get down from the ladder, so he had to tell at Susan, "The telephone is ringing."	He was pretty upset about not being able to get down the ladder.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

<u>Idiom/Sentence</u>	<u>Response</u>
Gets under my skin	Gets very annoyed.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Burning the candle at both ends	He's trying to do too much. More than what is good for him.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Mary called her guests and told them to dress warm because it was cold in her house.	That means that she shouldn't of had the party.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Take under your wing	Be especially nice to her.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Emily told her son, "The best way to get rich is to save your money."	It's good to save your money, but that isn't all there is to it.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Follow in her mother's footsteps	She planned to do exactly, the kind of life her mother had.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Jennifer's mother finally told Jennifer to finish her breakfast and go to the bus stop.	She became impatient with her.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

<u>Idiom/Sentence</u>	<u>Response</u>
Spill the beans	It was a secret his mother had and Joseph thanks for spilling the beans. Thanks, but no thanks.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Throw in the towel	I think that's a boxing expression, throw in the towel. Give it up. You've gone long enough.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

Transcription and coding sheet

Experimental Stimuli (Isolation)

Response Form

Participant #7

Sheet 1/4

Idiom/Sentence	Response
Breathe down my neck	Quit ragging on me.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Cry over spilled milk	There's no sense worrying about something that's already happened.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
The students were talking to each other and the teacher said, "Please, pay attention to me."	She's just asking for them to listen to what she said. She's trying to teach them and apparently they're talking and neglecting her.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Blow off some steam	That means to vent yourself. I mean let your feelings out.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Turn back the clock	It means try to go back in time. Think about the past or go into the past.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

Idiom/Sentence	Response
It is not polite to listen to other people's conversations.	Mind your own business.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Come apart at the seams	Lose all your logic and your ability to communicate in a logical fashion.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Hold your tongue	That means to relax and think about what's happening before you speak.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Wear out your welcome	That means doing something like visiting your neighbors more often than you should. They may like it, but they may get very tired of it if you do it too often.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
The children could not go outside to play because it was raining.	That means that the parent didn't want the kids to get wet, I guess.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Right under our noses	That means something's happening right in front of us and we don't even realize it.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

Idiom/Sentence	Response
Chip off the old block	That means one of the boys, just chums. The hood boys.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Put down my foot	That means get stern and buckle up to your responsibilities. Get stern with somebody.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Put on some weight	That means add some poundage to your body.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Slap in the face	Slap in the face usually means a remark that hurts you or hurting remark that's uncalled for.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Jump down my throat	Jump down my throat is ragging on somebody again unnecessarily usually.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
The librarian told Mike and Rob to stop talking because they were bothering the people next to them.	Well, you're in a library to do something and you usually need peace and quiet and their in there disturbing you, which is not right.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

<u>Idiom/Sentence</u>	<u>Response</u>
Beat around the bush	It means avoiding the issue.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Bite off more than you can chew	That means put too much food on your plate and you can't eat it. You've overloaded your dinner.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
The new employee is an honest person.	He's trustworthy and you can rely on him. He seems like a good person to work with.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
At the drop of a hat	It means over too quickly to over act, react I think. Spontaneous reaction.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

Transcription and coding sheet

Experimental Stimuli (Stories)

Response Form

Participant #7

Sheet 1/6

Idiom/Sentence	Response
Flip her lid	She really got angry I think.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
When Jane looked out her window she was very happy to see that it was finally sunny outside.	She was happy that finally the weather had changed and the cloudiness had gone away and it was nice and sunny outside.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Sitting on pins and needles	Well, it's kind of an anxiety deal. You're kind of antsy about, ya know hoping the thing will get on and I understand what he's doing here, though. Sitting on pins and needles because the first child often takes longer than most of the rest of them in labor pains and so forth so you get antsier and antsier. Just over-anxious maybe is the word I should use, sitting on pins and needles. Over anxious for the baby to come.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

