The effect of context on L2 learner strategies for idiom interpretation

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Abstract

Past research concerning how L2 learners comprehend English idioms (e.g. *throw in the towel, shoot the breeze*) has focused on L1 transfer and strategies used to process idioms with supportive context. This article investigates what strategies Japanese EFL learners use to interpret unfamiliar English idioms and how the presence and absence of context affects strategy use. An experiment was conducted in which 20 Japanese EFL learners used the Think Aloud Protocol to guess the meanings of 20 unfamiliar English idioms, including 10 in supportive context and 10 in isolation. Transcribed protocols were divided into utterance units, which were then analyzed as belonging to individual strategy categories. Guessing strategies included using context, using the literal meaning of the idiom phrase, using Japanese idioms, and using knowledge of real-world things or events. Rates of use of the latter three strategies were significantly lower for idioms in context than for idioms in isolation. Correct response rates for idioms in context were significantly higher than those for idioms in isolation, and participants often used multiple strategies to arrive at correct responses. This article also discusses implications of this study for the L2 classroom and suggests some questions for further investigation, including the effect of idiom transparency on the interpretation of idioms in both isolation and context.

1. Introduction

Idioms are widely used in spoken and written language (Gläser 1998; Moon 1998), and this area of vocabulary is of high interest for L2 learners of English (Irujo 1986b; Cooper 1998; Liontas 2002). Past studies have thus argued that it is desirable to teach idioms systematically in the L2 classroom (Yorio 1980; Irujo 1986a, 1986b; Cooper 1998; Liontas 2002). However, before addressing the issue of how to teach idioms, it is important to find out what learners already do when they encounter an idiom for the first time. The aim of this article is to clarify strategies used by Japanese EFL learners to interpret the meaning of unfamiliar English idioms (*pull strings, turn a blind eye,*

shoot the breeze, etc.). This article will focus in particular on the use and effects of L2 context.

Many definitions of 'idiom' can be found in the literature. Some are based on a single criterion, such as non-compositionality (Weinreich 1969; Fraser 1970) or conventional co-occurrence (Fernando 1996). Others are based on multiple criteria, including semantic, syntactic, and lexical stability (Barkema 1996; Itō 1997; Moon 1998), institutionalization (Nunberg et al. 1994; Barkema 1996; Moon 1998), figuration (Nunberg et al. 1994; Charteris-Black 2003), and so on. The lack of scholarly agreement regarding the definition of 'idiom' is a question that requires further discussion; however, such discussion is beyond the scope of this article. Here I will define an 'idiom' as a multi-word expression with the following three properties[1]:

(i) formal frozenness: idioms do not usually allow the replacement or deletion of constituents or changes in phrase structure (Miyaji 1982; Fernando 1996; Itō 1997; Ishida 1998; Moon 1998).

(ii) syntactic frozenness: idioms tend to resist grammatical operations, such as passivization and adnominal modification, that are allowed by ordinary collocations with the same syntactic structure (Fraser 1970; Asuka 1982; Miyaji 1985; Miyaji 1986; Barkema 1996; Ishida 2000).

(iii) semantic frozenness: the meaning of an idiom is not derived from the usual meanings of its individual constituents and their syntactic relationships with each other. For example, the meaning 'have a friendly chat' is not predictable from the usual meanings of *shoot, the*, and *breeze* (Fraser 1970; Nunberg et al. 1994; Irujo 1986a; Itō 1997; Ishida 2004).

Individual idioms, however, vary with respect to the degree of each of these properties (Nunberg et al. 1994; Moon 1998; Ishida 2004). Some idioms have institutionalized variations that allow for the replacement of noun or verb constituents (*hit the hay / sack; start / set the ball rolling*), and some allow a wide range of grammatical manipulations (*pass the buck → the buck has been passed* [too many times around here]). Expressions with a relatively high degree of formal, syntactic, and semantic frozenness (e.g. *shoot the breeze*) can be viewed as prototypical idioms; on the other hand, those with a relatively low degree of these properties (e.g. *turn one's eyes to*) can be viewed as straddling the borderline between idioms and collocations.

Further, although idioms share some or all of the properties listed above with proverbs and maxims (*too many cooks spoil the broth, don't count*

your chickens before they hatch), idiom-based compounds (*whistle-blower, boot-licking*), phrasal verbs (*cheer up, figure out*), greetings and salutations (*Good morning, Happy New Year*), and other formulaic sequences, the definition of idiom used here excludes the latter categories from consideration on the basis of differences in lexico-grammatical structure and —— in the case of proverbs and greetings —— discourse function (Miyaji 1985; Fernando 1996; Moon 1998). It is true that idioms, as defined above, constitute just one type of formulaic language (Coulmas 1979; Yorio 1980, 1989; Granger 1998; Howarth 1998; Wray 1999, 2002). However, the purpose of this study is to focus on idioms as a relatively homogeneous sub-category, with the expectation that clarification of how L2 learners deal with idioms will be instructive for further investigation of a variety of formulaic expressions. The question of how the processing characteristics of idioms are related to those of other formulaic sequences will thus be left for consideration elsewhere.[2]

2. Learner interpretation of L2 idioms

Early research concerning how learners deal with L2 idioms focused on the question of L1 idiom transfer. Kellerman's (1977) study of Dutch EFL learners indicated that L1 transfer does not take place, even in cases of lexico-semantic similarity between L1 and L2 idioms. Kellerman attributed this result to learner perceptions that 1) idioms are language-specific, and 2) the language distance between Dutch and English is relatively great —— in comparison, for example, to the distance between Dutch and German.

Jordens (1977) found that Dutch learners of German tended to reject L2 idioms similar to Dutch idioms and, like Kellerman, attributed this to a perception that idioms are language-specific. However, Jordens also found that less advanced learners were more tolerant of Dutch-like L2 idioms, whereas more advanced learners were less tolerant. This may have been because inexperienced learners were more likely to believe that the language distance between Dutch and German is relatively small. Kellerman's and Jordon's results provide evidence against L1 transfer for idioms, especially for advanced learners. However, these results were based on grammaticality judgments of sentences containing L2 idioms and did not address directly the question of how learners try to interpret L2 idioms.

Irujo (1986a) used a series of tests, including discourse-completion and translation, to investigate L1 transfer in advanced ESL learners whose first language was Spanish. She found that these learners used knowledge of

Spanish idioms to comprehend and produce English idioms. She also found that English idioms with lexico-grammatical cognates in Spanish produced more transfer — both positive and negative — than idioms without such cognates. However, the question of whether or not L1 transfer takes place in learners whose first language belongs to a language family typologically unrelated to English is one that requires further investigation (Irujo 1986a: 298).

Cooper (1999) pointed out the need to explore other strategies for idiom interpretation, in addition to L1 use. He used the Think Aloud Protocol to identify seven principal strategies used by advanced ESL learners with a variety of L1 (Spanish, Korean, Japanese, Portuguese, and Russian) to comprehend idioms presented in supportive contexts. These included both 'Preparatory Strategies' ('Repeating or paraphrasing idiom,' 'Discussing and analyzing idiom/context,' 'Requesting information') and 'Guessing Strategies' ('Guessing from context,' 'Using literal meaning,' 'Using background knowledge,' 'Referring to L1 idiom'). However, Cooper did not distinguish between cases of learners guessing the meaning of an unfamiliar idiom and cases of learners processing an idiom they already knew. Another question that remains is how learners interpret idioms without supportive context. Investigation of the strategies learners use to interpret idioms in isolation would likely shed further light on the role of context in interpretation.

Based on the above, this study will focus on the following three research questions:

1) What strategies do Japanese EFL learners use to interpret the meaning of unfamiliar English idioms?
2) How does the presence and absence of context affect interpretation strategies?
3) Which interpretation strategies are most effective? In other words, which strategies (or combinations of strategies) lead most often to a correct interpretation of idiom meaning?

The hypotheses for these questions are outlined below.

Hypothesis 1): Japanese EFL learners use a variety of strategies to interpret unfamiliar English idioms (cf. Cooper 1999). Regarding L1 use, two possibilities were considered. The first was that learners would tend not to use knowledge of Japanese idioms, because of an experience-based perception that Japanese is vastly different from English. If Dutch learners of English/

German are reluctant to make assumptions about correspondences between idioms in these languages, which are all Germanic (Kellerman 1977; Jordens 1977), then it is possible that Japanese learners are even more reluctant to make assumptions about correspondences between idioms in Japanese and English, which are typologically unrelated.

The other possibility considered was that learners would use Japanese idioms — in spite of typological differences between Japanese and English — because of a general tendency for learners to view L1 use as a legitimate strategy to cope with L2 idioms (Irujo 1986a; Cooper 1999). Cooper (1999: 251) reports that some Japanese participants in his study used Japanese lexical cognates to interpret a few English idioms (e.g. *saifu no himo o shimeru* 'to tighten the string of one's [money] purse' for *to tighten one's belt*). However, because Cooper's study included only a few Japanese participants and his target idioms were not selected with the aim of investigating transfer from L1 Japanese idioms, this possibility requires further examination.

Hypothesis 2): When interpreting idioms without supportive context, Japanese learners will tend to use the literal meaning of the idiom phrase, individual words in the idiom, and/or mental images evoked by the idiom. When interpreting idioms with supportive context, learners will tend to use contextual clues to guess idiom meaning. However, they may combine use of multiple interpretation strategies in both cases (see Hypothesis 3). Hypothesis 2 is based on the assumption that learners will use any and all information available to infer the meaning of an unknown lexical item. It is also consistent with Cooper's (1999) study, which identified 'Guessing from context' and 'Using literal meaning' as principal guessing strategies for idioms presented with context.

