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Finding ways to make phrase-learning feasible: The mnemonic effect of alliteration

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Abstract

The Lexical Approach (LA) is founded on the belief that, in order to achieve a high level of accuracy *with fluency*, learners of a foreign language need to commit to memory vast numbers of multi-word expressions. However, since it is far from clear that the methodology currently associated with the LA holds out well-founded hope that phrase learning on such a vast scale is widely achievable in ordinary school-based foreign language teaching, supplementary methods and strategies seem to be called for. It is also possible that a change is needed concerning the criteria for deciding which multi-word expressions should be focused on in teaching and materials writing. Thus far, the criteria most commonly advocated seem to be those of frequency and utility. If it were the case that certain moderately common classes of multi-word lexis were relatively easy to remember on account of salient phonological patterning (e.g., alliteration), it could then be argued that a third criterion, that of memorability, ought to be given additional weight. This paper reports results of controlled experiments which indicate that multi-word expressions which alliterate are indeed more memorable than ones which show no such salient phonological patterning. Implications for FLT methodology are briefly outlined.
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1. Introduction

1.1. Multi-word lexis and the learning of an additional language

In recent years, many theorists of post-primary SLA have emphasized the importance of drawing language learners' attention to multi-word expressions, or "chunks" (e.g. Nattinger and DeCarrico, 1992; Pawley and Syder, 1983; Schmitt, 2004). Mastery of idioms, collocations and other (semi-)fixed lexical phrases is believed to facilitate L2 fluency especially under real-time conditions, that is, in unplanned, spontaneous interaction where resorting to rule-based knowledge of grammar would be too slow a process (Skehan, 1998). While rule-based language instruction is a well-meant attempt at making language learning more cognitively economical (among other reasons, because applying a rule may be thought to be more efficient than memorizing all its instantiations), it has lately been contended—most popularly by Lewis (1993)—that many naturally occurring phrases fall outside the scope of such rules. Accordingly, a fair amount of research time is now being devoted to "exemplar-based" language learning (aka, the Lexical Approach), the signal element of which is helping learners notice useful multi-word expressions in authentic L2 language (see, e.g., Ellis, 2002, for a review).

Clearly, the principal challenge for the Lexical Approach (LA) is to increase the chances of turning exposure and noticing into intake. This question is all the more crucial in view of the vast numbers of multi-word expressions apparently current in natural language (Pawley and Syder, 1983). For example, an idiom dictionary such as the *Oxford Dictionary of Idioms* (Speake, 2000) contains about 5,000 entries. Yet, idioms represent only a segment of a language's resource bank of "chunks". Proverbs and similes figure nearly as prominently (Moon, 1997); and there are myriad additional stock phrases that fall into none of these categories.

Even if learners were required to master only a selection of multi-word expressions, for example those belonging to the highest frequency bands or those judged to be especially useful, it is plain that this would still place a heavy burden on memory.[1] It follows that LA-influenced FLT is in need of learning strategies or mnemonic techniques able to facilitate the memorization of phrases in large numbers.

One mnemonic strategy whose effectiveness has been established is encouragement of "dual coding" (Clark and Paivio, 1991), that is, helping learners to form and process lexical understandings which have an imagistic (i.e., visual, haptic, kinaesthetic or other perceptual) component as well as a component that is symbolic/propositional in nature. For instance, by resuscitating the literal meaning—that is,

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[1] This burden would be all the more significant if it should turn out to be true—as Adolphs and Schmitt (2003) have found—that the 2,000 most frequent word families and the 5,000 most frequent individual words provide less coverage of spoken English discourse (often supposed to be less lexically diverse than written discourse) than has been widely believed—under 95% and about 96% coverage, respectively.

the original usage of a conventional figurative expression (or so-called "dead" or "frozen" metaphor)—the learner is likely to associate that expression with a mental image of a concrete scene. If, for example, a target expression is *buy a pig in a poke*, students can (1) be told the current meaning of the expression, (2) be given the information that *poke* is an obsolete word for "sack", (3) be asked to visualize a pig in a sack, and (4) speculate about how the expression came to have its overall, idiomatic meaning.