Idiom/Sentence	Response
Shoot the breeze	That means sit around and chitchat and just talk. Chitchat or a common word is b.s.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Take a shot in the dark	To me that would just say guess and put it in one word that's what it is, guess.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Go against the grain	That means you got your own attitude and you're always right. You're willing to argue about it. Your way is the right way no matter what anybody else says.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Keep up your end	You better pay if you lose because it's a bet almost. His end of the deal is he's betting that he's going to win the twenty dollars, so all Jim told Keith is if you don't win you better be ready to pay.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Susan's dad couldn't get down from the ladder, so he had to yell at Susan, "The telephone is ringing."	Please, answer the telephone. I can't get to it.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

Idiom/Sentence	Response
Gets under my skin	Annoys me to no end. It really bothers me. Please, shut up.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Throw in the towel	Give up. Give up and stop competing anymore.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Burning the candle at both ends	That means you're looking for trouble because what you're doing is you're getting yourself in a situation where you're going to get really really sick. You're doing too much. You're using both ends against the middle.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Take under your wing	Well, she's a great protector. She protects everybody. She's like the old mother hen. Ya know, she's...she wants to keep the young chicks under her body and warm them as long as she can. Apparently she does that with all the new employees. She just tries to take them all over and decide what's best for them and plan their future for them.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

Idiom/Sentence	Response
Back is against the wall	There's nothing I can do for you at this point in time. We don't have any money in the budget. We don't have...we are in hard times. Sorry, but we can't give you any money right now.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Emily told her son, "The best way to get rich is to save your money."	Well, that means the best way to get rich is to invest your money and money makes money. So, invest it smartly, then you'll be richer than you would if you didn't save it.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Wait on hand and foot	Do everything for you. Do everything for somebody else. When you're waiting on somebody hand and foot you do everything that they need done.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Follow in her mother's footsteps	It means to grow up to live exactly the way her mom did. Do everything like her mother did. Like a clone.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

Idiom/Sentence	Response
Turn over a new leaf	Just meet this adversity and overcome it and then you will probably be just as cheerful as you are, were now. Maybe even more cheerful after you settle down into a new job.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Jennifer's mother finally told Jennifer to finish her breakfast and go to the bus stop.	Well, she's neglecting her responsibility. She's telling her to get done with her breakfast and get out there and catch her bus, so she's not going to be late for school.
---	--

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Spill the beans	That means talking, saying things that aren't necessary to say. He, what he did is he spoiled the whole surprise party by telling them about it and again he neglected the responsibility of his mom asking him to keep the secret and he didn't do it.
-----------------	---

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Make up your mind	Again, become responsible. Let's, let's get the thing straight. If you're gonna, if you want to bowl, bowl. If you want a movie, movie. If you want to go roller-skating, go roller-skating, but let's do what we say we're going to do and not keep vacillating back and forth.
-------------------	--

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Idiom/Sentence**Response**

Mary called her guests and told them to dress warm because it was cold in her house.

I think she was paranoid over this furnace thing that it was going to fail. All you guys had to do, all she had to do was say dress warm because we have an old furnace and it's cold out. She didn't have to go through all of that fear and stuff.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Transcription and coding sheet

Experimental Stimuli (Isolation)

Response Form

Participant #8

Sheet 1/5

<u>Idiom/Sentence</u>	<u>Response</u>
At the drop of a hat	It means at the drop of a hat is right now. It's immediately when the opportunity is there or presents itself.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Blow off some steam	It means to release pinned up emotions, anger or frustration of one thing or another.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Turn back the clock	Go back in the past. Review the situation and do as it was done before.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
The students were talking to each other and the teacher said, "Please, pay attention to me."	It means to listen and concentrate on what she's saying rather than what they're saying to each other. It's called non-divided attention.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