Hypothesis 3): Guessing from context will lead most often to a successful interpretation of idiom meaning. This hypothesis is based on the assumption that an idiom, by definition, is a phrase whose meaning cannot be predicted from its parts, although there are cases in which it is possible for speakers who already know what an idiom means to associate parts of the idiom with parts of its meaning (Nunberg, Sag, and Wasow 1994: 497; e.g. *spill* = 'divulge' and *the beans* = 'information'). It is also consistent with developmental studies of idiom acquisition, which show that contextual information enhances the ability of children (Levorato and Cacciari 1992) and young adults (Nippold and Martin 1989) to process L1 idioms, as well as research on L1 lexical inferencing, which indicates that children and adults often use context to learn the meaning of unknown words (Nagy and Herman 1987; Stern-

berg 1987).

Hypothesis 3 also suggests that 'Guessing from context' will often be used in combination with other strategies. Although Cooper's (1999) analysis of successful interpretation strategies includes 'only the one that led directly to the correct response' (p. 252), he mentions that, in many cases, participants used more than one strategy to arrive at a correct guess. Developmental studies of children's comprehension of idioms (Levorato and Cacciari 1992, 1999) suggest that children use several sources of information to interpret idioms presented in context, including the situation described in the context, the meanings of the words in the idiom, and the images conveyed by the idiom. They also argue that 'context...acts as the general framework allowing the integration of these possible sources of information and therefore the comprehension of the idiom' (Levorato and Cacciari 1992: 430). Context may function in a similar way for L2 learners.

In order to test the above hypotheses, I carried out a preliminary survey to identify 20 frequently-used English idioms unfamiliar to most Japanese EFL learners (3.1) and an experiment to investigate the strategies used by 20 native speakers of Japanese to interpret these idioms in isolation and in context (3.2).

3. Method

3.1 Idiom familiarity survey

Materials. I selected 30 idioms listed in the *Collins Cobuild Dictionary of Idioms* and the *Longman American Idioms Dictionary*, which are corpus-based dictionaries for L2 learners. I referred to these dictionaries in order to ensure the selection of idioms used in both British and American English (cf. *blow the gaff*, British; *a bum steer*, American). My judgment that 30 idioms would be sufficient for this survey was based on personal classroom experience that Japanese EFL learners know very few English idioms.

Two important factors when considering the selection of idioms to teach in the classroom are frequency and genre. It is important to give learners exposure to idioms that are commonly used in English, and also to give them some idea of whether they are more likely to encounter these idioms in written or spoken language. This study selected idioms that are more commonly used in written than in spoken English.[3] One reason for this is that, under natural conditions, most Japanese EFL learners are more likely to encounter idioms in written English. Another reason is that the methodology

used in this study involved asking participants to read and interpret the
meanings of idioms embedded in written contexts (3.2).

The question of frequency is a sticky one. Corpus-based idiom fre-
quency counts vary, depending on the genres and texts that constitute the in-
dividual corpus. Sometimes expressions that are widely recognized as idioms
by native speakers have relatively low frequency counts (*kick the bucket, be-
tween the devil and the deep blue sea*; see Grant 2005 for a discussion of this
issue). Although many of the idioms targeted in this study have relatively
high frequency counts (*have an eye for, jump on the bandwagon, turn a blind
eye*), this was not the only criterion used for selection. Some of the idioms
were chosen because of the author's interest in the possibility of L1 transfer
(see below).[4] Some were chosen because they have been targeted in past stud-
ies dealing with idiom analyzability and interpretation (Nunberg et al. 1994;
Grant and Bauer 2004). All were chosen because they appear in corpus-based
learners' dictionaries with frequency-based selection criteria (see above).

Participants. Participants were 45 second- and third-year university
students in the College of Japanese Language and Culture at the University
of Tsukuba. All were native speakers of Japanese who had had 7:7 or 8:7
years of formal English study in Japan and were enrolled in an upper-
intermediate English listening skills course at the time of the survey. Class
credit was given for survey participation.

Procedures. A written format was used, with instructions and ques-
tions in Japanese. Participants were asked to judge their familiarity with
each idiom using a three-item multiple-choice format and to write down the
meaning of the idioms they knew. Participants were also instructed not to
guess idiom meanings. Survey instructions and a sample question can be
found in Appendix 1.

Results. Survey results were tabulated and 20 idioms with low famili-
arity scores were chosen for the experiment. A 'low familiarity score' was de-
fined as a case in which fewer than five participants responded 'Yes, I've
heard of [this idiom]' and fewer than three participants defined it correctly.
Most idioms were unfamiliar to most participants, and only 4 idioms out of 30
were defined correctly by three or more participants (including *a piece of cake*
and *lend a hand*). The 20 idioms chosen for the experiment included 15 with
no correct definitions, 4 with one correct definition each[5], and 1 with two cor-
rect definitions. For a complete list of the target idioms, see Table 4 (4.3).

Since one goal of the experiment was to examine the possibility of L1
use (Hypothesis 1), the target idioms included eight with lexico-grammatical

similarity to Japanese idioms. In five cases, the English/Japanese cognates have similar meanings:

(1) *make your blood boil/harawata ga niekurikaeru* (lit. 'your guts boil' = boil with anger); *have an eye for s.t./~ o miru me ga aru* (lit. 'have eyes that see s.t.' = have the ability to judge quality or authenticity); *spill your guts/hara o waru* (lit. 'split your belly' = speak frankly); *turn a blind eye/ me o tsuburu* (lit. 'shut your eyes' = deliberately ignore s.t.); *throw in the towel/saji o nageru* (lit. 'throw the spoon' = give up on s.o/s.t.).

In three cases, the meanings of the cognates are different:[6]

(2) *pull s.o.'s leg/ashi o hipparu* (lit. 'pull s.o.'s leg' = thwart s.o.'s efforts); *have a thick skin/tsura no kawa ga atsui* (lit. 'the skin of your face is thick' = have a lot of nerve); *wash your hands of s.o. or s.t./ashi o arau* (lit. 'wash your feet' = leave an undesirable social group or line of work).

3.2 Experiment

Materials. I prepared two test booklets with 20 index cards each, including 10 idioms in supportive context and 10 in isolation. Idioms presented in context in Booklet 1 were presented in isolation in Booklet 2, and vice versa. Each booklet contained four supportive-context examples of idioms with Japanese cognates, including some idioms with 'similar' and some with 'different' cognates (see 3.1).[7] Supportive context examples were based on examples retrieved from the World Edition of the British National Corpus (2000). Some examples were edited for length or difficulty; average length was two or three sentences and 45 words (44.4 words for Booklet 1 and 45.5 words for Booklet 2). Idioms were presented in a different random order in each booklet, and examples in context and in isolation were alternated, with no more than two examples in a row of either presentation mode. Examples in both presentation modes were followed by the question, 'What do you think *Idiom X* means?' (e.g. *shoot the breeze* はどのような意味を表わしていると思いますか). The supportive context examples from both booklets are shown in Appendix 2.

One characteristic of idioms in both written and spoken language is that they are subject to grammatical operations that alter their canonical form. Some idioms allow the insertion of quantifiers or modifiers (*pull* some/a few/one or two/various/the right/Establishment *strings; between the devil* of serfdom *and the deep blue sea* of reform). Others allow passivization, which

alters the order of words in the idiom (e.g. *the buck has been passed*). Idioms may also undergo creative modifications that bind them to specific contexts, particularly in journalism and advertising (Fernando 1996; Gläser 1998; Moon 1998). Idiom constituents may be replaced by words with similar sound or meaning to create wordplay or other stylistic effects (*he burns the candle at five ends* [Moon 1998: 170]; *between Iraq and a hard place* [*Maclean's* 2002.10.28]). The questions of whether learners are able to recognize these kinds of variations and modifications, and whether they can use knowledge of the canonical form of an idiom to interpret a non-canonical form, are important. However, in order to clarify processes of interpretation for unfamiliar L2 idioms, the first step is to investigate how learners deal with canonical forms. In this experiment, context-embedded examples included idioms with minor grammatical variations (e.g. *turning a blind eye, kicks the bucket*), but deliberate effort was made to ensure that idioms were shown in contexts that did not disturb the integrity of their standard forms.

Participants. Participants were 20 paid volunteers who were second-year students (aged 19-21) in the College of Japanese Language and Culture at the University of Tsukuba. All were female native speakers of Japanese who at the time of the experiment had had 7:8 or 7:9 years of formal English study in Japan and were enrolled in an upper-intermediate English course on oral presentation skills. Specific measures of participants' reading ability were not obtained before the experiment; however, all had passed the *Tsukuba Eigo Kentei Shiken* (Test in English Proficiency), a university-wide exam that tests English listening, reading, and writing skills, at the end of the previous school year.[8] For the experiment, participants were divided randomly into two groups of 10. One group used Test Booklet 1 and the other used Test Booklet 2.

Methodology. For the experiment I used the Think Aloud (TA) protocol, a verbal reporting method for studying cognitive processes in specific tasks. The main advantage of the TA protocol is that concurrent verbalization is a means to gain direct evidence about specific cognitive processes (Olson, Duffy and Mack 1984; Ericsson and Simon 1993). Participants are asked to verbalize the thoughts that they generate in the course of performing a task such as solving a math problem or reading a text. They are not asked to explain, analyze, or justify what they are thinking, because these activities have been shown to alter the normal sequence of thoughts and influence cognitive processes (Ericsson and Simon 1993: 81; also see discussion in Preface, pp. xxii-xxxii). They simply vocalize what they are thinking as they perform the

task at hand.

Think Aloud procedures have been used to obtain research data about underlying cognitive processes in tasks of problem-solving, judgment and decision-making, reading comprehension, learning, expert performance, and so on (Ericsson and Simon 1993). In reading comprehension studies, TA procedures have been employed to clarify the strategies that people use to comprehend L1 and/or L2 texts (Olshavsky 1976-77; Olson et al. 1984; Block 1986; Davis and Bistodeau 1993). Cooper (1999) also used TA protocols to investigate strategies used by L2 learners of English to interpret the meanings of context-embedded English idioms.