Such encoding of a verbal form with semantically linked imagery seems to provide an extra pathway for recall. This technique of "etymological elaboration" has been empirically shown to help learners remember a wide range of idiomatic expressions, including prepositional phrases (Boers and Demecheleer, 1998), phrasal verbs (Boers, 2000), and figurative idioms (Boers, 2001).[2]

In this paper, however, we investigate the potential merits of another mnemonic strategy, that of drawing learners' attention to a type of salient, possibly euphonious, sound patterning— prototypical alliteration, which we take to be word-initial repetition of at least one consonant (e.g., *time will tell; spic and span*). If alliteration were found to have mnemonic effect, the strategy of encouraging learners to notice it could in two ways complement the strategy of trying to engender mental images. Firstly, the "alliteration strategy" would be applicable to two types of multi-word expression which cannot be tackled by etymological elaboration: (1) literal expressions such as *in the whole wide world* and (2) transparent figurative expressions such as *sink or swim* (when meaning 'make an effort or fail'). Secondly, this strategy could accommodate those learners whose cognitive style inclines towards "verbalizing" rather than "imaging" (Riding and Cheema, 1991).

Raising learners' awareness of alliteration may prove to be especially fruitful with regard to English since its stock of multi-word expressions seems to contain a comparatively large proportion of ones which alliterate. For example, our own entry-by-entry hand count reveals that no fewer than 12.7% of the entries in the *Oxford Dictionary of Idioms* (Speake, 2000) show prototypical alliteration (i.e., repetition of word-initial consonants as in *the bare bones of*, *cut corners*, *done and dusted*), which is a greater proportion than found in some other languages (see below). In fact, this estimate is conservative since it excludes dictionary entries which indicate a choice between alliterating and non-alliterating forms (e.g., *go to ground/earth* and *beat your breast/chest*). Nor does it include non-prototypical alliteration (i.e., repetition of consonants involving other than word-initial ones, e.g., *above board*, *off the cuff*, *rain on your parade*). If we include the latter two categories, our hand counts suggest that no fewer than 17% of the entries in the *Oxford Dictionary of Idioms* show some type of alliteration (Boers and Stengers, forthcoming).

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[2] Another means of exploiting the mnemonic potential of more or less deliberately formed mental imagery—one chiefly applied in learning individual words—is the well-researched keyword technique (e.g., Nation, 2001, 311-14).

In line with these and related thoughts and observations, the decision was made to carry out an experiment (see Section 2.3 below) designed to cast light on the potential of alliteration to facilitate recollection of multi-word L2 expressions.

1.2. Multi-word lexis, alliteration, and memory

Alliteration has been shown to be perceptually and cognitively salient. Dowker (1989), for example, reports evidence of considerable facility with English alliteration (and rhyme) in children as young as three, of whom some were non-native speakers, while Jusczyk et al. (1999) find that even nine-month-old infants are sensitive to alliteration. It was therefore surprising to us, as we searched the literatures of SLA, psycholinguistics and general memory studies that little attention seems to have been paid in these fields to the issue of alliteration and recall. After all, the mnemonic potential of alliteration is commonly taken for granted by commercial memory improvement gurus, as a small amount of web surfing should swiftly demonstrate. It appears, though, that intuition and personal experience are likely to be the sole bases for their belief. Thus, Baddeley (1997, 133-34) is typical of surveys of research findings in that he makes no mention of alliteration despite touching briefly on mnemonics for vocabulary and text.[3] Aitchison (1987, 119-21, 126) comes closer to the matter (but without using the term *alliteration*) in her brief overview of the role in the lexicon of similarity of word onsets (alliteration being an extreme type of onset similarity). She concludes that ''words which have similar beginnings, similar endings and similar rhythm are likely to be tightly bonded'' (p. 126), which only hints at the possibility that recalling one word in an alliterative phrase might facilitate the recall of the other alliterating word(s) which in turn, from what is known about the importance of links for successful recall, ought to facilitate the recall of the rest of the phrase.

However, it seems that it is not in the usual feeder fields of FLT (e.g., SLA research and psycholinguistics), or even in general memory research, that the most attention has been given to the possibility that phonological patterns such as alliteration, assonance, rhyme, and rhythm facilitate the recall of multi-word expressions. One must turn instead to "oral formulaic theory" as constructed in works by Parry (collected in Parry, 1971) and Lord (e.g., 1956) and—with particular regard to alliteration—as refined in such later studies as Cornell (1981); Fry (1967) and Gonda (1959).[4]

Oral formulaic theory was founded in the late 1920's and early 1930's, by the Homeric scholar Milman Parry (*op. cit.*), in an atmosphere of controversy about

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[3] Baddeley (*ibid.*) does note that rhyme and rhythmic patterning can facilitate recall, but the study he cites (Wallace and Rubin, 1988) was informed by oral formulaic theory. See just below in this same section.

