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FORMULAICALLY SPEAKING: ERROR AND THE ADULT FOREIGN LANGUAGE LEARNER

This paper presents issues surrounding the use of formulaic language items by non-native speakers, in particular that processes and strategies employed by adult foreign language users often lead to ill-formed formulae. This particular error type is defined herein as a paraformula. An error gravity study with a focus on this type of production is presented; pedagogical implications are indicated. Error gravity testing is recommended as a way of registering interlocutor responses to paraformulae, which in turn may give a new perspective on what it means to be “formulaic”.

I. A NUCLEUS OF FIXED LEXICAL ITEMS

Once regarded by mainstream linguistics as a category irrelevant to the study of core rules, multi-word patterns, which seem to have unpredictable, idiosyncratic properties (in terms of their semantic or formal characteristics), are the subject of growing interest. In a paper that facilitated the resurrection of lexical pattern study and which is generally acknowledged as a catalyst for much of the current work on multi-word expressions, Pawley and Syder (1983) point to numerous regularities in “nativelike selection” and “nativelike fluency,” claiming that the idiomatic control native speakers wield over language requires more knowledge than a purely syntactic explanation of native language competence would account for. The authors maintain that the items which cannot be analyzed systematically (which the generative account would call “marginal cases” in language) have been under-investigated because of a tendency in linguistics to examine “productive elements” rather than areas of language which aren’t easily explained in terms of grammar alone (Pawley and Syder 1983: 219), such as items which appear to be *preferred* by particular native speaker groups. Native speakers seem to rely on a certain processing strategy, referred to as a “one clause at a time facility...the speaker must be able regularly to encode whole clauses, in their full lexical detail, in a single encoding operation,” producing sustained discourse by linking “sequences which contain a nucleus of fixed lexical items... with one or more variable elements (often a grammatical inflection)” and pausing between phrases (Pawley and Syder 1983: 202-205).

Thus the productive items in meaning making were presented as phrasal and habitual in nature, and lexis was given primary status in a time when the study of rules advocated by the mainstream generative approach had mostly overtaken traditional, empirical study of language -- a period James (1998: 142) has referred to as “the Golden Age of syntax.”

There are many definitions and taxonomies of this “fixed lexical nucleus” in the literature (cf. Becker 1975, Lewis 1993, Nattinger and DeCarrico 1992, Moon 1998 and others), each with differing assumptions about the range of expressions that ought to be included. The proliferation of competing terms (cf. Wray 2000: 9) suggests that *formulaicity* is large enough to necessitate a variety of approaches for purposes of its description. Gałkowski (2006a, 2006b) enumerates three main foci present in the literature as a whole, namely form-based, processing-based and socio-culturally based accounts. Form-based accounts find explanations for the way particular combinations are cemented together by examining their phonological, semantic, or syntactic properties. Formulae are seen here as sequences with two or more units (words or morphemes) with opaque, often compositional meanings or functions, which are not the same as the meanings of the individual elements themselves (Wray 1999: 214-215).

Processing-based accounts (Sinclair 1991; Wray 1992, 2002) attempt to show the differences between units of language that are created analytically and those retrieved from memory as wholes. The most vexed problem in this area of study is determining when a phrase is accessed as a whole and when it has been derived of its component parts (this issue of “modes” of production will be revisited below). Socio-cultural accounts study the embeddedness of certain linguistic behaviors (consider the uses of *proszę* in Polish or *bitte* in German, which do not overlap with the uses of *please* in English) provide an example of this type of account (cf. a comparative study of English and German in Barron, 2003).

Each of these approaches to the phenomenon of formulaicity carries with it certain assumptions about the speakers themselves, and it may be generalized that much of the existing literature revolves around the native speaker model and describing native production. It may also be ventured that when considering the nature of formulaicity, it is useful to examine cases where it is *missing*, and what happens to meaning along the way.

As a starting point for discussion, let us consider Wray’s (2002) definition of fixed phrases as “formulaic sequences”, which delineates a formulaic sequence as: a sequence, continuous or discontinuous, of words or other elements, which is, or appears to be, prefabricated: that is, stored and retrieved from memory at the time of use, rather than being subject to generation or analysis by the language grammar. (Wray 2002: 9)

To what extent we cement ready-made patterns to novel strings is unclear, as is the role of grammar, and it is likely that each speaker draws upon units of differing length and frequency. Wray introduces another concept to account for

this, the Heteromorphic Distributed Lexicon (Wray 2002: 264-268), which is a “repository of all linguistic units...which are handled as holistic” and which is, importantly, unique to every speaker (Wray 2002: 264). Irregular items as well as common, compositional items are stored for quick retrieval in one of five lexicons--grammatical, referential, interactional, memorized or reflexive; lexical units may be morphemes, polymorphemic items or word strings. In stark contrast to the claims of generative grammarians as to our infinite creativity with language, the literature of lexical-pattern research assumes that native speakers function most often at this phrasal level, such that “humble patterns [retrieved from the phrasal lexicon] do most of the work of language production for us” (Becker 1975: 63).

Two main procedures are discussed in the literature, which seem to underlie native language production and comprehension. Bolinger (1976: 2) once declared that “speakers do at least as much remembering as they do putting together.” When characterizing the “remembering,” one may state it is the most economical method of language processing, employed for the retrieval or interpretation of longer, seemingly prefabricated sequences of text. Those who are actively studying co-occurring language provide us with mounting evidence for large matrices of co-selectional restrictions and point to the startling regularity of our speech routines (cf. Moon 1998, Butler 2003). But we are not necessarily limited to a closed repertoire of prefabricated phrases -- the procedure of “putting together” involves the creation, interpretation and understanding of novel utterances, informed by a system of rules (cf. Skehan’s 1998 *analytic mode*). However, this is a process that may be seen as *costly* in terms of effort and available resources.