One limitation of the TA protocol is that it is sensitive to instructional variables. Instructions must be precise and carefully thought out in relation to specific research goals (Olson et al. 1984; Cooper 1999). In particular, it is important to ask participants explicitly to focus on reporting the content of their immediate awareness and to refrain from describing, analyzing, or explaining their behaviour (see above). Procedures that Ericsson and Simon (1993) suggest to ensure this focus include giving a warm-up task to acquaint participants with the TA procedure, and minimizing social interaction between the participant and the researcher during the experiment. Another limitation of the TA protocol is that 'some [participants] are good talkers, some are not' (Olson et al. 1984: 284). Ericsson and Simon (1993: 82-83, 254-257) suggest several experimental techniques for increasing concurrent verbalization, including a warm-up task (as above) and brief reminders during the experiment to 'Keep talking' after a silent period of a specified number of seconds.[9]

I chose to use TA procedures with a reading task for this study because Japanese EFL learners are likely to encounter idioms in written language (3.1), because unfamiliar idioms are likely to cause difficulty in reading comprehension (Cooper 1999; Liontas 2002), and because TA reporting has been shown to provide evidence of participants' underlying thought processes during reading tasks (see above). TA procedures were used to collect data that could later be analyzed to infer strategies used by L2 learners to interpret the meaning of unknown idioms. I asked participants to perform the TA protocol in Japanese, based on the assumption that I would be able to obtain richer and more detailed verbal reports of thought processes if participants used their first language to talk about the idioms (cf. Davis and Bistodeau 1993: 461).

Procedures. I carried out the Think Aloud protocols in one-to-one ses-

sions with the participants in a quiet office from December, 2005 to January, 2006, as follows.

i) Explanation of the Think Aloud protocol. Participants were given written instructions (in Japanese), which I read aloud as they read along silently (Appendix 3). Instructions asked participants to read the index cards and guess the meaning of each idiom. Participants were told to talk about whatever came to mind as they looked at each example, in much the same way that they would if they were talking to themselves, and to talk continuously about what they were thinking about, from the time they first looked at the example until they were finished describing their guess of the idiom's meaning (cf. Ericsson and Simon 1993: 378). Instructions also included examples of things I had hypothesized participants might think about when looking at each idiom:

Have I heard this idiom before? Do I know what it means?

Does the context of this idiom help me guess what it means?

Does the literal meaning of this idiom phrase help me guess what it means?

Does a certain word in this idiom help me guess what it means?

Do I know another English idiom or expression that helps me guess the meaning of this idiom?

Do I know a Japanese idiom or expression that helps me guess the meaning of this idiom?

Examples were provided because when using the TA protocol it is important to give participants precise instructions concerning what to talk about (Olson et al. 1984; Davis and Bistodeau 1993). The list of examples above was motivated by the research questions in this study and by the examples given in Cooper (1999).

ii) Practice session. After explaining the TA protocol, I had the participants rehearse the TA task with four idioms that were not used in the main experiment (e.g. *break the ice, twist s.o.'s arm*). Two idioms were presented in context and two in isolation, and presentation modes were alternated. After the practice session, I provided feedback on performance as necessary (e.g. participants who tended to take long pauses between utterances were reminded to verbalize as continuously as possible).

iii) TA protocol. Participants looked at the index cards in the test booklet one at a time, proceeding at their own pace. Participants read the examples and talked about what they thought each idiom meant and why. During the TA protocols, I took notes and talked as little as possible, other than

to prompt participants to talk after silences of more than 30-40 seconds and to respond briefly to questions about the meaning of individual words.[10] All protocols were recorded on an IC recorder. The average time of the protocols was 61 minutes, and individual sessions ranged from 29 to 120 minutes.

iv) Exit interview. After each protocol, I conducted a brief exit interview (in Japanese) to clarify any ambiguous comments made by the participant during the protocol. I also asked participants to comment on the TA procedure itself and on the relative ease of guessing the meanings of idioms in isolation versus context. Finally, I asked participants not to discuss the experiment or the idioms with anyone else until all participants had finished the experiment.

3.3 Data transcription and utterance analysis

Recorded TA protocols were transcribed by four Japanese students at the University of Tsukuba. Transcription yielded approximately 246 single-spaced pages of data (249,000 Japanese characters). I then analyzed the transcribed protocols and divided each one into utterance units. In this study, the term 'utterance unit' refers primarily to a main clause and any subordinate clause(s) attached to or embedded in it. This corresponds to the 'minimal terminable unit' used by Yorio (1989) and Cooper (1999) and the 'idea unit' used by Davis and Bistodeau (1993).

However, the data obtained in the present experiment included fragments impossible to analyze as main or subordinate clauses in the strict sense of these terms — for example, single word sentences, incomplete or unfinished sentences, repetition of a word or phrase without pausing, and so on. Following Usami's (2003) view of the units of analysis in Japanese conversation, I based judgments of whether or not such fragments constituted independent utterances on the presence or absence of pauses before and after them in the flow of verbalization. Table 1 (next page) shows an utterance analysis sample from one participant's discussion of the idiom *have a thick skin* presented in context (see 4.1 for explanation of the 'Strategy' column).

4. Results

4.1 Research Question 1: Idiom interpretation strategies

After dividing all of the transcribed protocols into utterance units, I analyzed and labelled each utterance unit as belonging to a particular strategy category. I labelled most strategies with reference to those reported in previous

Table 1 Sample transcript analysis (*have a thick skin*)

Speaker	Utterance unit (English translation)	Strategy
RY11	これ，どういう意味ですか？　'disreputable' (what does this mean, 'disreputable'?)	RI
Researcher	評判が悪い ('to have a bad reputation')	-----
RY11	厚い…なんだろう (thick...I wonder what [it means])	TR
RY11	厚い肌だから，なんていう，にぶいじゃなくて，なんていうんだろう ([it's] 'thick skin,' so what can I say, not 'insensitive,' but, what can I say)	IP
RY11	なんか，別に何を言われても動じないみたいな (it's like, no matter what people say to you, it doesn't bother you)	IP
RY11	評判が悪いとか，'crazy'とか，って思われてるっていうのを知ってるって書いてあるから，知ってても大丈夫なんだ，なのかな，と (it says he knows that other people think he has a bad reputation or he's crazy, so I think maybe [it means] that even though he knows this, he's all right)	GC
RY11	文章，これ見たとき，文章からも推測しました (the example [lit. 'sentences'], when I saw this, I guessed [it] from the example too)	MC

studies dealing with idiom processing (Cacciari 1993; Flores d'Arcais 1993;[11] Cooper 1999) and reading comprehension (Olson et al. 1984; Block 1986; Davis and Bistodeau 1993).

Strategies used by participants included 1) reading aloud or repeating an idiom phrase, an example sentence, or any part thereof (RARP); requesting information about the meaning of an unfamiliar word in an idiom or example (RI); translating into Japanese part or all of an idiom or example (TR); discussing or analyzing the literal meaning of an idiom phrase, one of the words in the idiom, the grammatical structure of the idiom, mental images created by the idiom's phrasal meaning, etc. (DAI); discussing real-world knowledge associated with the entity or event expressed by an idiom (DWK); discussing or analyzing the context in which an idiom is embedded, including the meaning and/or grammatical structure of individual sentences (DAC); explicitly rejecting a particular interpretation strategy (RJ); making metalinguistic com-

ments about the nature of idioms or metacognitive comments about the Think Aloud task, the participant's own behaviour, etc. (MC); recalling or remembering a familiar idiom (RR); using the literal meaning of an idiom, mental images associated with an idiom, or one of the words in an idiom to guess its meaning (IP); using knowledge of entities or events in the real world to guess an idiom's meaning (WK); guessing an idiom's meaning from contextual clues (GC); using knowledge of a Japanese idiom/expression to guess an idiom's meaning (L1); using knowledge of a familiar English idiom/expression to guess an idiom's meaning (L2); and finally, giving up on the interpretation of an idiom without verbalizing any guess as to its meaning (NG). Table 2 shows examples of each of the 15 interpretation strategies observed in this study.

Interpretation strategies observed in this study that have not been reported elsewhere include 3) 'Translating,' 7) 'Rejection,' and 15) 'No Guess.' Use of 3) 'Translating' may be related to the fact that Japanese students are trained in senior high school to use grammar-translation as a method for the comprehension of English texts. As we will see in Section 4.2, the rates of use of 7) 'Rejection' and 15) 'No Guess' were relatively low. However, because these strategies differ qualitatively from each other and from the rest of the strategies reported here, they were classified separately.

Table 2 Interpretation strategy categories and examples

1) Reading Aloud/Repeating (RARP)
　'and promises to spill the beans about their divorce and Yoko'／

2) Requesting Information (RI)
　この bandwagon はどういう意味ですか？／ (what does this *bandwagon* mean?／)

3) Translating (TR)
　西に，西に飛行機で飛んで，西に行くと，時間が，gain time，増える？／ (to the west, [you] fly west by plane, when you go west, the time, *gain time*, increases?／) (original example: 'When you fly west and gain time...')