[4] See both Foley (1985) and the oral formulaic theory bibliographic search engine at http://www.oraltradition.org/bibliography/. The latter, especially, has a broad linguistic scope and includes, for instance, five annotated entries on Vedic and Sanskrit oral literature (e.g., the *Mahabharata*) and nineteen for Arabic [as of 23.10.2004].

the so-called 'Homeric question', which was in fact a congeries of questions among which were: (1) How, in a non-literate society, were the *Iliad* and the *Odyssey* composed and (2) how was it possible, once they had been composed, for anyone to commit such long texts to memory? Parry's answer to the second question (the one that is of particular interest here) is that it was *not* the norm for such epics to be recited from seamless verbatim memory. Rather, in good part, bardic performances were—and in some places still are—extemporized. Parry proposed that what makes it possible for bards to closely adhere not only to the traditional storyline of an epic but also to its traditional form is very frequent inclusion of "formulas" of which there is likely to be a very considerable number in any given rendition. Further, it was noted (but apparently nowhere empirically demonstrated) that the memorizability of such formulas—poetic lexical phrases *avant la lettre*—tends especially to be enhanced by rhythmic fit, rhyme, and alliteration.

In oral formulaic theory, the Greek word for bard—*rhapsode*, or 'sewer of songs'— takes on a new meaning for the reason that a recital of an epic does not, as it were, consist of a single cloth but of many small, pre-fabricated patches joined together by spontaneously composed passages changeable in their exact wording from performance to performance. As per the lexical phrase hypothesis, the bardic approach to recital involves a trade-off between (1) comprehensive orig-inality of poetic wording in each recital (which, to say the least, would be difficult to achieve with any fluency especially given the pressures of public performance) and (2) delivery of seamlessly memorized text (a practice which, if carried to its extreme, could result in superb fluency but which presupposes extraordinary mne-monic capabilities and fits ill with the possibility that bards might adapt the telling to fit particular occasions).

Oral formulaic theorists have written much that could be studied with profit by teachers and methodologists interested in the LA despite the fact that their chief ob-ject of interest is oral *literature*. And again, so far as we know, controlled experimen-tation has never had a prominent place in their methodology. Consequently, it is to empirical investigation of multi-word expressions in *colloquial* English that we now turn.

2. Investigating the mnemonic potential of alliteration in phrase-wise EFL

2.1. Research context

Evidence of the mnemonic effect of alliteration in "phrase wise" FLT has come to us mostly by chance—as a result of retrospective analyses of data collected in the course of research aimed at measuring the benefits of etymological elaboration. As mentioned above, in various experiments promotion of image-rich etymological knowledge was found to have a beneficial effect on learners' retention of figurative expressions. However, we also found that our learners' performance in the experi-ments had been contaminated by a variable we had not anticipated. This variable

seemed to be the effect of salient sound patterns, alliteration most of all. Let us review the evidence in three sets of data collected over a three-year period.

2.2. On-line experiment 1

2.2.1. Method and set-up

In 2002 a computer-aided experiment was set-up at the Erasmus College of Brussels to investigate whether upper-intermediate/advanced students could be helped to remember English idioms through the strategy of etymological elaboration. The target idioms were presented via three types of exercise, the first of which was meant to encourage dual coding, the second of which tested recall of meaning (but not form), the third of which tested recall of a key word (i.e., form).

The first type of exercise (called "identify-the source") was a multiple-choice task in which the students were asked to tick the most likely source domain of a given idiom. For example, "*What domain of experience do you think the idiom 'to show someone the ropes' comes from: (a) prison/torture; (b) boats/sailing; or (c) games/sports?* " On completion of the item, as feedback, a short explanation about the origin, or literal use, of the expression appeared on the screen. In the case of *to show someone the ropes*, learners were told that experienced sailors need to teach novice sailors which ropes they should handle and for what purpose. This type of exercise was meant to stimulate mental visualization, first via the identify-the-source task itself and subsequently via the etymological feedback.