Idiom/Sentence	Response
Cry over spilled milk	It means crying over a situation that cannot be changed. Once it's happened, it's happened, even though it might have been preventable.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Come apart at the seams	It means to lose control. Break down and cry, emotional or whatever. Get angry, well again emotions.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Hold your tongue	It means not to be yapping and spouting off when you should be listening.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Wear out your welcome	To aggravate somebody by showing up when they're not wanted around. They want some peace and quiet.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
It is not polite to listen to other people's conversations.	It means not to eavesdrop.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

<u>Idiom/Sentence</u>	<u>Response</u>
Breathe down my neck	Looking over your shoulder is another phrase. Be watching somebody real close to see if they're doing things the way you think they should do it, whether it's right or wrong.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Put down my foot	It means to call a halt and stop a situation from progressing as it would normally progress in a situation, you put down your foot and don't let them over-run.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Right under our noses	It means you're letting them do things that you told them not to do and you're doing the things they want right under your nose or going ahead and disobeying them. Not following the rules that set up beforehand.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Put on some weight	It means to gain weight.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
The children could not go outside to play because it was raining.	It means they wouldn't be able to play out in the rain or they would get wet. Maybe catch a cold if it's a nice cold rain.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

<u>Idiom/Sentence</u>	<u>Response</u>
Chip off the old block	It means to be exactly like your predecessors, your dad or your mother or one of your relatives being a chip off the old block. Normally it refers to mother or dad.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
The librarian told Mike and Rob to stop talking because they were bothering the people next to them.	It means they were causing them to lose concentration if they were reading a book or something with their antics disturbing them.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Beat around the bush	It means not to come to the point talk about the past get something... talk about everything, but surrounding it, but the point in question.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Bite off more than you can chew	It means you picked out a job that you can't handle.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
The new employee is an honest person.	It means that he's going to take, do everything that he thinks is copastetic or right to be done. Probably according to the instructions he had. He will be honest about it. He won't be falsifying any reports.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

Idiom/Sentence**Response**

Slap in the face

In most terms that I've run into it, it could be an insult of a person to tell them they're wrong. When they're doing something wrong, it's sort of a slap in the face and they been doing it all that time, all the time that way and getting away with it.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Jump down my throat

It means to get angry and let you know that you're doing something that's not possibly right at the time.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Transcription and coding sheet

Experimental Stimuli (Stories)

Response Form

Participant #8

Sheet 1/5

Idiom/Sentence

Response

When Jane looked out her window she was very happy to see that it was finally sunny outside.

It means she has not seen the sun in quite awhile. From the preceding part of the story it's been a state that has very little sun during that particular month. Just one of those times that the sun just broke out.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Take a shot in the dark

A wild guess

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Go against the grain

A know it all. He goes always opposite the other people. He takes the negative half. If you put the people who stated, he's right and your wrong.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Mary called her guests and told them to dress warm because it was cold in her house.

It means she was thinking that the furnace would go out.

CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT

Idiom/Sentence	Response
Keep up your end	In this case, paying up if you lose. In other words, he didn't trust Keith to follow through with the bet.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Flip her lid	Well, I think she got mad. She was being careful and somebody else was tailgating her and wasn't as careful as she was and blew it.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Susan's dad couldn't get down from the ladder, so he had to yell at Susan, "The telephone is ringing."	It means that she had her stereo up so loud she didn't hear the phone ringing and he couldn't get to it to answer it. He wanted her to pick it up and answer it.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Gets under my skin	It's irritating him, bothering him.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Burning the candle at both ends	It means cutting short on something. Now, he's cutting his sleep short. He should be getting eight hours of sleep, some rest. He's going to burn himself out, burning both ends you don't have much candle left.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

<u>Idiom/Sentence</u>	<u>Response</u>
Take under your wing	It means to guide and teach her the tricks of the trade. Show her the ropes.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Emily told her son, "The best way to get rich is to save your money."	It means don't be spending it all the time. In other words, blowing it on trivial things. If you save it, it mounts up you'd be surprised how fast.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Wait on hand and foot	Doing everything for someone else.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Follow in her mother's footsteps	Be exactly like her mother. Follow the same path.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Turn over a new leaf	Take and change your attitude would be turning over a new leaf. Depressed, have a better outlook on things.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