4) Discussing/Analyzing Idiom (DAI)
　バケツを蹴ると，うるさい／中に水が入ってればこぼれる，うん／中に入ってる汚い水がこぼれれば台無しになる，うん，うん／ (when you kick a bucket, it makes a loud noise/ if there's water inside, it spills, hmm／ if the dirty water that's inside it spills, everything's spoiled, hmm, hmm／)

5) Discussing World Knowledge (DWK)[12]
　タオルを投げ出すっていうと，ボクサーが，こう，タオルをしてて，それをぱっと投げて，「行くぜ！」／いや，違うか，タオルを投げ込むんだ／タオルを投げ込むと，どうなるんでしたっけ？／ ('throw down the towel,' [that's] when a boxer has a towel like this and all of a sudden he tosses it, [like] 'Let's go!'／ no, that's not right, it's 'throw in the towel'／ what is it that happens when someone throws in the towel?／)

6) Discussing/Analyzing Context (DAC)
　the people of Belize ってなんだ？と思って／これで「この国の人々」ってことですよね／

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これなんかお金の貸し借りに関する国際の問題ですよね，たぶん／（I thought, what does 'the people of Belize' mean?／it means 'the people of this country,' doesn't it／this is probably about international problems related to borrowing and lending money／）

7) Rejection (RJ)

あまりこの二人に「足を引っ張る」とかそういう関係がなさそうなので，「足を引っ張る」じゃないのかな，と思いました／(it doesn't really seem like these two have a relationship [that involves] one of them getting in the other's way, so I thought maybe it doesn't mean *ashi o hipparu*／) (=Rejection of 13) L1)

8) Metalinguistic/Metacognitive Comments (MC)

a）えっ…慣用句って直訳ではないですよね／(idioms aren't direct translations, are they/)
b）えー，これってなんかこう，もっと短く答えないといけないんですかね。／(um, for this should I, like, I wonder if I should maybe be making my answers shorter, huh/)

9) Recalling/Remembering (RR)

これは，もう，意味分かってるんですよ／「寝る」ですよね／hit the sack，これは，よく聞くので／知り合いがよく言うので／(I already know the meaning of this one／it's 'go to bed', isn't it／*hit the sack*, I hear this one a lot, so...／somebody I know says it a lot, so.../)

10) Guessing from Idiom Phrase (IP)

楽隊は賑やかで楽しそうな感じがするから，で，その上に飛び乗るから，「楽しそうなものに仲間入りする」／(I feel like a band is lively and fun, so, and [somebody] jumps on top of it, so [it means] 'to be included in something that looks fun'／)

11) Guessing from World Knowledge (WK)

プロレスでタオルを投げるというのは，試合終了というか，諦めろという意味じゃないですか／あのー，そう，「give up する」みたいな意味じゃないかなと，はい／(in pro-wrestling when they throw in the towel, it means the end of the match, or 'Give up!', doesn't it／well, yes, [I think] it might mean something like 'give up,' yes／)

12) Guessing from Context (GC)

文脈からだけだったら，「和んだ」とか，なんだろう，「和みの場をもうけた」って感じがするんですけど…／「談笑した」，みたいな感じですかね／(just from the context, I have the feeling it means 'got friendly' or, what can I say, 'created a warm and friendly space'...／something like 'had a friendly chat,' maybe／)

13) Guessing from First Language (L1)

「足を引っ張る」という日本語の慣用句とすぐ連想しちゃって…／だから，要するに，その，「人のやろうとしていることの邪魔をする」とかそういう意味じゃないかなと思いました／(right away I thought of the Japanese idiom *ashi o hipparu*...／so, to put it in a nutshell, I thought it might mean 'to get in the way of something somebody else is trying to do'／)

14) Guessing from Second Language (L2)

keep an eye for something でしたっけ？／あ，あれ keep でしたっけ？／ keep でしたね あれは／have もそんな意味ありましたっけ／私が聞いたことあるのは keep でした／それと have が一緒だったような気もするので…／そのものを「見張っておく」とか，「見ておいてね」っていう意味じゃないかなと思います／ (was it *keep an eye for* [sic] *something*?/ oh, was that one *keep*?／ it was *keep*, wasn't it, that one／ does *have* have that meaning too?／ the one I've heard of is with *keep*／ I think maybe *have* is the same as that one, so...／ I think it might mean 'keep a close watch' on something, or 'keep an eye on it, ok?'／)

15) No Guess (NG)

全然わかんないです（苦笑）／なんか，想像しにくいなあ／全然わかんないです，これ／(I have no idea (wry laugh)／ this one is really hard to imagine／ I have no idea what it means, this one／)

Following Cooper (1999), the strategies listed in Table 2 were classified into two types. The first includes cases in which participants read aloud, repeated, translated, or talked about the idiom phrase, individual words in the idiom, the context in which the idiom was embedded, and so on — all without saying what they thought the idiom meant (Strategies 1-8). Participants seemed to be using these strategies to organize and process the linguistic information contained in the idiom and/or its context, and to explore various avenues for working out idiom meaning. The second type of strategy includes cases in which participants actually articulated a definition of idiom meaning and talked about why they thought the idiom had this meaning (Strategies 9-15). Since these two types correspond to those identified by Cooper, this article will adopt Cooper's terminology and refer to them as 'Preparatory Strategies' (1-8) and 'Guessing Strategies' (9-15).

A word of explanation is necessary with respect to the distinctions between 4) 'Discussing/Analyzing Idiom' (DAI) and 10) 'Guessing from Idiom Phrase' (IP); between 5) 'Discussing World Knowledge' (DWK) and 11) 'Guessing from World Knowledge' (WK); and between 6) 'Discussing/Analyzing Context' (DAC) and 12) 'Guessing from Context' (GC). In this study, there were many cases in which 4) DAI, 5) DWK and 6) DAC eventually led to idiom definitions based on 10) IP, 11) WK, and 12) GC, respectively. Based on these cases alone, it might be argued that it is hard to draw a clear line between a 'Preparatory' phase and a 'Guessing' phase in the interpretation process, and that the above distinctions are unnecessary. However, there were also many cases in which the former strategies did not lead to definitions based on the latter. For instance, some participants talked at length about parts of the example in which an idiom was embedded (DAC), but were unable to arrive at an understanding of the example and ultimately articulated an IP-based guess with no recognizable relation to the context. There were also cases in which participants talked about the words in an idiom (e.g. 'a breeze is a light wind' = DAI), but eventually guessed the idiom's meaning from its context ('[Clinton] is doing something with the regular customers, so maybe [*shoot the breeze*] means *talking*' = GC). It was therefore judged necessary to distinguish between 4) DAI and 10) IP, 5) DWK and 11) WK, and 6) DAC and 12) GC, respectively.

In most cases, participants began by using several Preparatory Strategies and then used one or more Guessing Strategies to interpret idiom meaning (see Table 1). In some cases, however, participants gave an idiom definition first, without using any Preparatory Strategies. These were primarily

cases in which participants recalled the meaning of a familiar target idiom
(RR) or related the target idiom to a Japanese idiom (L1).

4.2 Research Question 2: The effect of context on rates of strategy use

The next step in this study was to analyze the rates of strategy use for par-
ticipants and idioms. First, I calculated the proportions of individual strate-
gies used by each participant for idioms in isolation and idioms in context,
based on the total number of strategies used by the participant in each mode.
Following Davis and Bistodeau (1993: 462), I used proportions rather than
raw scores because there was variation in the total amounts verbalized by in-
dividual participants. I then calculated means for the use of individual strate-
gies and for the overall use of Preparatory and Guessing Strategies, in isola-
tion and in context. Secondly, I used the same method to calculate proportions
and means of strategy use for each idiom. Table 3 (next page) shows the re-
sults for both participants and idioms.

To find out whether or not differences between strategy use rates in
isolation and in context were statistically significant, I carried out a series of
one-way ANOVA's with repeated measures ($p < .05$). Results showed a main
effect for presentation mode for a number of strategies. First, the rate of use
of Strategy 4) 'Discussing/Analyzing Idiom' was significantly lower in context
than it was in isolation ($F_1(1, 19) = 41.63$, $p < .001$; $F_2(1, 19) = 31.09$, $p <
.001$).[13] Examination of the means suggests that this can be linked to the high
rate of use of 6) 'Discussing/Analyzing Context.' For idioms in isolation, par-
ticipants spent a great deal of time talking about the idiom itself (.229); for
idioms in context, however, they talked a great deal about contextual informa-
tion (.172), and there was proportionally less discussion and analysis of the
idiom (.102). Because 6) DAC was not available for idioms presented in isola-
tion, it is not possible to say that there was a statistically significant differ-
ence between use of this strategy in isolation and in context. However, the
fact that this was the most frequently-used Preparatory Strategy in context
mode is an important result of this analysis.

Several other Preparatory Strategies showed a main effect for presen-
tation mode in the item analysis only. The rate of use of 1) 'Reading Aloud/Re-
peating' was significantly higher in context than in isolation ($F_2(1, 19) = 5.91$,
$p < .05$), as was that of 2) 'Requesting Information' ($F_2(1, 19) = 12.58$, $p < .01$).
Examination of the protocol data suggests that these differences are related
to the greater amount of linguistic information contained in the context-
embedded examples: 1) RARP and 2) RI were being used as a means to sort

Table 3 Mean rates of strategy use, by participant/idiom

	by participant		by idiom	
	isolation	context	isolation	context
	mean (*SD*)	mean (*SD*)	mean (*SD*)	mean (*SD*)
Preparatory				
1) RARP	.121 (.078)	.128 (.102)	.142 (.033)	.176 (.045)
2) RI	.086 (.044)	.107 (.052)	.065 (.037)	.099 (.043)
3) TR	.065 (.032)	.060 (.062)	.064 (.033)	.088 (.035)
4) DAI	.229 (.098)	.102 (.057)	.251 (.119)	.094 (.046)
5) DWK	.023 (.036)	.013 (.019)	.031 (.097)	.015 (.025)
6) DAC	--------	.172 (.074)	--------	.173 (.033)
7) RJ	.006 (.012)	.012 (.018)	.006 (.014)	.010 (.014)
8) MC	.009 (.017)	.004 (.006)	.010 (.017)	.005 (.008)
Total (Prep.)	.539 (.109)	.598 (.148)	.570 (.147)	.659 (.091)
Guessing				
9) RR	.010 (.023)	.005 (.008)	.008 (.017)	.005 (.011)
10) IP	.292 (.104)	.109 (.083)	.262 (.124)	.084 (.054)
11) WK	.020 (.021)	.005 (.008)	.012 (.038)	.004 (.011)
12) GC	--------	.217 (.074)	--------	.186 (.048)
13) L1	.120 (.036)	.056 (.042)	.127 (.135)	.054 (.077)
14) L2	.012 (.026)	.002 (.005)	.016 (.036)	.002 (.006)
15) NG	.007 (.018)	.008 (.015)	.005 (.009)	.006 (.014)
Total (Guess.)	.461 (.109)	.402 (.148)	.430 (.147)	.341 (.091)

Note. $N = 20$; $n = 10$ for each idiom under each condition. *SD* = Standard deviation. Shading indicates strategies for which there was a statistically significant difference between rates of use in isolation and context ($p < .05$).

out, think about, and process not only the idioms but also their supportive contexts. However, the lack of a main effect in the participant analysis means that not all participants were consistently using these strategies more often in context than in isolation.[14] Some participants may have used 1) RARP more often in context because they took protocol instructions to verbalize continuously more literally than did other participants. Some may have used 2) RI more often because their vocabulary was not as rich as other participants', or because they were less reluctant to ask for information.