In the second type of multiple-choice exercise ("identify-the-meaning") the students needed to match the idiom with a synonymous paraphrase. For example, in the case of *to show someone the ropes*, the students were supposed to tick *to teach someone how to do a certain task* rather than any of the (wrong) distracters.

The third type of exercise was a gap-fill task where the learners were presented with a meaningful paragraph in which they were supposed to reproduce the key word of the idiom in a gap. For example: "*When I started working here as a novice, nobody bothered to teach me how things were done around here. I had to find out all by myself how to do my new work properly. You could say that nobody showed me the* _____. "

Each time, between 20 and 30 idioms were first presented by means of *one* of the two types of multiple-choice exercise (i.e., "identify-the source" or "identify-the-meaning") before they were targeted again in the gap-fill task (i.e. "remember-a-keyword"). That is, the students' ability to reproduce the key words in the gap-fill task strongly depended on their ability to remember between 20 and 30 expressions at a time.

In the experimental set-up, the student population (approximately 200 students) was divided into an experimental group and a control group. The experimental students were asked to do the exercises of the first type ("identify-the-source"), but were not given access to the *second* type ("identify-the-meaning"). The control students were asked to do the second type of exercises ("identify-the-meaning"), but were not given access to the *first* type ("identify-the-source"). One week later, both groups

did the gap-fill tasks, which were meant to measure the mnemonic effect of mental imagery induced by the "identify-the-source" exercise as compared to the more conventional "identify-the-meaning" exercise.

In total, the experiment generated 3,474 gap-fill responses relating to 175 different idioms.

2.2.2. Results, discussion and further analysis

In accordance with the hypothesis that mental imagery enhances memory, average recall rates by the experimental students were indeed higher than the mean recall rates under the control condition: 39% vs. 28%, respectively (see Boers et al., 2004a,b, for detailed reports). The superior recall under the condition of imagery processing appeared more pronounced for some idioms than for others. At the time of the experiment it had not yet occurred to us that salience—perhaps euphony—of sound pattern might account for the higher levels of recollection shown for some of the idioms.

In the sample of 175 idioms, there were 21 cases of alliteration: *bite the bullet*, *a close call*, *fly the flag*, *go against the grain*, *a leading light*, *get short shrift*, *turn the tables on*, *be waiting in the wings*, *get someone's goat*, *pip someone at the post*, *settle a score*, *bring someone to book*, *carry the can*, *chop and change*, *burn your bridges*, *too close to call*, *below the belt*, *the fur is flying*, *a feeding frenzy*, *read the runes*, *beat about the bush*. This enabled us, in retrospect, to compare students' gap-fill scores on these idioms to their scores on the others. Irrespective of whether students had been in the experimental or control groups in the experiment, average recall rates of alliterating phrases (out of 403 responses) turned out to be significantly higher than those of the non-alliterating phrases (out of 3071 responses): 41.69% vs 34.00%, respectively. Application of a chi-square test shows the greater likelihood of the alliterating idioms being recollected to be significant at $p < .01$. In the control group, the mnemonic effect of the sound patterns seems to have partially made up for the lack of mental imagery: while the experimental students had outperformed the control groups on average by 11% when recalling non-alliterating idioms, this mean was reduced to 7% when it came to the alliterating phrases.

2.3. On-line experiment 2

2.3.1. Method and set-up

Still unfocused on the potential mnemonic effect of sound patterns, we carried out a follow-up experiment at the same college in 2003. The aim was to find out if the strategy of etymological elaboration was as suited to idioms whose origins are opaque (e.g., *follow suit*) as to idioms with a more transparent etymology (e.g., *break ranks*). This time all the students did all three exercise types in succession, in the following order: (i) "identify-the-meaning", (ii) "identify-the-origin" and (iii) the gap-fill exercise. The "identify-the-meaning" exercise was now used as a pre-test to filter out gap-fill responses by students who already seemed to know the given idiom. Against expectations at the time, the mnemonic strategy of etymological

elaboration worked just as well for etymologically opaque idioms as for etymologically transparent ones, which shows that this kind of instruction has a wide scope of application (see Boers et al., 2004a,b, for detailed reports). For example, few students could guess that the source domain of *follow suit* is card playing and so most students failed this item in the ''identify-the-source'' multiple choice task. (Most likely they were misled by the more frequent use of the word *suit* to refer to a garment set.) Nevertheless, after reading the etymological feedback explaining the relevant use of the word *suit*, these students managed to recollect this word just as well as the words in idioms whose source domains they had identified correctly at the outset.