In an account of these co-existing language behaviors, Sinclair (1991) presents a dual division of language processing in the form of “the open choice principle” and “the idiom principle.” The open-choice principle is the filling in of a metaphorical tree diagram: there are spaces with grammaticality constraints, and the language there must satisfy the rules. Sinclair claims that speakers also have “a large number of pre-constructed phrases” at the lexicon which behave like “single choices, even though they might appear to be analysable into segments” (Sinclair 1991: 110) which is the “idiom principle.” Sinclair states that this is the default mode though “lexical choices which are unexpected in their environment will presumably occasion a switch [of processing mode].” He seems to see the two modes as operating exclusively of each other, though it is never made clear to what extent replaceable items in idioms would be considered unanalyzed choices. In a similar vein, Wray (2002: 17) contrasts the holistic (*formulaic*) and grammatical (*analytic*) modes; formulaic sequences are thought to occur without grammatical editing, undergoing a function like “lexical retrieval”; she has suggested that “formulaic sequences are just one of many solutions which arise for an individual on a particular occasion in the course of protecting his or her interests” (Wray 2002: 211). Thus the use of formulaic language, which

saves time and effort, is also a strategy for marginalizing areas of potential misunderstanding. It is a way of guaranteeing that an interlocutor (who shares the code) will be able to understand and isolate particular information in the flow of speech. This definition does not appear to embrace the many patterns which undergo partial analysis (a large category of formulae does) nor provide an adequate account of how formulaicity appears in other languages, like Polish, which has a very complex system of inflection, and “free” word order (in any event, freer than that of English). It is clear, however, that even if an item demands partial editing, valuable processing resources are still reserved for planning the next utterance or interpreting a response.

Not only do holistically retrieved packets of meaning save valuable processing time, they are easily understood by others and they are *expected*. It would seem that the noticeable absence of or addition of parts within a fixed expression tests their veracity. Humorists, for instance, play on our expectations by stretching collocations or fixed expressions (cf. Kjellmer 1991: 123). Consider as an example “Sewage costs hitting the fan,” from a newspaper headline.¹ Similarly, masters of literary style manipulate meaning-bearing islands:

He had delusions of adequacy. (Walter Kerr)

The proper basis for a marriage is mutual misunderstanding. (Oscar Wilde)

The inventive potential of a generative grammar, as well as the acceptability of “altered” formulae are both restrained by culture-specific social expectations (cf. Leech 1976, Grice 1989, Wray 2002). There are palpable socio-pragmatic consequences to saying things in other words than anticipated by a particular social or target language group. Beyond humorous (intended or unintended) effects, confusion, frustration and irritation are likely to accompany uses of language which seem “out of place,” according to the judgments of a particular social group.

II. FORMULAE AND THE NON-NATIVE SPEAKER

In response to the needs of adult learners, foreign language pedagogy more and more frequently includes the introduction of “fixed” expressions to facilitate communication, and rightfully so, as these are precisely what learners need in order to express themselves in a natural (read: native-like) way in the target language. However, at the same time, formulae are often the very items which stand to be most opaque to foreign language learners, at one or more levels. Let us revisit certain characteristics of formulaic expressions mentioned ear-

¹ Lee Vining, California. Times-Standard, July 8, 2006

lier, after the tripartite model put forward by Gałkowski (2006b: 126ff), which seem have given rise to distinct areas of inquiry within the broader subject of formulaic language, most of which is focused on the production and processing of native speakers. In each case, a barrier to adult foreign language learners is present:

- Formulae are these items often have functions or meanings which are not predictable by way of analyzing their elements separately (form-based)
- Formulae are assumed to be retrieved from memory holistically, or their frames are, which must then be filled in with inflections, deictic elements, and so on (processing-based)
- Formulae are often culturally embedded -- in other words, their usage is entrenched in a social group or context and this is difficult to appreciate without direct, long-term cultural experience (socio-culturally based).

The lack of “live” cultural routines for experience-building with language is perhaps the most immediate barrier in foreign language classroom settings. As Davies (2003) aptly points out, learners “cannot live out the cultural routines, as native speakers can, learning them through doing, the only success s/he has is through knowledge, learning like a book” (Davies 2003: 115). The lack of repeated exposure to legitimate and believable contexts for collocations and idioms, as well as other types of high frequency information, makes mastering these patterns in adulthood extraordinarily difficult. Again, it should be emphasized that areas like fixed social routines (which often entail a need for further cultural knowledge) are the most crucial to a learner who wishes to sound native-like rather than “rule-driven,” or moreover, inappropriate.

If protecting one’s interests and avoiding potential misunderstandings (Wray 2002: 211) are dominant interests underlying native speakers’ selection of language, then it follows that learners are of primary importance when choosing a phrasal lexicon to teach. The number of fixed expressions is foreboding, but for pedagogical purposes, it is worth exploring what nucleus of high-frequency expressions best allows learners “entry into communication, when they lack appropriate L2 rules” (Weinert 1995, in Myles et al. 1999: 52-53). Longer fixed phrases such as “would you mind -ing that”, “it’s a pleasure to meet you”, or “yours sincerely” may be introduced as single items which fulfill particular social functions, even though their internal complexity may exceed the overall analytic abilities of a beginning learner. In turn, production and processing are thought to be greatly enhanced. The benefits of teaching formulae may be argued to outweigh the risk that they will be misapplied later, particularly since the meaning of a flawed formula is often salvageable in spite of the errors it contains. In the words of Lewis (1993), whose Lexical Approach to teaching advocates the early introduction of lexical patterns and formulae to learners:

Institutionalised expressions will be a help to any non-native learner. Clearly a repertoire of such phrases is an important part of fluency for the intermediate and more advanced learner... Institutionalised expressions provide a way of increasing the elementary student's communicative resources rapidly, and at the same time provide accurate and natural data against which other novel utterances may be monitored and a valuable resource contributing to the acquisition of competence. (Lewis 1993: 95)

Grammatical analysis and modification of lexical phrases, and particularly idioms, does not always bring desirable effects, of course. Learners ultimately have to commit to memory which phrases can undergo re-analysis, but they are not likely to know all of the restrictions involved, potentially resulting in noticeable errors or wordiness; as James (1998) has put it, "adherence to the collocational conventions of an FL contributes greatly to one's idiomaticity and not doing so announces one's foreignness" (James 1998: 152). An illustration of this point comes from Finland, where I encountered the following message in a hostel shower stall:

Please use hot water in reasonable manner, in order to guarantee it to the bathers after you in the queue.

This "save hot water for others" message is quite grammatical (excepting one missing article), yet in terms of formulaic language content, it is stunningly unidiomatic (incidentally, this meaning was conveyed in Finnish in only four words).