There was also a main effect for presentation mode for several Guessing Strategies. The rate of use of 10) 'Guessing from Idiom Phrase' was sig-

nificantly lower in context than in isolation ($F_1(1, 19) = 65.58$, $p < .001$; $F_2(1, 19) = 55.76$, $p < .001$). The same was true of 13) 'Using L1 Idioms' ($F_1(1, 19) = 24.23$, $p < .001$; $F_2(1, 19) = 13.53$, $p < .01$). Results for 11) 'Guessing from World Knowledge' showed a main effect for presentation mode for the participant analysis only ($F_1(1, 19) = 6.95$, $p < .05$). This means that although participants consistently used this strategy more in isolation than in context, they did not do so for all idioms. Examination of strategy rates for individual idioms reveals that 11) WK was used primarily for *red herring* and *throw in the towel*. Some participants used real-world knowledge that the flesh of herring is white to guess (incorrectly) that *red herring* means 'strange' or 'impossible.' Others guessed (correctly) that *throw in the towel* means 'give up,' based on knowledge that, in boxing matches, throwing a towel into the ring signifies surrender or defeat.

Examination of the means on Table 3 suggests that the relatively lower rates of 10) IP, 11) WK, and 13) L1 in context are related to the high rate of use of 12) 'Guessing from Context.' For idioms in isolation, participants tended to use 10) 'Idiom Phrase' (.292), 13) 'L1 Idioms' (.120), or 11) 'World Knowledge' (.020) to guess L2 idiom meaning. However, for idioms in context participants were most likely to use 12) 'Context' (.217), and there were proportionally lower rates of use for the other three strategies (IP .109, L1 .056, WK .005). Strategy 12) GC — like Strategy 6) DAC — was not available for idioms presented in isolation, so it cannot be said that there was a statistically significant difference between the rates of use of this strategy in isolation versus context. However, in terms of ranking, this was by far the most frequently used Guessing Strategy in context mode.

ANOVA's carried out for the umbrella categories of Preparatory and Guessing Strategies showed that the rate of use of Preparatory Strategies was significantly higher in context mode than it was in isolation ($F_1(1, 19) = 5.89$, $p < .05$; $F_2(1, 19) = 10.44$, $p < .01$). At the same time, the rate of use of Guessing Strategies was significantly higher in isolation than in context ($F_1(1, 19) = 5.89$, $p < .05$; $F_2(1, 19) = 10.44$, $p < .01$).[15] This means that when participants looked at the context-embedded examples, they usually spent a considerable amount of time — before they articulated a guess as to idiom meaning — discussing individual words, analyzing the situation described, exploring the connection between the idiom phrase and the context, and so on. They spent less time exploring the limited linguistic information and fewer available avenues of interpretation provided by idioms in isolation. The significantly higher rate of Guessing Strategies in isolation mode, as com-

pared to context mode, reflects the fact that because participants were spending proportionally less time sorting out linguistic information and exploring avenues of interpretation, they were also spending proportionally more time talking about what they thought the idioms meant and why.

4.3 Research Question 3: Effectiveness of idiom interpretation strategies
The final step in this study was to investigate which strategies led most often to a successful interpretation of idiom meaning. First, all 20 idiom definitions given by each participant were scored in comparison to definitions listed in the *Collins Cobuild Dictionary of Idioms*, with the *Longman American Idioms Dictionary* used as a supplementary reference. Raters were the researcher and a Foreign Research Fellow in Linguistics at the University of Tsukuba (from Belgium) who is fluent in both English and Japanese. We gave 2 points for a correct definition, 1 point for a partially correct definition, and 0 points for an incorrect definition or no guess.[16]

With respect to the idiom *get hot under the collar*, for example, we gave 2 points for the definition 'a person gets angry' (*hito ga okoru*), because we judged it similar to the dictionary definition 'become angry about something.' We gave 1 point for 'emotion wells up; anger, hatred, or shame wells up' (*kanjō ga waite kuru; ikari, nikushimi, hazukashisa ga waite kuru*), because we thought this definition was too broad; it specifies 'anger,' but it also specifies several other emotions. We gave 0 points for 'be secretly full of ambition; look cool on the outside but have great ambition or passion beneath' (*hisoka ni yashin o idaku; ikken kūru na kanji desu ga, sono shita ni wa, sugoi yashin ya jōnetsu ga aru*).

Each participant could score a potential maximum of 40 points (20 points each for idioms in isolation and in context). All 400 responses were scored independently by both raters. There were 326 agreements and 74 disagreements, resulting in an interscorer agreement rate of 82% (calculated by dividing the total number of agreements by the total number of responses scored). All disagreements were subsequently resolved through discussion so that 100% agreement was reached.

After scoring was complete, I calculated the proportions of correct (2-point) and partially correct (1-point) responses for each participant and each idiom. Proportions were used instead of raw scores because correct responses based on Strategy 9) 'Recalling/Remembering' were excluded, in order to maintain the focus of this analysis on the effectiveness of guessing strategies for unfamiliar idioms. Nine responses out of 400 were excluded on this basis

Table 4 Correct response rates, by idiom

isolation			context		
idiom	2 pt. only	1 pt./ 2 pt.	idiom	2 pt. only	1 pt./ 2 pt.
make your blood boil	.875	.875	make your blood boil	.800	.800
between the devil and the deep blue sea	.200	.300	turn a blind eye	.800	.800
throw in the towel	.200	.300	throw in the towel	.778	.778
have an eye for s.t.	.200	.250	shoot the breeze	.700	.700
get hot under the collar	.200	.250	jump on the bandwagon	.600	.700
turn a blind eye	.100	.117	between the devil and the deep blue sea	.500	.600
pull strings	.100	.100	spill your guts	.500	.550
spill your guts	.000	.150	keep tabs on	.500	.550
jump on the bandwagon	.000	.125	leave no stone unturned	.400	.550
wash your hands of s.t./s.o.	.000	.100	hit the sack	.333	.333
have a thick skin	.000	.100	get hot under the collar	.300	.400
keep tabs on	.000	.050	pull s.o.'s leg	.250	.250
spill the beans	.000	.028	have a thick skin	.200	.450
leave no stone unturned	.000	.000	pull strings	.200	.400
red herring	.000	.000	spill the beans	.200	.400
hit the sack	.000	.000	have an eye for s.t.	.200	.300
pull s.o.'s leg	.000	.000	dog in the manger	.100	.275
dog in the manger	.000	.000	red herring	.000	.000
kick the bucket	.000	.000	wash your hands of s.t./s.o.	.000	.000
shoot the breeze	.000	.000	kick the bucket	.000	.000

Note. $N = 20$; $n = 10$ for each idiom under each condition.

(isolation: *spill the beans* [1], *make your blood boil* [2], *kick the bucket* [2]; context: *hit the sack* [1], *pull s.o.'s leg* [2], *throw in the towel* [1]). In total, there were 89 two-point responses out of 391, including 17 out of 195 in isolation and 72 out of 196 in context. There were also 50 one-point responses, including 19 in isolation and 31 in context.

Table 4 shows correct response rates for individual idioms in both presentation modes. Idioms are listed from top to bottom according to the proportion of 2-point responses they received (highest to lowest). Combined 1-point/ 2-point response rates were calculated by adding 1-point responses to 2-point responses and dividing the total by the potential maximum number of points. For instance, a combined response rate of .700 for *jump on the bandwagon* in context reflects a raw score of 14 out of 20 points, including six 2-point re-

sponses (e.g. 'try s.t. or start doing s.t. after it gets popular') and two 1-point responses (e.g. 'participate; participate in s.t. fun'). Informal analysis indicated that the rate of correct responses was not affected by the order of presentation. In other words, idioms with a relatively low rate of correct responses (e.g. *red herring*) did not necessarily occur earlier in the test booklets than those with a relatively high rate of correct responses (e.g. *make your blood boil*), or vice versa.

Table 5 Mean rates of correct responses, by participant/idiom

	2 pt. only		1 pt./2 pt. combined	
	by participant			
	mean (*SD*)	range	mean (*SD*)	range
isolation	.089 (.103)	.000-.300	.134 (.118)	.000-.400
context	.369 (.177)	.000-.600	.445 (.189)	.100-.722
	by idiom			
	mean (*SD*)	range	mean (*SD*)	range
isolation	.094 (.201)	.000-.875	.137 (.202)	.000-.875
context	.368 (.268)	.000-.800	.442 (.257)	.000-.800

Note. N = 20; *n* = 10 for each idiom under each condition. *SD* = Standard deviation.