Of interest to us *here*, however, is whether indication of the mnemonic effect of alliteration observed in the 2002 data recurs in the data for 2003 which, as has been noted, allow us to take into account only the gap-fill responses by students who gave evidence in the ''identify-the-meaning'' section (serving now as a filtering pre-test) that they were unfamiliar with the idiom in question. This is crucial, as our interpretation of the 2002 data had to be very tentative because we could not preclude the possibility that students might by chance have had better knowledge of the alliterating idioms through incidental exposure prior to the experiment.

2.3.2. Results and discussion

A comparison of students' recall of the alliterating idioms with their recall of the other idioms unambiguously confirms the preliminary evidence: the average recall rates of the alliterating idioms (out of 227 responses) was 76.65%, as compared to a mean score of 66.89% for the other idioms (out of 1350 responses). Chi-square shows this difference to be statistically significant at $p < .01$ again.

In short, although students' attention had not at all been explicitly directed at sound patterns, alliterating phrases were more likely to be remembered than the non-alliterating ones. If the mnemonic effect of alliteration is fairly marked without explicit instruction—which other evidence also suggests is quite likely (Dowker, 1989 and Jusczyk et al., 1999)—then the next question must be whether that mnemonic effect could be maximized by means of noticing activities. This is the topic of the next section.

2.4. Pen-and-paper experiment

2.4.1. Method and set-up

As part of a 60-hour English proficiency course, a group of upper-intermediate learners were regularly exposed to a variety of BBC radio and TV recordings over a three-month period. The recordings were used first and foremost as input for pair-work listening-and-reporting activities in which each half of the group of students listened to a recording and then orally reported its contents to members of the other half of the group. Afterwards, the same recordings were played again for the whole group with a view to (self-)assessing the quality of the students' oral reports. At this stage, students were also given gapped transcripts to fill in. In

keeping with a lexical approach to language teaching (e.g. Lewis, 1997, 2000), these gap-fill exercises typically targeted phrases (e.g. collocations) that the teacher—relying on his experience at teaching this course to previous generations of same-profile learners—thought likely to be unfamiliar to these students and also relatively useful to know. To motivate learning and to illustrate that not all language is arbitrary, the teacher engaged as frequently as possible in etymological elaboration and, additionally, pointed out sound patterns, alliteration in particular.

At the end of the three-month course, the students (N 25) were presented with an unannounced quiz. This was a pen-and-paper gap-fill task using sentences resembling those in the transcripts and targeting (keywords of) 23 expressions that had been tackled in the three-month course. The teacher's choice of these items pre-dated the intention to use the students' responses to the quiz for item analysis purposes. It included five alliterating phrases: *be sent from **p**illar to **p**ost*, ***w**age **w**ar*, *put something **t**o the **t**est*, *be **c**arbon **c**opies of each other* and *a **pr**ecious **pr**ize*. The non-alliterating phrases were the following: *by the flip of a coin*, *in its wake*, *sustain wounds*, *wreak havoc*, *state of the art*, *ethnic cleansing*, *thin end of the wedge*, *a foregone conclusion*, *lay accusations at someone's door*, *the shape of things to come*, *in its own right*, *(be) burnt at the stake*, *someone's lips are sealed*, *run around on all fours*, *sit up and take notice*, *which side of the fence are you on?*, *at the hands of* and *that's the long and short of it*.

2.4.2. Results and discussion

Students' mean scores on the alliterating phrases turned out to be markedly higher than for the other phrases: 43.2% vs. 27.33%, respectively. Chi square shows the greater likelihood of the alliterating phrases being recollected to be significant at $p < .001$. The finding that this superior recall is more pronounced than in the previous two data-analyses (2.2 and 2.3 above), gives us reason to suspect that drawing learners' attention to alliteration in multi-word expressions can indeed amplify the mnemonic effect. At the same time, the very tentative nature of this conclusion must be acknowledged for the reason that we cannot rule out the possibility that some of the students participating in this action research might have had some knowledge of the alliterating phrases prior to instruction.