Pawley and Syder (1983) note that errors which appear in the middle of multi-word expressions may be due to an assumption on the part of the non-native "that an element in the expression may be varied according to a phrase structure or transformational rule of some generality, when in fact the variation (if any) allowed in nativelike usage is much more restricted" (Pawley and Syder 1983: 215). Grammatically correct but unidiomatic statements may result; the sentences below are examples of this. The first one comes from a personal collection of learner compositions, and the second from Pawley and Syder (1983: 215):

*In the post war period the crucial role belongs to the allies, which can *get stuck in the deadlock* without compromise with Irak politicians.

*You are pulling my *legs*.

To the disappointment of our learners, it would seem that only a small fraction of grammatically correct sentences are actually native-sounding and natural. As Erman and Warren (2000) have expressed it, language is filled with combinations of words which are non-compositional, indeed opaque, and preferred in language to alternate combinations, such that one cannot even say that these alternatives are equivalents, due to the process of *conventionalization* among a particular group of language users (Erman and Warren 2000: 31-32).

Ironically, when examining non-native use of formulae, it seems easier to attribute missing formulae in particular contexts to avoidance, or lack of knowledge, than to determine whether anything was holistically retrieved as a “learner” chunk. After all, can we ever be certain that a given form was retrieved as an unanalyzed phrase, or if the learner made creative use of a language rule? This is particularly frustrating, since the border “between modes” is fuzzy in accounting for instances of processing by natives: two processing modes are intended to represent a bipartition which results in “an uneasy compromise” (Wray 1998: 64); as well, this account is applied to natives, who are assumed to have a stable language system in place. Retrieval of formulae, according to the dual-mode processing models mentioned above, would place a learner’s production somewhere between analytic and holistic modes; allotting a large, undistributed middle to non-natives lends little (if any) explanatory power as to why their productions of formulae go wrong, and why many attempts don’t seem to be analytic, nor holistic.

III. PARAFORMULAE

Criteria for the “identification of L2 chunks” have been suggested by Myles et al. (1999):

1. Greater length and complexity of sequence compared with other learner output
 2. Phonological coherence, that is, fluent, nonhesitant encoding without a break in the intonation contour
 3. They tend to be used inappropriately (syntactically, semantically, pragmatically), as numerous examples of overextensions clearly show.
 4. They are generally used in the same form, with no parts substitutable, that is, learners are not able to change any elements in the sequence....
 5. They tend to appear well formed and to be grammatically advanced compared to the rest of the learner’s language (i.e. unrelated to productive patterns in the learner’s speech)
 6. They usually occur in situationally specific ways or are predictable in context: the classroom situation is particularly rich in routines that are heavily context dependent...
- (Myles et al. 1999: 61-62)

This list was based on classroom observation of students’ chunking of items already introduced by way of overt instruction and practiced. The researchers were looking for evidence of extended or generalized patterns; the learners were at the elementary level of proficiency. However, when learners are more advanced, these criteria are no longer as descriptive or helpful. For instance, fluent encoding of items which are repeatedly used incorrectly may take on a very natural intonation contour. Often learners use and re-use multi-word units that have errors within them, such as a commonly-encountered Polish→English calque **it depends from the situation*. As Schmidt has put it, “errors...may be stored

and retrieved as wholes by learners rather than being committed each time as a creative act” (Schmidt 1992: 378, cited in James 1998: 143). As well, mastery of target language grammar rules allows a learner to hazard guesses (cf. Wray 2008, regarding “risk taking”) in making both correct and incorrect internal modifications, thus changing elements in a sequence for better or worse.

It would seem that the single-choice status of a multi-word pattern (formula) is not necessarily perceived by the language learner unless it is highlighted or otherwise comes to the attention of the learner (perhaps due to its frequency, like one might hear *not at all* as a common response in the UK to *thank you very much* and *do you mind [X]*). Regarding the perception of multi-word patterns, let us take an example from the author’s own experience: while preparing to order breakfast in an American restaurant, a Polish learner of English asked what his favorite kind of eggs were called in English. He rehearsed the new expression *eggs over easy* until the waitress arrived. She came to take orders, and asked what he wanted.

“I would like the easy eggs,” he declared.

“What was that?” she asked.

“I would like my eggs easy.”

The message was not retrievable to the waitress; the exchange was prolonged. However, the question that should be of interest to us here is why the seemingly-salient word “over” vanished. Fixed expressions in the adult foreign language learner’s repertoire would seem especially permeable to production errors, which in turn result in idiosyncratic constructions.

Idiosyncratic errors remain one of the more enigmatic features of interlanguages. In the words of Moon (1998), “non-native speakers of a language... [approach formulaic strings] in ways which native speakers do not, *and see them as compositional*” (Moon 1998: 185, my emphasis). Chunks of language have many substitutable parts which potentially undergo analysis during production; the variable of memory could be crucial to successful holistic retrieval by natives and non-natives alike, and an important “individual difference” among learners. Skehan remarks:

the aptitude research seems to embrace both the linguistic [analytic] and the ‘chunking’ viewpoints...suggesting two different orientations to language development -- one linguistic, and one memory-based. One type of learner seems to have a language learning orientation which stresses the analysability of language while the other, perhaps more expression-oriented, is more apt to rely on chunks of language and efficient memory. (Skehan 1989: 37)

This could be a matter of personality or a function of “hemispherical lateralization” (ibid.). Another issue concerns the psycholinguistic and pragmatic difficulties of using a grammar/lexicon model. In any event, errors in retrieval may be attributed to a variety of causes or events, among them a lack of correctly proceduralized units, faulty memory, over-reliance on transfer, uncertainty

about form, lack of knowledge, or nervousness. If indeed adult learners approach multi-word items compositionally, they are more likely to resort to piecemeal utterances based on their lexicon and grammatical resources.