Table 5 shows mean rates and ranges of 2-point responses and combined 1-point/2-point responses in the two presentation modes, for both participants and idioms. One-way ANOVA's with repeated measures yielded a significant main effect for presentation mode. Correct response rates were significantly higher in context than in isolation for both 2-point responses (F_1(1, 19) = 36.84; $p < .001$; F_2(1,19) = 23.66, $p < .001$) and for combined 1-point/2-point responses (F_1(1, 19) = 37.87; $p < .001$; F_2(1, 19) = 31.94, $p < .001$). This indicates that participants were consistently and effectively using context to guess the meaning of unfamiliar idioms.[17]

I used the results of the strategy analysis (4.1) to determine which strategies participants had used to arrive at correct interpretations of idiom meaning. Results for 2-point responses appear on Table 6 (next page). These results show that, for idioms in context mode, Strategy 12) 'Guessing from Context' was used pervasively. For instance, many participants used context alone (GC) to guess that *shoot the breeze* means something like 'have a friendly little talk' (*chotto danshō suru*), or 'chat' (*oshaberi suru*), or 'have a pleasant talk with friends' (*tanoshii kandan o tomodachi to suru*). Other idioms whose meanings participants guessed correctly using context alone in-

cluded *throw in the towel, jump on the bandwagon*, and *hit the sack*.

Table 6 Strategies used to arrive at 2-point responses

	isolation	context	TOTAL
10) IP	8 (.090)	2 (.022)	10 (.112)
11) WK	2 (.022)	0 (.000)	2 (.022)
12) GC	-----	20 (.225)	20 (.225)
13) L1	4 (.045)	5 (.056)	9 (.101)
10) IP／13) L1	3 (.034)	1 (.011)	4 (.045)
12) GC／10) IP	-----	25 (.281)	25 (.281)
12) GC／11) WK	-----	3 (.034)	3 (.034)
12) GC／13) L1	-----	11 (.124)	11 (.124)
12) GC／10) IP／13) L1	-----	5 (.056)	5 (.056)
TOTAL	17 (.191)	72 (.809)	89 (1.00)

Note. 10) IP = Idiom Phrase; 11) WK = World Knowledge; 12) GC = Guessing
from Context; 13) L1 = First Language.

Use of context was also combined with use of other strategies — for
example, 10) 'Guessing from the Idiom Phrase.' Table 1 (Section 3.3) shows
how one participant associated the phrase *thick skin* with a quality of tough-
ness ('it's like, no matter what people say to you, it doesn't bother you') and
also used context to guess the meaning of this idiom ('it says he knows that
other people think he has a bad reputation or he's crazy, so I think maybe [it
means] that even though he knows this, he's all right'). Other participants
used 12) 'Context' and 10) 'Idiom Phrase' to arrive at a correct interpretation
of *turn a blind eye, spill your guts,* and *between the devil and the deep blue
sea*, associating *blind eye* with 'ignoring s.t.,' *guts* with 'innermost thoughts' or
'secrets,' and *devil* and *deep blue sea* with two 'bad' or 'dangerous' alterna-
tives.

Some correct guesses were based on combined use of 12) 'Context' and
13) 'L1 Idioms.' The transcript below (see footnote 18 for English translation)
shows how one participant used both of these strategies to interpret the id-
iom *make your blood boil*:

(3)　最初，この，これだけを見たときは，血が…，なんか，血が沸騰すると
　　　か，頭にくるとか，そういう意味かなと最初思いました／（L1）
　　　なんだろう，ぼろもうけとかそういう感じですか？／（DAC）
　　　要するに，なんか，あまりにもぼろもうけとかすることですよね／（DAC）
　　　汚い…やりかた…うーん／（DAC）

やっぱり，そうすると，腹を立てるとか，血が沸騰するというイメージな
ので，まず，カーと腹がたつ／（GC）
こういうやり方は，腹立っても当然みたいな／（GC）[18]

What seems to be happening here is that the participant initially re-
lates *make your blood boil* to several Japanese anger expressions (L1), then
talks about the situation described in the example (DAC), and finally returns
to her original guess, confirming it with context (GC). In other cases, partici-
pants articulated context-based guesses first and then used L1 idioms/expres-
sions to support these guesses. Other idioms whose meanings participants
guessed correctly using 12) 'Context' and 13) 'L1' included *spill your guts* and
turn a blind eye, for which participants used *hara o waru* (3.1) and *me o tsub-
uru* (3.1)/*mite minu furi o suru* (lit. 'pretend not to see s.t.' = ignore/overlook
s.t.), respectively.

Although context was used pervasively for idioms presented in context
mode, there were a few cases of participants correctly guessing idiom mean-
ing from 13) 'L1 Idioms' only (*make your blood boil*), from 10) 'Idiom Phrase'
only (*get hot under the collar, turn a blind eye*), or from the combined use of
these two strategies (*between the devil and the deep blue sea*). It is difficult to
be certain that participants made no use of context to guess the meaning of
idioms presented in context mode (see discussion in Section 5). In this study,
however, judgments that a participant guessed the meaning of an idiom using
only 10) 'Idiom Phrase,' only 13) 'L1,' or a combination of these two were
based on the lack of any explicit reference to context in the participant's TA
protocol. In these cases, I also confirmed in the exit interview that the partici-
pant had not [consciously] used context.

Results for idioms in isolation mode showed that most correct re-
sponses were based on 10) 'Idiom Phrase' (*make your blood boil, get hot under
the collar*[19]), on 13) 'L1 Idioms' (*make your blood boil, have an eye for s.t.*), or
on both of these strategies (*make your blood boil, between the devil and the
deep blue sea*). The two correct responses based on 'World Knowledge' were for
throw in the towel (see 4.2).

5. Discussion

The findings of this study can be summarized as follows. The hypothesis that
Japanese EFL learners would use a variety of strategies to interpret the
meaning of unfamiliar English idioms **(Hypothesis 1)** was supported (4.1).

Regarding L1 use, the second possibility considered —— that Japanese learners might use knowledge of L1 idioms, in spite of the typological difference between Japanese and English —— was supported. Using an L1 Idiom/Expression was the second most frequent Guessing Strategy in isolation and the third most frequent in context (Table 3), even though less than half of the L2 target idioms have lexico-grammatical cognates in Japanese.

There may be several reasons that participants used Japanese idioms to interpret English idioms. One is related to the difficulty of guessing the meaning of an unfamiliar idiom on a first encounter: learners may take the view that 'all is fair,' including the use of L1 linguistic knowledge. Protocol comments also indicated a strong L1 effect for some idioms (e.g. *pull s.o.'s leg*), even when participants recognized an incompatibility between L1 idiom meaning and context (e.g. 'I can't stop thinking about *ashi o hippatta*,' or 'I thought of *ashi o hipparu* at the very beginning, and I just can't get away from it'). The results of this study extend those reported by Irujo (1986a) and Cooper (1999) and suggest the possibility of a general tendency for learners to view L1 use as one of a variety of strategies available to cope with L2 idioms. However, there is a need for further investigation of this tendency with respect to idioms in other typologically unrelated languages.

Hypothesis 2, that participants would tend to focus on the idiom phrase when interpreting idioms in isolation and on contextual clues when interpreting idioms in context, was supported (4.2). The most frequently used strategies in isolation were 4) 'Discussing/Analyzing Idiom' and 10) 'Guessing from the Idiom Phrase,' whereas the most frequently used strategies in context were 6) 'Discussing/Analyzing Context' and 12) 'Guessing from Context.' Further, there was significantly less use of 4) DAI and 10) IP in context than there was in isolation. The presence or absence of context also affected the use of some strategies not addressed in Hypothesis 2. There was significantly less use of 13) 'L1 Idioms' and 11) 'World Knowledge' in context than in isolation, and significantly more use of 1) 'Reading Aloud/Repeating' and 2) 'Requesting Information' (item analysis only). These results show that context influences L2 learners' choice of interpretation strategies and that learners see context as an effective interpretation tool.

Hypothesis 3, that guessing from context would be the most effective strategy for the interpretation of unfamiliar idioms, was supported (4.3). Context-related guesses accounted for 64 of the 89 correct responses obtained from participants (Table 6). An important finding was that participants often used context in combination with other strategies —— namely 10) 'Idiom

Phrase,' 13) 'L1 Idioms,' and 11) 'World Knowledge.' Use of combined strate-
gies indicates that learners explore multiple avenues for idiom interpretation
and seek consistencies among these avenues in order to construct plausible
and well-supported guesses.

An important question here is that of the qualitative constraint of con-
text on other interpretation strategies —— in particular, 10) 'Idiom Phrase'
and 13) 'L1 Idioms.' Examination of the protocol data for Idiom Phrase-based
guesses shows that, in many cases, IP guesses for idioms in isolation were not
only different from IP guesses for the same idioms in context, they were also
less consistent. IP-based definitions for *turn a blind eye* **in isolation** included
'not understand things very well' (*amari monogoto ga wakaranai*), 'concen-
trate on s.t.' (*~ni shūchū suru*), and 'become able to see something one hadn't
been able to see before' (*ima made miete inakatta mono ga mieru yō ni naru*).
In contrast, most of the IP- and GC/IP-based definitions of this idiom **in con-
text** expressed the meaning 'to ignore s.t. deliberately' (*mushi suru* 'ignore;
disregard'; *misugosu* 'overlook; let s.t. go by'; *mokunin suru* 'overlook; tacitly
permit'). This suggests the possibility that, even when participants appeared
to be using the idiom phrase, they may in fact have been associating part of
the phrasal meaning they had inferred from context ('ignore') with part of the
idiom (*blind eye*).

With respect to L1-based guesses, protocol data indicates that partici-
pants were more likely to use an L1 expression with meaning unrelated to
the L2 target idiom when the L2 idiom was presented in isolation than when
it was presented in context. For example, *fukurodataki ni suru* (lit. 'put s.o. in
a bag and hit him' = gang up on s.o.) was used to interpret *hit the sack* (3
participants) and *noren ni udeoshi* (lit. 'punch a shop curtain' = get no re-
sponse; have no effect) was used to interpret *shoot the breeze* (5 participants)
when these idioms were presented in isolation only. On the other hand, when
interpreting L2 idioms presented in context, participants often referred to L1
expressions with meaning similar to the L2 idiom (e.g. *mite minu furi o suru*
for *turn a blind eye*) and/or used L1 in combination with GC (see 4.3). This
suggests that learners may tend to select L1 idioms they perceive to be con-
sistent with the L2 context.