3. Discussion

3.1. Learning multi-word expressions

If real-time language processing is driven by the language user's repertoire of prefabricated multi-word chunks, it is essentially driven by memory. In order for second or foreign language learners to become fluent in their target language, they will not only need to notice useful phrases, but will also need to remember and reproduce them (i.e. turn exposure into intake). Given the enormous size of a natural language's resource bank of multi-word expressions, memorizing even a limited number of these

must be a tremendous task. It follows that learners would benefit from effective mnemonic techniques that are adapted to the task at hand.

We have presented evidence of the mnemonic effect of a particular class of sound pattern, alliteration, in semi-fixed English expressions such as idioms. This effect may to some degree arise because, other factors such as frequency and phrase length being equal, an alliterative phrase is relatively likely to be mentally processed as a chunk. We have also presented preliminary evidence of the extra mnemonic effectiveness of explicitly drawing learners' attention to such sound patterns. This straightforward technique could complement the strategy of etymological elaboration for, as we have observed, the strategies of forming mental images and attending to sound patterns may sometimes work in tandem. In such cases, a combined approach would cater to learners showing a preference for verbalizing as well as to those showing a preference for imaging.

3.2. Cross-lingual differences

Languages may well differ with regard to the types of appealing sound patterns that feature most prominently in their banks of multi-word expressions. For example, our hand counts through a Dutch dictionary of idioms (De Groot, 1999), suggest that prototypical alliteration is less common in this segment of Dutch than in the English counterpart: 7.3% vs 12.7%, respectively. We hypothesize, with particular respect to verbal phrases, that one of the reasons why Dutch idioms may be less prone to alliteration has to do with word order and inflection. That is, components in English tend to cohere whereas in Dutch—given its more variable word order— they are more easily separated. For example, an English verbal idiom like _Don't beat about the bush_ preserves its unity—and hence its very prominent alliteration—in a context such as "*My wife complained that I shouldn't have _beat about the bush_ again last night* ". By contrast, due to SVO to SOV transformation in Dutch subordinate clauses, the (unalliterating) Dutch version of this idiom, *Wind er geen doekjes om*, is separated out in "*Mijn vrouw klaagde dat ik er _geen doekjes om_ had mogen _winden_* ". In other words, alliterative force in Dutch idioms seems more susceptible to being weakened by wide separation of the alliterating elements. Moreover, unlike in English, the formation of past participles in Dutch typically involves adding a prefix (*ge-*) to the verb: e.g. "*Ik zeg dat ik er _geen doekjes om_ heb ge wonden.*." As a result, even if the verb stem were part of an alliteration in the canonical form of the idiom, its impact would again be reduced in actual morpho-syntactic patterning.

Another feature of English that may help explain its comparatively high frequency of alliterating phrases is the likelihood of first-syllable word stress. In some other languages, such as French, it is much more common to stress the final syllable of bi- or multi-syllabic words. Because the impact of alliteration is likely to be phonetically most profound when the alliterating first syllables are stressed, we may predict that French multi-word expressions might be less prone than English to exploiting this particular sound pattern. Hand counts through a French idiom dictionary, *Le Robert Dictionnaire d'expressions et locutions* (Rey and Chantreau, 1993) seem to corroborate this hypothesis: only 7% of the phrases listed alliterate.

4. Implications and projects for the future

4.1. Phonological patterning and mnemonic effect

Our findings accord with the view that phonological and semantic systems are fully interactive in storage and retrieval (e.g., Jackendoff, 2002 and Yates et al., 2003). More specifically, our results support a claim that alliteration has the potential to foster the recollection of multi-word lexis.[5] But closely pertinent questions remain unanswered, over and above the routine one of whether further research into the mnemonic effect of alliteration would yield results similar to ours. If our results *are* indicative of reality, it would be worth attempting to discover (1) whether, or to what degree, mnemonic effect varies across such types of consonance as ''heavy'' alliteration (e.g., *sp*ic and *sp*an), basic alliteration (e.g., *g*ive as *g*ood as you *g*et), 'initial↔interior' repetition (as in *L*o and beho*l*d), interior ↔ interior alliteration (e.g., *go out in a bla*z*e of gl*o*ry*) and cases of nearby words beginning with consonants which are similar rather than identical (e.g., *cover girl*), and (2) to what degree mnemonic effect varies according to the syntactic or semantic character of the alliterating words or according to the length of a phrase and the distance (e.g., in syllables) between the points of alliteration—in other words, whether alliterating compounds such as *tiptoe* and longer expressions such as *b*eat around the *b*ush are more or less equally memorable.