Learners may apply particular strategies which serve as observable evidence of a production process. The division of strategy and process is not new in the literature: strategies have been described relative to processing by Faerch and Kasper (1983), who define a strategy as “a specific subclass of processes” (Faerch and Kasper 1983: 29). Ellis (1985) claims that strategies are not processes in themselves but “plans for controlling the order in which a sequence of operations is to be performed” and reserves the term “process” for those “operations involved in the development or realisation of a plan” (Ellis 1985: 166). Blum-Kulka and Levenston (1983) draw the following distinction between process and strategy:

...the distinction between processes and strategies is not necessarily one of +/- consciousness.... Rather, the difference is one of levels of analysis: processes are the underlying cognitive principles we are searching for in analysing strategies [...] Processes are inferable from strategies, just as strategies are inferable from spoken and written interlanguage performance. (Blum-Kulka and Levenston 1983: 125)

Below, a type of process will be discussed (the “contentive” processing mode from Gozdawa-Gołębiowski, 2003) and one particular production strategy which seems to accompany it (which is introduced in this paper as *semantic scanning*), in the spirit of the definitions just given above. Another model, presented by Cook (1993), where “strategies of learning” are part of the development of competence and placed in opposition to communication strategies, characterized by Cook as the means “to solve a momentary difficulty” (Cook 1993: 113), are not taken into consideration, since this would seem to minimize the usefulness of studying communicative strategies as indications of non-native competence (if there is even such a thing as non-native “competence” -- cf. Bley-Vroman 1989, Newmeyer 1998, Gozdawa-Gołębiowski 2003).

IV. SEMANTIC SCANNING AND THE PRODUCTION OF PARAFORMULAE

In search of a non-native processing account, Gozdawa-Gołębiowski (2003) has suggested that non-natives do not function on a continuum between the holistic and analytic modes, which best model native production. Recall that the holistic mode and its “probabilistic strategies” are thought to be the default means of processing (cf. Skehan 1998: 27) among native speakers. In the case of messages (sent or received) with greater structural complexity, novelty or ambiguity, the analytic processing mode often takes over. In the case of a non-native learner, Gozdawa-Gołębiowski (2003: 140) notes that learners favor lexis as the “pre-

ferred method of coding/decoding.” It would appear that a lexis-focused mode, one which is not entirely analytic nor holistic, informs the processes of coding and decoding: “the analytic mode reflects the system (be it L1 steady state linguistic competence or an interlanguage)...[lexis] is always more accessible, it is a shortcut to meaning” (ibid.) Gozdawa-Gołębiowski has proposed that a third mode may exist in interlanguage processing and he has dubbed this annex the *contentive* (as in content-word-based) mode. Here, it will be referred to as the C-mode.

Among learners communicating at all levels there is a strong preoccupation with meaning and getting that meaning across; learners are believed to attend most to content words (nouns, verbs, adverbs, adjectives) and omit items that carry less referential weight (prepositions and articles). They also overlook inversion in question forms, transformations in passives, and use simple tenses in place of more complex or irregular conjugations. Gozdawa-Gołębiowski suggests that since there is no time to monitor output during spontaneous production, and even some “positive” transfer from L1 requires self-monitoring, a learner is likely to refer to what he knows of the relevant semantic area and employ whatever word or multi-word item reasonably expresses the meaning he wants to convey. This act of reference is what I call the *semantic scanning* strategy.² Semantic areas in L1 and L2 may be involved in this strategic act, as well as assumptions about semantic areas in L2 which may not in fact be present in that language. To illustrate the C-mode process and the observable semantic scanning strategy at work, let us consider a transcript of a Polish adult learner of English who is retelling a story about car troubles with picture prompts:

[16] ...we get our wheel uhm broken or eh how do you say uhm anyway there was a problem with our wheel so I took a triangle from a trunk and we wanted to change the wheel uh so I uh lift the car with a special uh tool and I changed the wheel with with a little help of my uh woman after a while uh she anyway she was driving this car and she she did not know how to change the gear anyway so I she pull the backwards gear instead of the fifth gear and our car was broken after five minutes of driving so uh we couldn't find any help on the way we were stopping all the cars but they were passing by...

The speaker does not attend to verb inflection when he approaches a point in his story where a formula is called for, but perhaps missing in his repertoire. The effort of searching for useful semantic fields takes priority over the need to be grammatically correct.

she pull the backwards gear...
we get our wheel uhm broken...
I uh lift the car with a special uh tool...

² Since the activity of the processing mode is not directly observable, a strategy is put forward here (semantic scanning) by which we might explain particular instances of error in non-native use of formulae.

Salient semantic data is present in each case and the speaker conveys meaning—he is, overall, successful in making himself understood. While there are other ways to view the strategies in the above extract (for example that message abandonment, native language transfer or other strategies are present) the currently-discussed semantic scanning strategy intends to account for a particular form of selection, within a three-mode model. This distinguishes it from the transfer-based framework such as that underpinning Tarone's (1977) early taxonomy, and from others which provide a behavioral account of learner strategies (cf. Oxford 2001).

Erroneous formulae, or what I call *paraformulae*, are the observable result of meaning-driven, partial retrievals of multi-word units in an Interlanguage. They occur when components of a formula are replaced or missing due to errors in retrieval or proceduralized errors, e.g. incorrect storage within chunks. They may be the result of semantic scanning, if the learner is not aware that particular words and expressions demand corresponding collocational patterns, because of over-reliance on L1 transfer or because of processing limitations (as seen above). The following definition of a paraformula may be put forward:

A paraformula is the observable result of inaccuracies in the retrieval of multi-word units, when one or more components are replaced or missing due to limited processing, memory or transfer.

Native speakers (and proficient non-natives to varying degrees) are able to “feel” and isolate instances of paraformulae. It is much more difficult to identify what processes lie behind a particular instance of paraformulaic usage. The definition may be assailable for the same reasons that current native and non-native processing accounts are unsatisfying, in general: processes are unobservable and unpredictable, and discerning whether negative transfer is in fact to blame when no collocational matching was even attempted is next to impossible, given a corpus of learner data. The Polish → English error **take under consideration* [*brać pod uwagę* – *take under attention*] could be viewed as a paraformula, the result of storing the content words (*consideration* instead of *attention*) and transferring in a conceptually satisfying preposition from L1 during production, though a learner could *conceivably* arrive at it by way of verbatim transfer. However, the definition is offered as a starting point for discussion of a difficult area, namely how to describe the production of formulae or paraformulae among non-native speakers -- and not only those of the English language.

By way of reverse engineering, so to speak, we are slowly reaching a working answer about why formulae might be challenging to non-native speakers: formulae are often those constructions which are not predictable or derivable by way of a learner's rule system and lexicon. If that is the case, it is no longer important whether processing is ever purely holistic or analytic: it is only important what the learner's lexical and memory resources are at a given moment.