The view of context described above is similar to Levorato and Cacci-
ari's (1992) description of the role of context in children's comprehension of
idioms (see Section 2). L2 learners also use multiple sources of information to
interpret idioms presented in context —— including the situation described in
the context, the words in the idiom, L1 expressions, and/or knowledge about

real-world entities and events — and it is possible that they use context as a general framework for the integration of this information and the interpretation of the idiom. However, further research is needed to clarify precisely how learners combine strategies and how these strategies interact with each other.

A final question remains: given the effectiveness of context as a guessing strategy, why did some context-embedded idioms have low correct response rates (Table 4)? A comprehensive error analysis is beyond the scope of this article. However, examination of the protocol data suggests that, in some cases, low response rates were related to the misinterpretation of context (e.g. misreading 'sometime' as 'sometimes' in the sentence 'Everybody *kicks the bucket* sometime'). In other cases, participants ignored or abandoned context and arrived at an incorrect guess based on the idiom phrase (e.g. 'vent one's frustration or spite' for *kick the bucket*) or an L1 idiom (see discussion of *pull s.o.'s leg/ashi o hipparu* under 'Hypothesis 1' above). Low response rates for some idioms in context may also be related to the difficulty of making a correct guess based on a single example of use (Nagy and Herman 1987: 25; Nippold et al. 1996: 445).

6. Implications for the L2 classroom

This study has shown that upper-intermediate EFL learners use a variety of strategies to interpret the meaning of unfamiliar L2 idioms, and that Guessing from Context is a particularly effective strategy. In the exit interviews conducted after the TA protocols, most participants said that they had enjoyed looking at examples of idioms and guessing what they meant, rather than just looking them up in the dictionary. Many also expressed interest in finding out the 'real meaning' of the idioms they had looked at in the experiment. With respect to the relative ease of guessing the meanings of idioms in isolation versus context, many participants said that, although it was 'less work' to 'think freely' about possible meanings of idioms presented in isolation, they felt more confident about context-based guesses. This indicates an intuitive awareness on the part of learners that guessing from context is an effective strategy.[20]

Based on the above, one practical application of this study's results would be to adapt the method used here to a classroom setting — i.e., use idiom examples gathered from a language corpus and train learners to use context as a primary guessing strategy. A strict TA Protocol could be replaced

by structured pair work or group work. Multiple examples of individual idioms could be provided, in order to stimulate learners to identify patterns and use inductive reasoning to formulate guesses. This method could be adapted for different learner ability levels by editing corpus examples for length and difficulty and/or allowing the use of dictionaries for unknown words in the context. Informal testing in my own classroom suggests that Japanese EFL learners are often able to guess the meaning of unfamiliar idioms when given multiple examples from authentic texts. Learners also indicate that such 'real life' examples are useful for them to develop a sense of what idioms mean and how they are used.

7. Questions for further investigation

In this study, learners were asked to guess the meaning of idioms that had been identified and selected by the researcher. An important question, though, is whether or not — and how — learners recognize idioms when they encounter them under natural conditions. Liontas (2002) reported that three quarters of his participants were either 'not confident' or 'marginally confident' about being able to detect an idiom while reading an L2 text. However, Grant and Bauer (2004) argue that L2 learners have 'pragmatic competence' that allows them to recognize figurative language (e.g. *get hot under the collar*) as compositionally untrue and to reinterpret it with a meaning appropriate to its context. Clearly, experimental studies are required to investigate the nature of L2 idiom recognition processes. Such studies should also explore the effect of familiarity on L2 learners' ability to recognize and interpret grammatical variations and creative modifications (see 3.2).

Another question for further investigation is whether the 'transparency' or 'interpretability' of individual idioms affects learner interpretation. Irujo (1986b) suggests that idioms like *hit the nail on the head* and *the coast is clear* are relatively easy for L2 learners to figure out, because their meanings are metaphorically transparent. On the other hand, *pull s.o.'s leg* and *have a green thumb* are non-transparent and difficult to decode. In a similar vein, Grant and Bauer (2004) argue that L2 learners are able to interpret idioms such as *get hot under the collar* and *dog in the manger* because these idioms have 'figurative meanings' that can be deduced using ordinary pragmatic competence; however, learners cannot interpret the meanings of 'core idioms' such as *shoot the breeze* and *kick the bucket*.

One difficulty with such judgments of 'transparency' and 'interpretabil-

ity,' however, is that they are based not on experimental evidence but on the researchers' own linguistic intuitions. The transparency judgments of native speakers who already know the meanings of idioms may have little to do with the ability of L2 learners to interpret these idioms successfully on a first encounter. Another difficulty has to do with the role of context. Grant and Bauer (2004: 54) state that contextual clues may be necessary for successful interpretation of the meanings of 'figuratives.' If this is the case, however, it also becomes necessary to investigate the possibility that contextual clues may lead to the successful interpretation of 'core idioms.' The present study has shown that some 'core idioms' (e.g. *shoot the breeze*) were relatively easy for L2 learners to interpret when presented in context. This suggests the need to separate the effects of context and transparency (cf. Levorato and Cacciari 1999). It may also suggest that for L2 learners, the 'transparency' of individual idioms is a less important factor in decoding idiom meaning than the presence or absence of supportive context.[21]

NOTES

1   These properties have been referred to by a variety of different terms in past studies of idioms in English, Japanese, German, etc. The terminology used here is from Ishida's (1998, 2000, 2004) studies, which focus on how the degree of each property can be measured for Japanese idioms.

2   For an extensive survey and discussion of past research dealing with formulaicity in L1 adult language and L1/L2 acquisition, see Wray (1999, 2002).

3   Frequency counts are based on written and spoken texts in the British National Corpus.

4   Another factor that may affect L2 idiom interpretation is idiom transparency (Nippold and Rudzinski 1993; Nippold and Taylor 1995; Levorato and Cacciari 1999). However, since the primary interest of this study is in the effect of context (cf. Nippold and Martin 1989), and a secondary interest is L1 use (cf. Irujo 1986a), the question of transparency will be left for investigation elsewhere. See Section 7 for further discussion.

5   *Pull s.o.'s leg* was rated as familiar by 10 participants; however, of the 9 definitions provided 8 were incorrect, and 7 of these indicated negative transfer from the Japanese idiom *ashi o hipparu*. *Pull s.o.'s leg* was included in the target idioms in order to test further for L1 transfer.

6   Although *have a thick skin* and *tsura no kawa ga atsui* share the meaning of 'non-sensitivity' and *wash your hands of s.o./s.t.* and *ashi o arau* share the meaning of 'separation,' these pairs were classified as 'different' because of differences in their meaning and use. For example, *wash your hands of s.o./s.t.* expresses the rejection

of responsibility for a person or problem (*CCDI, LAID*), whereas *ashi o arau* expresses the cutting of ties with an undesirable group or occupation (crime, prostitution, etc.). For a discussion of methods for the contrastive analysis of idioms of different languages, see Dobrovol'skij (1998), Dobrovol'skij and Piirainen (2005), and Ishida (2008).

7   It was not possible to balance the number of context-embedded idioms with 'similar' and 'different' cognates in each booklet. Also, results showed that participants actually used a variety of L1 cognates in addition to those listed in (1) and (2) (e.g. *kōgan muchi* [lit. 'thick face, no shame'] for *have a thick skin*). Some participants also used L1 idioms to interpret *hit the sack (fukurodataki ni suru* [lit. 'put s.o. in a bag and hit him'] = gang up on s.o.) and *shoot the breeze (noren ni udeoshi* [lit. 'punch a shop curtain'] = get no response). See Sections 4.3 and 5 for further details.

8   Passing the *Eigo Kentei Shiken* is a graduation requirement for all students at the University of Tsukuba. Exam results are reported as 'pass' or 'fail' only. The question of how L2 idiom interpretation strategies are affected by learners' English ability level is an important one; however, because the principal aim of this study is to clarify the effects of context and L1 use, I chose to target a reasonably homogenous group of participants.

9   See Olson et al. (1984: 284-285) for a discussion of other limitations, including the amount of time and labour required for the transcription, coding, and analysis of data. Olson et al. also suggest possible effects of the TA task on cognitive processes; see Ericsson and Simon (1993: xviii-xxii), however, for a rebuttal of criticisms regarding effects of the type of task described here.

10   Following Cooper (1999: 249), I allowed participants to ask the meaning of unfamiliar words in an idiom (e.g. *manger, bandwagon*) or its context. This was done in order to maintain participants' focus on guessing the meaning of the idiom phrase. Permission to ask the meaning of unfamiliar words was given orally after the written protocol instructions had been read at the beginning of each TA session.

11   Cacciari (1993) and Flores d'Arcais (1993) reported the results of experiments carried out with speakers of English and Dutch, respectively, who were asked to infer the meanings of unfamiliar L1 idioms presented in isolation (Flores d'Arcais) or in an unsupportive context (Cacciari). Results showed that L1 speakers used strategies such as analogy to a known L1 idiom containing the same (or a similar) word, metaphoric extension of the action or state expressed by the idiom phrase, etc.

12   It is possible to take the view that comments such as those quoted in 4) 'Discussing/ Analysing Idiom' involve the discussion of 5) 'World Knowledge.' However, the comments in 4) reflect one participant's idiosyncratic image of what happens when a bucket is kicked; other participants described images of empty buckets, gardening buckets, tin buckets, and so on, and associated these images with a variety of meanings ('be disgusted,' 'give up,' 'behave like a juvenile delinquent,' etc.). In this study, 5) 'World Knowledge' refers to a participant's prior knowledge of facts about

entities or events in the real world (e.g. the flesh of a herring is white, not red), or about conventionalized relationships in certain cultures and societies between actions and what they represent (e.g. in boxing matches, throwing a towel into the ring signifies surrender or defeat).