Idiom/Sentence	Response
Jennifer's mother finally told Jennifer to finish her breakfast and go to the bus stop.	It means she was sitting there daydreaming probably, just like my daughter. Rattling off, bending her jaw. She's probably just dawdling along, not eating. Letting the time past by and she told her to hurry up and finish up and get going.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Spill the beans	Reveal a secret.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Sitting on pins and needles	It means waiting anxiously. You're antsy, jumping around. Getting up and walking around, pacing. To kind of past the time. You're always worried about something, if everything's going right.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Make up your mind	It means make a decision. Set your mind on one thing and not be jumping around like a Mexican jumping bean.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Shoot the breeze	It means that they can talk about things that have no meaning to anybody else.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

<u>Idiom/Sentence</u>	<u>Response</u>
Back is against the wall	It means there's no room for him to give, to make allowances.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	
Throw in the towel	It means he's decided to quit competing and trying to win things.
CORRECT LITERAL INCORRECT NON-LITERAL INCORRECT	

REFERENCES

REFERENCES

Ackerman, B. (1982). On comprehending idioms: do children get the picture? Journal of Experimental Child Psychology, 33, 439-454.

Baxter, L., & Brorson, K. (1998, November). Classroom Teacher's Use of Idiomatic Language. Poster session presented at the annual conference of the American Speech-Language-Hearing Association, San Antonio, TX.

Bayles, K.A., & Tomoeda, C.K. (1991). Arizona Battery for Communication Disorders of Dementia. Tucson, AZ. Canyonlands Publishing, Inc.

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

Brasseur, J., & Jimenez, B.C. (1989). Performance of university students on the Fullerton subtest of idioms. Journal of Communication Disorders, 22, 351-359.

Brownell, H.H., Potter, H.H., Michelow, D., & Gardner, H. (1984). Sensitivity to lexical denotation and connotation in brain damaged patients: a double dissociation? Brain and Language, 22, 253-265.

Burns, M., Halper, A., & Mogil, S. (1985). The Rehabilitation Institute of Chicago Evaluation of Communication Problems in Right Hemisphere Dysfunction. Rockville, MD: Aspen Systems Corporation.

Cacciari, C., & Tabossi, P. (1988). The comprehension of idioms. Journal of Memory and Language, 27, 668-683.

Cohen, G., & Faulkner, D. (1983). Word recognition: Age differences in contextual facilitation effects. British Journal of Psychology, 74, 238-251.

Collins, M. (1975). The minor hemisphere. In R.H. Brookshire (Ed.), Clinical Aphasiology: Conference Proceedings. Minneapolis, MN: BRK Publishers.

Duffy, J.R. (1995). Motor Speech Disorders. Tasks for Assessing Motor Speech Programming Capacity. St. Louis, MO: Mosby.

Fraser, B. (1970). Idioms within a transformational grammar. Foundations of Language, 6, 22-42.

Gardner, H., & Denes, G. (1973). Connotative judgements by aphasic patients on a pictorial adaptation of the semantic differential. Cortex, 9, 183-196.

Gardner, H., Ling, P.K., Flamm, L., & Silverman, J. (1975). Comprehension and appreciation of humorous material following brain damage. Brain, 98, 399-412.

Gibbs, R.W. (1980). Spilling the beans on understanding and memory for idioms in conversation. Memory and Cognition, 8, 149-156.

Gibbs, R.W. (1987). Linguistic factors in children's understanding of idioms. Journal of Child Language, 14, 569-586.

Gibbs, R.W., & Gonzales, G. (1985). Syntactic frozenness in processing and remembering idioms. Cognition, 20, 243-259.

Hirst, W., LeDoux, J., & Stein, S. (1984). Constraints on the processing of indirect speech acts: Evidence from aphasiology. Brain and Language, 23, 26-33.