The types of category scans which may result in rephrasing as well as attempts at self-correction can be seen in the following transcript, where a Polish learner of English is telling a story:

After failing these exams he had to quit in the first year and the army forced him -- he was collected -- he was taken into the army because he taken -- he'd taken -- *nie* [no] -- he took p-- he took the papers from the university and immediately it was given notice to the -- oh what is it called -- [Author: *Recruitment office.*] recruitment office...

This type of stop plus “self-repair” has been suggested in Van Hest (2000) as a criterion for measuring proficiency, which could augment the study of non-native processing of multi-word items, though this is not Van Hest’s area of interest. Van Hest annotates learner transcripts using a caret [^] to signal instances of self-correction, a “cut-off... (i.e., the sudden interruption of the flow of speech), which generally takes the form of a glottal stop” (Van Hest 2000: 76-77); if non-natives are shown to break off or pause within chunks, which natives are less likely to do (Erman 2006), it could provide evidence for analytic or C-mode retrievals. The C-mode is an account of L2 processing that is readily observable in the irregular and non-linear nature of Interlanguage and which remains present at all stages of adult language learning. Studying regularities in the way non-natives convey meaning would be greatly enhanced by the study of non-native language data for its formulaic and paraformulaic language content.

We have seen that if one wants to sound *natural* (read: native-like) he needs to have many formulae in his repertoire. Examples of responses to learners who invent phrases “on the fly” or do not insert formulae where they are expected provide us with evidence that learning to sound formulaic is a formidable challenge, given that formulae function at manifold levels. It may also be that correctly-formed formulae are not necessarily exempt from criticism from native speaker judges, if those items are deemed to be out of place or otherwise inappropriate from a cultural point of view. Let us now consider the matter of formalizing judgments about non-native use of formulae, and instances of paraformulae.

V. ERROR GRAVITY RESEARCH

While exploring the contemporary applications of Error Analysis research back in the day, James (1972) made one of the earliest references to *error gravity*, as *graveness* or *seriousness* of learner error:

a linguistic approach to error analysis should at least attempt to explicate and rationalise the teacher’s subjective evaluations...at the present time nothing is known about the relative gravity, from a native speaker’s point of view, of errors of pronunciation, of grammar, or of lexis...” (James 1972: 76, cited in Johansson 1978: 1)

This implies that certain errors are, or ought to be, regarded as more or less *serious* than others in the eyes of teachers and interlocutors. In Error Analysis, which “provides a check on the predictions of bilingual comparisons...[and] is an important additional source of information for the selection of items to incorporate into the syllabus” (Corder 1973: 257), error gravity (EG) research is a diagnostic tool originally intended to accompany other analyses of learner language in an attempt to establish *which* errors are most detrimental to meaning and communication. In the words of Ellis and Barkhuizen (2005: 67), it “is not so much a stage in the analysis of learner errors as a supplementary procedure for applying the results of an EA.” Error gravity research has sometimes been referred to as “intelligibility” research (for an early summary see Olsson 1977), or *error evaluation* (cf. Ellis and Barkhuizen 2005: 67), with researchers testing for what could be characterized as *error perception*: individual and subjective reactions to error.

In addition to identifying the relative importance (or unimportance) of a given error type, error gravity research may be used to test the reactions of a particular group of evaluators. Most often this has been done by presenting errors for evaluation on paper by native speaker teachers, though interesting comparisons have also been made between the judgments of native and non-native speakers. While there may be general agreement among language teachers about what is “right” and “wrong” in a grammar (though even native speakers tend to disagree about acceptability), most teachers have developed their own, particularized viewpoints on what demands correction. James (1977), for instance, introduced his early error gravity study as an inquiry into teachers’ “criteria of degree of erroneousness...[and whether there are] consistent differences” in the grading practices of native and non-native teachers (James 1977: 116). It is easy to see the usefulness of this type of evaluation as part of an institutional assessment of co-teaching teams, for instance.

Studies that examine the relative comprehensibility of errors have often followed the empirical lead of Johansson (1978), who presented his findings from eight error gravity research projects in a book which was state-of-the-art at the time of its publication. Johansson applied a native speaker standard to the data, thus a certain comparative fallacy (cf. Bley-Vroman 1983) is present, in the sense that non-native data is critiqued by natives only in terms of its shortfalls. In establishing a research paradigm whereby the communicative effects of learner errors could be evaluated in a relatively systematic way, Johansson addressed the need for what Corder had called “hard facts about attitudes to, or expectations of, foreigners’ linguistic behaviour” (Corder 1973: 282, in Johansson 1978: 8). EA is presented in Johansson as a procedure for creating deficit models using the performance data of non-natives:

...which is used as a means of revealing what the learner has yet to know. As the analysis will normally reveal a host of deficiencies, it may be difficult to know where to start and what to

emphasize in applying the results. This is where error evaluation fits in, i.e. the study of error gravity.” (Johansson 1978: 1)

Other evaluator groups have been included in error gravity research projects. Like Davies (1983), some researchers have culled the judgments of professionals in a particular job market, university students, or professors of subjects other than linguistics to see their particular reactions to foreign language learner error.

Johansson (1975, referring to Quirk 1968: 109), points out that the way errors are appraised in EA depends to a great extent on the focus of foreign language teaching, namely whether it is “comprehensibility” (intelligibility) or “conformity” (we might generalize that this is *accuracy*) (Johansson 1975: 22). When the focus is on accuracy, it is necessary to take notice of all error types, whether or not they affect meaning-making. When the focus is on fluency, it is predictable that the *gravest* errors will be those which interfere most with intelligibility. Says Johansson, two essential questions arise when an error is under evaluation: has the error had an effect on the comprehensibility of the utterance, and even if it has not, has it led to *irritation* in the evaluator / interlocutor (Johansson 1975: 25)?

VI. THE TREATMENT OF LEXICAL AND GRAMMATICAL ERROR IN ERROR GRAVITY RESEARCH

While James (1972) originally called for research into the relative impact of particular error types, among them errors in lexis, this crucial area has received the least attention. Most researchers stop at a handful of sentences with intrusive vocabulary, and no one has specifically addressed how “word choice” errors affect comprehensibility, or to what extent they intrude on meaning-making and perceived learner success. Rifkin (1995) mentions the need to include research into the gravity of lexical errors compared to grammatical and phonological errors. The existing gap in the literature may be explained in various ways. Perhaps the traditional focus on *grammaticality* as a benchmark of proficiency has led researchers in their selection of criteria for evaluation. Another explanation may be the difficulty in choosing representative vocabulary errors from a multilingual corpus, such as teachers English-speaking countries would collect from their ESL students, say, in the United States or Great Britain. Yet another reason could be the idiosyncratic nature of lexical type errors, which occur at all stages of learning. Since it is usually ubiquitous, subtle lexical errors rather than grammatical errors that mark advanced learner production, the lack of inquiry in this area is all the more curious.