13 F_1 and F_2 indicate F ratios for the participant analysis and the item analysis, respectively.

14 RI showed a marginally significant difference due to presentation mode in the participant analysis ($F_1(1, 19) = 3.06$, $p < .10$); RARP did not.

15 ANOVA results for Preparatory and Guessing Strategies are identical because they are based on proportions of use of these strategies out of a total of 1.000 and these two proportions are complementary.

16 A variety of scales has been used in past studies of idiom interpretation (0-1 points, Nippold and Martin 1989; 1-3 points, Cooper 1999) and lexical inferencing (0-2 points, Sternberg 1987). In this study, a 0-2 point scale was used in order to acknowledge partially correct responses and avoid awarding points for incorrect responses.

17 Cooper (1999: 252) reported a correct response rate of 56% for advanced ESL learners interpreting context-embedded idioms. However, 12% of correct responses were based on participants' knowledge of familiar idioms ('Background Knowledge').

18 'at first, this, when I saw this by itself, *chi ga*...at first I thought it might mean something like *chi ga futtō suru* (lit. 'one's blood boils' = seethe with anger) or *atama ni kuru* (lit. '[it] comes to one's head' = get mad) (L1)/ what is it, like [they're] making easy money or something? (DAC)/ the gist of it is, like, [they're] making way too much money or something, right (DAC)/ dirty...methods...um (DAC)/ so, like I said before, I have the image of *hara o tateru* (getting angry), or *chi ga futtō suru* (your blood boiling), so first, all of a sudden get angry (*hara ga tatsu*) (GC)/ like, it's natural to get angry (*hara ga tatsu*) about this way of doing things (GC)/'

19 Some participants associated the words *boil* and *hot* in these idioms with 'the heat of anger' (cf. Matsuki 1995, who argues that some Japanese anger expressions reflect the conceptual metaphor ANGER IS HEAT).

20 Compare to Liontas's (2002) questionnaire survey results for learners of Spanish, French and German. 67% of participants reported feeling confident that they would 'often' or 'very often' be able to tell what an idiom meant in context, while only 35% expressed such confidence for interpreting idioms in isolation.

21 See Ishida (2007) for a preliminary report on the effects of transparency and context on L2 idiom interpretation. Experimental results showed that context facilitated the interpretation of both low- and high-transparency idioms, and that high-transparency idioms were easier to comprehend than low-transparency idioms in both isolation and in context. However, there was no interaction between context and transparency.

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ACKNOWLEDGMENTS

The effect of context on L2 learner strategies
for idiom interpretation
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Appendix 1 Idiom familiarity survey（「英語の慣用句に関する調査」）

> 　この調査の目的は，以下の英語の慣用句が一般に知られているかどうかを調べることです。各表現について該当する項目に〇を付けて（記入して）ください。
>
> 　注意してほしいのは，「上の表現はどのような意味を表わしていますか？」といった質問は，その表現の意味を推測できるかどうかではなく，その表現の意味を既に知っている場合に限ります。
>
> 　各問いに正直に答えてください。すべて「聞いたことがない」，または「わからない」といった答えになってもかまいません。

1. spill the beans

　上の表現は聞いたことがありますか。

　　a）聞いたことがある　　　　b）聞いたことがあるかもしれない

　　c）聞いたことがない

　上の表現はどのような意味を表わしていますか。

　　a）わからない

　　b）次のような意味を表わしている：（意味を書いて下さい。英語でも日本語でも結構です）

Appendix 2 Supportive context examples
Booklet 1

1) There are a lot of people here who are afraid to take chances and do new things. They wait till something gets really popular and then jump on the bandwagon.

2) Recently, the human rights organization Amnesty International stated that the United States should stop 'turning a blind eye to human rights abuses committed by the Mexican government.' Amnesty said that it had received reports of more than 200 cases of torture over the past two years.

3) John Lennon's first wife met him at art college, married him in 1962, and lost him to Yoko Ono. Now, to mark the 25th anniversary of his death, she tells in *John* her story of their relationship and promises to spill the beans about their divorce and Yoko.

4) The football club is used to such reactions. At home, says Gnaiem, 'We are caught between the devil and the deep blue sea. The Israelis refuse to acknowledge us as equal citizens of Israel, and many Arabs tell us that we are "Zionists" because we play under the Israeli flag.'

5) Hitchens, 54, proclaims that he is 'proud of his enemies,' even if over the years he has had to develop a thick skin. 'I know a lot of people consider me to be disreputable or crazy, but you have to learn not to care, or at least not to mind.'

6) A spokesman said: 'The British government is punishing Belize by refusing to allow any relief from debt. This <u>dog in the manger</u> attitude is just punishing the people of Belize because the government would not agree to Britain's demands.'

7) The oil company's profits are 'obscene,' said Clinton Manning in the *Daily Mirror*. 'It's enough to <u>make your blood boil</u>. In the three minutes it takes to fill your car with £50 of petrol, Shell will have rung up another £53,000 profit.'

8) Geoffrey Jones didn't want me to mention the fact that he had terminal cancer; he couldn't see why it was relevant. 'Everyone <u>kicks the bucket</u> sometime,' he said matter-of-factly. He was still talking about finishing some of his films — but on Tuesday, at the age of 73, he died.

9) Murray also admitted for the first time how close she came to quitting after the Barcelona Olympics. 'Tommy Boyle told me not to <u>throw in the towel</u>,' she said. 'There were a lot of traumatic phone calls between the two of us and I had to do a lot of soul-searching.'

10) Clinton was left by himself in upstate New York. There were stories about the lonely former President calling friends late at night and wandering into a downtown bar, sipping non-alcoholic beer and <u>shooting the breeze</u> with the regular customers.

Booklet 2

11) A good journalist has the ability to create a relaxed and friendly atmosphere. This is in order to seduce the interviewee into talking honestly and expansively — i.e., <u>spilling their guts</u>. However, this skill is just a trick to encourage confessions that will get the journalist award-winning headlines.

12) The Italian journalist arrived back in Rome yesterday, as confusion grew over the circumstances in which she was shot by American soldiers. Prime Minister Silvio Berlusconi demanded that the U.S. '<u>leave no stone unturned</u>' in investigating the incident. President George Bush called Berlusconi to promise a full investigation.

13) She displayed a love and devotion for Mother which went far beyond her filial duty. After she got married, she had her husband <u>pull strings</u> with a housing agent in order that she, her husband, and their baby girl could be housed in a flat next to Mother's.

14) John said, 'He went out, put the ladder against the wall briefly to leave traces, threw a bit of mud through the window, and scattered more mud around the rose bed. It was <u>a red herring</u>.' 'What do you think really happened?' asked Mary.

15) To relieve the stress Kylie turned to painting, a pastime she has loved since childhood. She has always <u>had an eye for</u> composition and colour, and is especially gifted in the art of watercolour.

16) To prepare for the show, we begin by finding out what films and plays are due to open, books to be published, records to be released. We also keep in touch with agents and <u>keep tabs on</u> where the big celebrities are in the world.

17) Jetlag is simple. When you fly to and from the U.S., you gain or lose five or more hours. But when you fly west and gain time, it is easier to cope with this difference. Simply stay up as late as possible, <u>hit the sack</u> and set your alarm for local time in

the morning, and you will be fine in a day.
18) That is the real failure of the Government's approach. They cannot <u>wash their hands of</u> social problems and crime by saying, 'Let the markets take care of it all.' That will not work; it is not responsible, and future generations will pay for the Government's failure.
19) The FBI interviewers are pretty tolerant of homosexuals and marijuana-smoking. But they <u>get hot under the collar</u> about trips behind the old Iron Curtain. Candidates are still asked whether they are, or have ever been, members of the Communist Party.
20) Rosie said, 'But now I've left New York, and moved back with my family, to help out as a part-time waitress.' 'Now I know you're <u>pulling my leg</u>!' exclaimed Gloria. 'Don't tell me you've given up being a fashion model!'

Appendix 3　Written instructions for experiment (TA protocol)

<div align="center">慣用句に関する調査</div>

　この調査では英語の慣用句を20個見てもらい，これらの慣用句の意味を推測してもらいます。
　「慣用句」というのは，例えば a piece of cake や beat around the bush のような表現です。このような表現の意味は個々の語の意味の積み重ねとは異なり，句全体に固有のものです。例えば，a piece of cake は「楽勝，朝飯前」といった意味を表わし，「ケーキ」とは関係がありません。また，beat around the bush は「遠回しな言いかたを使う」ことを表わし，「茂み」や「たたくこと」とは関係がありません。
　この調査では，慣用句の用例カードを一枚ずつ見てもらい，それぞれの用例に含まれている慣用句の意味を推測してもらいます（慣用句は下線で記してあります）。重要なポイントは，慣用句を見て考えたことをすべて口に出して言うことです（日本語で）。用例を見てから，慣用句の意味に関する推測を述べ終わるまで，考えていることをできるだけ休まずに話してください。
　慣用句の意味を推測する際，次のようなことを考えるかもしれません。以下に挙げたようなことを考えた時も，すべて口に出して言ってください。

・この慣用句は聞いたことがあるか
・この慣用句の意味は文脈から推測できるか
・この慣用句の意味は，この句の文字通りの意味から推測できるか
・この慣用句の意味は，この句に含まれている単語から推測できるか
・この慣用句の意味は，他の英語慣用句（表現）との関連から類推できるか
・この慣用句の意味は，何かの日本語慣用句（表現）を手がかりとして推測できるか
・その他　_____

　「考えていることをすべて口に出して言う」ことですが，考えていることをきれいにまとめてから話すのではなく，自分に話しているかのように，今，頭の中で考えていることをそのまま話してください。（沈黙が長くなった場合は，私は「話してください」と言います）
　では，本調査に入る前に，ちょっと練習をしてみましょう。