Kertesz, A. (1982). Western Aphasia Battery. Orlando, FL: Grune and Stratton, Inc.

Lane, V.W., & Molyneaux, D. (1992). The Dynamics of Communicative Development. Englewood Cliffs, NJ: Prentice-Hall, Inc.

Makkai, A., Boatner, M., & Gates, J. (1995). Handbook of Commonly Used American Idioms. Hauppauge, NY: Barron's.

Myers, P.S. (1979). Profiles of communication deficits in patients with right cerebral hemisphere damage. In R.H. Brookshire (Ed.), Clinical Aphasiology: Conference Proceedings. Minneapolis, MN: BRK Publishers.

Myers, P.S., & Linebaugh, C.W. (1981). Comprehension of idiomatic expressions by right hemisphere damaged adults. In R.H. Brookshire (Ed.), Clinical Aphasiology: Conference Proceedings. Minneapolis, MN: BRK Publishers.

Myers, P.S., Linebaugh, C.W., & Mackisack-Morin, L.E. (1985). Extracting implicit meaning: right versus left hemisphere damage. In R.H. Brookshire (Ed.), Clinical Aphasiology: Conference Proceedings. Minneapolis, MN: BRK Publishers.

Myers, P.S., & Mackisack, E.L. (1986). Defining single versus dual definition idioms: The performance of right hemisphere and non brain damaged adults. In R.H. Brookshire (Ed.), Clinical Aphasiology: Conference Proceedings. Minneapolis, MN: BRK Publishers.

Nippold, M.A., & Martin, S.T. (1989). Idiom interpretation in isolation versus context: A developmental study with adolescents. Journal of Speech and Hearing Research, 32, 59-66.

Ortony, A., Schallert, D.L., Reynolds, R.E., & Antos, S.J. (1978). Interpreting metaphors and idioms: Some effects of context on comprehension. Journal of Verbal Learning and Verbal Behavior, 17, 465-477.

Parmalee, P.A., & Katz, I.R. (1990). The Geriatric Depression Scale. Journal of the American Geriatrics Society, 38, 1379.

Partridge, E. (1973). Usage and Abusage: A Guide to Good English. New York, NY: Penguin Books.

Reicher, G.M. (1969). Perceptual recognition as a function of meaningfulness of stimulus materials. Journal of Experimental Psychology, 81, 275-280.

Rivers, D.L., & Love, R.J. (1980). Language performance on visual processing tasks in right hemisphere lesion cases. Brain and Language, 10, 348-366.

Schweigert, W.A., & Moates, D.R. (1988). Familiar idiom comprehension. Journal of Psycholinguistic Research, 17, 281-296.

Soukhanov, A.H. et al. (1988). Webster's II New Riverside University Dictionary. Boston, MA: Riverside Publishing.

Spears, R.A. (1987). NTC'S American Idioms Dictionary. Lincolnwood, IL: National Textbook Company.

Spears, R.A. (1997). Slang American Style. Lincolnwood, IL: NTC Publishing Group.

Strassler, J. (1982). Idioms in English. Tubingen: Gunter Narr Verlag.

Swinney, D.A., & Cutler, A. (1979). The access and processing of idiomatic expressions. Journal of Verbal Learning and Verbal Behavior, 18, 523-534.

Tompkins, C.A. (1991a). Automatic and effortful processing of emotional intonation after right or left hemisphere brain damage. Journal of Speech and Hearing Research, 34, 820-830.

Tompkins, C.A., Boada, R., & McGarry, K. (1992). The access and processing of familiar idioms by brain damaged and normally aging adults. Journal of Speech and Hearing Research, 35, 626-637.

Winner, E., & Gardner, H. (1977). The comprehension of metaphor in brain damaged patients. Brain, 100, 717-729.

MICHIGAN STATE UNIVERSITY LIBRARIES



3 1293 02092 7137