Rifkin and Roberts (1995) point out that lexical items, whether comprised of one or many words, may very well be part of larger “norm bounded constructs

whose limits shift from judge to judge across speech communities.” Recalling Kachru’s (1992) notion of “norm-providing” (Inner Circle native speakers) and the large number of “norm-developing” (ESL speakers), the very definition of “norm-bounded” constructions is difficult to formulate, as it is dependent on local standards and needs. The fact that any speech community may serve to judge (and these need not be natives or even teachers, but plausible representatives of those who would potentially have contact with or critically assess learner language) means that local conditions and varieties of a particular language can be captured in the research project. Rifkin and Roberts also defined an important, related objective for future error gravity investigations: “to define what constitutes an error... [Currently] there are no psycholinguistic studies addressing whether or not any cognitive disruption actually occurs as the result of particular L2 errors...” (Rifkin and Roberts 1995: 532) and this includes the impact of lexical errors. It is a call which has gone largely ignored.

Chunks of learner language are often missing parts or sporting replacements, as if they had not ever been wholes in the learner’s repertoire at all. This phenomenon vexed contrastive analysis and may just as well vex computer-driven studies of non-native speaker corpora, another area which is often neglected in favor of seeking out lexical regularities in very large native speaker corpora. When investigating learner error, one may identify them and tag them in a corpus, even count how many errors of various types exist in a particular learner’s data compared to other learners’. However, the next step ought to be an appraisal of their relative seriousness, which no computer can quantify.

A modern application of error gravity research, further discussed below, is to use error gravity research in a *qualitative* format to record reactions to lexical error in particular. There is a largely unexplored area to be addressed, namely responses to *non-native use of formulaic and paraformulaic language*. The relative seriousness of errors within prefabricated language items, as well as instances of their conspicuous absence, could be explored using evaluation techniques from error gravity research.

What particular areas could be addressed? The possibilities are numerous. One might study how much strategic language behavior in lexical choices, for instance, proved to be too much (according to a particular group of evaluators) and affected a learner’s performance negatively. It might also be possible to show that natives do indeed prefer (even expect) certain lexis to be present: we can test whether or not evaluators notice when particular lexis is missing. If they *do not* seem to react, or if their reactions differ significantly, what could that tell us about how important formulaicity is to meaning making? There is a lot of fascinating work to be done in the area of assessing *successful but unidiomatic* learner language, in terms of native and non-native evaluators’ reactions to it.

If there have been certain inconsistencies in the research and the findings have proven to be largely incomparable, one may wonder if it is worth returning

to this format. Error gravity research may, in fact, reveal interesting differences in the way native and non-native teachers treat what are usually referred to as word-choice or lexical-type errors. Consider the relevance of such a study from both theoretical and practical standpoints -- in program development, teacher training and program evaluation at the institutional level. To teachers, error gravity research is a useful way of evaluating the relative success of communication *at all learning levels*. It is a tool for making decisions about which errors ought to receive extra attention in the classroom, if evaluators report particular instances of misunderstanding or communication breakdown in particular areas of performance. Error gravity is a means of organizing external evaluation of learners' performances, which may optionally be presented to them as feedback. Testing may be used to evaluate written or spoken language. For the researcher, error gravity study is a useful step in the study of interlanguage (Selinker 1972) production. If all of the participants are non-natives (learners and evaluators) the non-native grammar systems are not measured for their deficits in relation to "ideal" native grammars, a solution which may suit the program objectives of certain institutions. Which of the above applications seem outdated or irrelevant to contemporary teaching? It would seem that none of them will ever become entirely irrelevant to the foreign language classroom.

VII. AN ERROR GRAVITY STUDY WITH A LEXICAL FOCUS

The following is a brief summary of a doctoral project which was carried out with 20 English teachers, ten of whom were native speakers of English, and ten of whom were Polish non-native speakers of English. Each participating teacher evaluated recorded performances of 8 learners who were telling a story using the same picture board each time. The recordings chosen for evaluation contained instances of paraformulaic and missing formulaic items, identified by the author, though the target items of the study were not revealed to the participants. The teachers evaluated the performances on paper in terms of various criteria, such as naturalness, intonation, grammar, lexis, and so forth, though the primary data of the study was that taken from feedback sessions. Among the most significant findings, the following are of greatest interest here:

1. Non-native and native speaker teachers had disparate opinions about the seriousness of the learners' errors, as well as the significance of their lexical choices.

Where the number of formulae exceeded the number of paraformulae, native speaker teachers evaluated the speakers higher than the non-native speaker teachers on the criteria directly relating to lexis. In two of three cases when paraformulae outnumbered formulae, natives also gave the speakers higher marks than

their non-native counterparts. Where there were no formulae, on the criteria of “appropriacy” the non-native speaker teachers marked higher than native speaker teachers, but there was a negligible difference between the groups regarding complexity of vocabulary. Native speaker teachers gave higher scores on the criterion of “complexity of vocabulary”, regardless of how many formulae or paraformulae the learner used. This could be seen as evidence of slightly greater tolerance of lexical error, where present, as well as recognition of correctness. The non-native evaluators did appear to be aware of lexical errors, though they spent much more interview time on discussing errors of phonology, organization or grammar, which may be attributed to the demands placed on them in their respective teaching environments.

2. Acceptability and the use of formulaic language items do not necessarily go hand in hand.

It would be worth studying, in an independent project, only *non-native* teachers’ responses to incorrect or unconventionalized lexical forms whose meanings are still retrievable. One wonders what attempts would be acknowledged for their functionality or creativity, because in this project, the comprehensibility of the form being used in place of formula (and its recognizability as a substitute for something else) seems to have been a factor in determining whether it was highlighted as an important error by native speaker teachers. Native speaker participants in the evaluation did question the *appropriacy* of well-formed formulae, namely at the pragmatic or socio-cultural levels.