Rhyme (e.g., *be left h*igh *and d*ry and *go with the fl*ow) and rhythm are the categories of phonological form which are most commonly said to have mnemonic potential, although generally with respect to the recall of individual words rather than phrases. Neither of these patterns was an object in our study. However, Aitchison (1987, 119-21, 126) summarizes findings which indicate that words with similar beginnings (i.e., onsets), endings (i.e., rimes), and overall rhythmic pattern have particularly high potential to trigger one another's recall. while Baddeley (1997, 133-34), who cites work in the tradition of oral formulaic theory (Wallace and Rubin, 1988), observes that rhyme and rhythm have been identified as aids in the recollection of ballads. All this suggests—albeit weakly—that teachers and materials writers might facilitate the learning of phrasal lexis in a foreign language by appropriately exploiting the (hoped for) mnemonic effect of phrasal rhyme and rhythm. But, at least so far as we know, neither pattern has figured in research carried out in order to cast light on the learning of an additional language. This state of affairs seems to be in quite serious need of rectification. The same can be said concerning other varieties of phonemic similarity than end-rhyme—for instance, end-internal rhyme (e.g., *one st*op *sh*opping); nucleic assonance (e.g., *r*at *r*ace); possibly euphonious sequencing of different vowels (e.g., *As if!*, where the first vowel is tense and the second lax); and interactions of assonance, consonance and rhythm. It is implicit in Wallace and Rubin

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[5] On an anecdotal level, our experience is that an anonymous reviewer is correct in supposing that an additional reason for working on alliteration is that doing so could be fun for learners and, therefore, motivating. Lindstromberg and Boers (2005) describe several tasks designed to exploit this possibility.

(1988) that melody too may have the potential to facilitate the recollection of multi-word L2 expressions—yet another proposition which, though widely accepted in FLT, seems to lack empirical grounding.

4.2. FLT and phonological patterning in multi-word expressions

As it happens, classic end-rhyme seems to be slightly less common in English multi-word expressions than alliteration—according to our hand count only about 3% of the entries in the *Oxford Dictionary of Idioms* (Speake, 2000) show such rhyme (Boers and Stengers, forthcoming)—and there were too few instances of rhyming phrases in our own sets of data for any statistical analysis. But for other target languages than English, the case for investigation of the mnemonic potential of rhyme in multi-word expressions may be stronger; for example, languages with final word stress, such as French, may show a greater tendency than English to foster chunk-wise mental handling of rhyming word combinations—another reminder that pedagogical instruments for phrase-wise learning may need to be attuned to the target language at hand.

It might be objected that teaching alliterative and rhyming phrases could cause learners to overload their speech with alliteration; but at root this is a concern that could discourage the teaching of almost any element of language whatsoever. That being said, it might, with respect to English, be prudent to inform learners that, for good style, markedly Latinate words must alliterate very rarely.

In any case, once multi-word lexis has been clarified semantically, time must be devoted to the creation and maintenance of its traces in memory. It is not clear whether the LA as it has so far been formulated has much to offer with respect to such consolidation. Aside from concordance analysis—hardly a species of study that the average learner is likely to find attractive and which in any case is ill-suited to mass-wise phrase learning—the LA seems to offer few if any task types that have not been inherited either from the Grammar-Translation or Audio-Lingual methods, neither of which is known for explicitly addressing learners' needs to remember and fluently deploy vast numbers of multi-word expressions. The LA stands, therefore, as a theoretically heavy-weight approach which has yet to be furnished with a commensurate operational apparatus. Lindstromberg and Boers (2005) propose tasks for implementing the findings about alliteration which have been presented here, for example, tasks which seem likely to result in enhanced noticing of alliteration. Certainly, a very great deal remains to be done in this direction. However, it does seem that if even only a few common phonological patterns can be shown to have mnemonic effect capable of methodological exploitation, the hope could be still justified that the learning of some significant fraction of the phrasal lexis of an L2 might be made easier.

Acknowledgement

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