3. Personal judgments about factors not relating to language content appear to impinge on the evaluation process.

Yet another finding which deserves attention is that personal judgments regarding extra-linguistic factors or beliefs seem to have influenced evaluators’ assessments of the learners. Manifold sources of irritation toward a performance may stem from psychological factors within social relationships, issues relating to social norms of appropriacy, high error density within a stretch of text, incomprehensibility, interlocutor expectations, prejudice, and so on. Error gravity studies have always aimed, whether directly or implicitly, to establish which errors are most likely to cause learners difficulty -- in the form of misunderstandings or other unintended effects. While it is impossible to predict by way of a research instrument what an individual interlocutor will say or do in the face of a particular error, we can, where appropriate and relevant, make learners aware of the pragmatic consequences of certain expressions.

4. Teachers from both groups lacked cohesive descriptors for referring to or accounting for instances of lexical-type errors.

There are certainly communicative consequences to circumventing formulae. In this study, it was clear that the teachers noticed certain events in the learners’

lexis but did not have a technical vocabulary to discuss them or what was wrong with them. They signalled their impressions in many ways:

- ...the way it came out, a typically British way of expressing things...the choice of expressions, the choice of words and putting all these things together...
- ...he used a lot of complex lexical devices, shall we say...stock comments...
- ...she was able to sort of make allowances...she was quite happy to use a sort of a sort of fill-in choice...
- ...he's using very clear phrases which match the situation...
- ...she doesn't use expressions appropriately but she is fluent in phrases...
- ...expression-wise there was something...there were one or two cases, there was something he said...not exactly a normal way of putting it...

When one mentions the words “collocation” or “idiom” it might conjure up different types of language items in the minds of individual teachers. Consider what the following NST says here about teaching multi-word items, in particular phrasal verbs and idioms. He is not referring to the entire class of fixed expressions, but rather particular representatives thereof. It appears that he views this type as inessential to basic communication:

They do make a lot of mistakes within phrases and idioms. I think they understand them and learn them but never really use them, well no. Maybe it's... the other way around [*laugh*] that they use them but never learn them, never really learn how [*laugh*] and even when I see a lesson coming up with idioms I don't even want to go over it sometimes, because I automatically start wondering... asking myself how useful they are in my everyday life, and it's sometimes like, not very. For survival nobody goes around using idioms, right? So I don't always feel like that's an important area for them to master at all [*Author: What kind of idioms are you talking about? Maybe give me an example?*] ‘Beat around the bush,’ we had ‘caught red-handed,’ or a lesson with sayings, I don't remember any examples. I'd have to look at it again.

Nobody at the start of their language learning experience is concerned about cats being “out of the proverbial bag” or “buckets having been kicked,” but formulae such as the ones found in phrase books for tourists are examples of the facilitative power of longer, fixed lexical units.

VIII. PEDAGOGICAL IMPLICATIONS OF THE STUDY

Even if adult learners tend to analyze, they should be informed about the importance of considering words at a phrasal level rather than just as isolated units. They should be also encouraged to look for patterns of words which seem attracted to each other. Theory ought to confront practice--or at least augment it. If findings from the study of formulaicity were introduced to teaching practice and materials on a much wider scale, native and non-native teachers would have a way to discuss and identify these areas of lexis which are certainly meaningful

and yet non-native-like, and pass this awareness on. It would also be advisable to inform learners of the communicative consequences of *not* using formulae. There are many important advantages to passing on these tools to learners. First of all, many formulae are in fact frames, which are versatile and may be filled in with grammatical elements at the time of use—they are highly productive and may be put to memory as wholes. Secondly, formulae may be used as a way to enter communication at a very basic level, even though the items have an internal complexity that exceeds the analytic capabilities of the beginner. Finally, as many learners desire to sound more native-like, and it could be quite an eye-opening experience for them to discover that it is not just flawless grammar but the appropriate use of expressions which makes one sound more like a native.

Lack of knowledge about the distinctions between available forms with their varying degrees of culturally-bound significance, namely “the choice of items from the wrong register, and the mixing of items from different registers are among the most frequent mistakes made by non-native speakers” is a major source of error, according to Halliday et al. (1964: 88). This vulnerability to error within selection, if one may call it that, leads naturally to two more research areas which error gravity studies could be used to investigate. The first area would seek to investigate the effects of formulaicity in the realm of English as a *lingua franca*. The guiding question would be whether the use of opaque phrasal constructions might actually prove to be disadvantageous to communication with other non-natives. We could expect that if they did, they would stand the chance of being excluded from the many Englishes which are developing around the world. That would have consequences for teaching practices, as well. A second area which ought to be investigated by way of error gravity testing is the socio-pragmatic consequences of using non-formulaic language in contexts which dictate culturally-bound, obligatory formulae. Native and non-native evaluators could judge the seriousness of errors in obligatory contexts with socially-dictated formulae, such as those which function in congratulations, condolences, praise, criticism, thanks, apologies, giving instructions, and so forth. In doing so, we would perhaps develop a better understanding of what it is that is so *obligatory* about formulae.

CONCLUSIONS

While native speakers can be argued to favor the holistic (or formulaic) language processing mode, adult foreign language learners (even the most proficient) will tend, by contrast, to break down what would be unanalyzable to a native speaker into more manageable, analyzable pieces. Having done so, learners are more vulnerable to producing idiosyncratic lexical errors (paraformulae)

when reassembling multi-word items, particularly when there are tangential processing demands at play. It has been stated herein that a theory-neutral auxiliary testing technique which was used in Error Analysis, namely *error gravity* study, is worth salvaging from this paradigm, the rest of which was largely abandoned due to methodological weaknesses. Error gravity research can be adapted to the purposes of those who are interested in studying the communicative effects of formulaic language error, in the eyes of native and non-native judges. The general findings of a study of this kind were presented as an example of the potential of the testing model, which may be used in redressing the profound lack of attempts in the literature to appraise the seriousness of errors made by non-natives within multi-word items. Certainly, both native and non-native teachers would benefit from further knowledge of how much is „enough” formulaicity in their learners’ language to ensure success in whatever area they need the language for. It is essential to know more about when these language behaviors lead to communicative success or communication breakdown.

REFERENCES

- BARRON, ANNE (2003) *Acquisition in interlanguage pragmatics: learning how to do things with words in a study abroad context*. Amsterdam: John Benjamins.
- BECKER, JOSEPH D. (1975) “The Phrasal Lexicon.” In: Shank, T. and B. L. Nash-Webber, eds. *Theoretical Issues in Natural Language Processing*. Cambridge, MA: Bolt Beranek and Newman. 60-63.
- BLEY-VROMAN, ROBERT (1983) “The comparative fallacy in interlanguage studies: the case of systematicity.” *Language Learning*, 33. 1-17.
- BLEY-VROMAN, ROBERT. 1989. “What is the logical problem of foreign language learning?” In: Gass, Susan and Jacqueline Schachter, eds. (1989) *Linguistic Perspectives on Second Language Acquisition*. Cambridge: Cambridge University Press.
- BLUM-KULKA, SHOSHANA AND EDDIE A. LEVENSTON (1983) “Universals of lexical simplification.” In: Faerch, Claus and Gabriele Kasper, eds. (1983) *Strategies in Interlanguage Communication*. Longman: New York. 119-139.
- BOLINGER, DWIGHT (1976) “Meaning and Memory.” *Forum Linguisticum*, vol. 1, number 1 (1976). 1-14.
- BUTLER, CHRISTOPHER S. (2003) “Multi-word sequences and their relevance for recent models of Functional Grammar”. *Functions of Language* 10:2. 179-208.
- COOK, VIVIAN (1993) *Linguistics and Second Language Acquisition*. London: Macmillan.
- CORDER, S. PIT. (1973). *Introducing Applied Linguistics*. New York: Penguin.
- DAVIES, ALAN (1991) *The native speaker in applied linguistics*. Edinburgh: Edinburgh University Press.
- DAVIES, ALAN (1996) “Proficiency or the native speaker: what are we trying to achieve in ELT?” In Cook, G. and Seidlhofer, B. (eds.), *Principle and Practice in Applied Linguistics*. Oxford: Oxford University Press. 145-157.
- DAVIES, ALAN (2003) *The Native Speaker: Myth and Reality*. Clevedon: Multilingual Matters.
- DÖRNYEI, ZOLTÁN AND PETER SKEHAN (2003) “Individual Difference in Second Language Learning” in Doughty, Catherine J. and Michael H. Long (Eds.) *The Handbook of Second Language Acquisition*. Oxford: Blackwell. 589-630.

- ELLIS, ROD (1985) *Understanding Second Language Acquisition*. Oxford: Oxford University Press.
- ELLIS, ROD (2004) "Individual Differences in Second Language" in Davies, Alan and Catherine Elder, eds. (2004) *The handbook of applied linguistics*. Oxford: Blackwell Publishing. 525-551.
- ELLIS, ROD AND GARY BARKHUIZEN (2005) *Analysing Learner Language*. Oxford: Oxford University Press.
- ERMAN, BRITT AND BEATRICE WARREN (2000) "The idiom principle and the open choice principle." *Text* 20:1, 29-62.
- ERMAN, BRITT (2006) "Non-pausing as evidence of the idiom principle." Conference paper presented May 20, 2007 in Joensuu, Finland. Abstract published in *Collocations and Idioms: The First Nordic Conference on Syntactic Freezes*. Joensuu, Finland, May 19-20, 2006, Joensuu: University of Joensuu.
- FAERCH, CLAUS AND GABRIELE KASPER (eds.) (1983) *Strategies in Interlanguage Communication*. Longman: New York.
- GAŁKOWSKI, BŁAŻEJ (2006A) „Kompetencja formułiczna a problem kultury i tożsamości w nauczaniu języków obcych.” *Kwartalnik Pedagogiczny* 4(202):163-180]
- GAŁKOWSKI, BŁAŻEJ (2006B) *Rules, Words and Prefabs: Formulaicity in Foreign Language Teaching*. Unpublished PhD dissertation. Warsaw University.
- GOZDAWA-GOLEBIEWSKI, ROMUALD (2003) *Interlanguage Formation: a study of the triggering mechanisms*. Warsaw, Poland: University of Warsaw Press.
- GRICE, H. PAUL (1989) *Studies in the Way of Words*. Harvard University Press.
- HALLIDAY, M. (1989) *Spoken and written language*. Oxford: Oxford University Press.
- JAMES, CARL. (1977) "Judgements of Error Gravities" *ELT Journal* Vol. XXXI 2 January, 1977. 116-124.
- JAMES, CARL. (1998) *Errors in Language Learning and Use: Exploring Error Analysis*. London: Longman.
- JOHANSSON, STIG. (1975) *Papers in Contrastive Linguistics and Language Testing*. Lund Studies in English 50. Claes Schaar and Jan Svartik, eds. CWK Gleerup, Lund.
- JOHANSSON, STIG. (1978). *Studies in Error Gravity: Native Reactions to Errors Produced by Swedish Learners of English*. Acta Universitatis Gothoburgensis: Göteborg.
- KACHRU, B. (1992) "Teaching World Englishes." In: Kachru, B. (ed.) *The Other Tongue: English Across Cultures*. Urbana: University of Illinois Press. 355- 367.
- KJELLMER, GOERAN (1991) "A mint of phrases." In: Aijmer, K., et al (eds.) *English Corpus Linguistics: Studies in Honour of Jan Svartvik*. London: Longman. 111-127.
- KRAMSCH, C. (1998) "The privilege of the intercultural speaker." In: Byram, M. and Fleming, M. (eds.), *Language Learning in an Intercultural Perspective*, Cambridge: Cambridge University Press. 16-31.
- LEECH, G. (1983) *Principles of Pragmatics*. London: Longman.
- LEWIS, MICHAEL (1993) *The Lexical Approach*. London: Language Teaching Publications.
- MOON, ROSAMUND (1998) *Fixed Expressions and Idioms in English*. Oxford: Clarendon Press.
- MYLES, FLORENCE, ROSAMOND MITCHELL, AND JANET HOOPER (1999) "Interrogative chunks in French L2: A Basis for Creative Construction?" *Studies in Second Language Acquisition* 21. 49-80.
- NATTINGER, J. R. AND J. S. DE CARRICO (1992) *Lexical Phrases in Language Teaching*. Oxford: Oxford University Press.
- NEUMEYER, FREDERICK J. (1998) *Language Form and Language Function*. Cambridge: MIT Press.
- OLSSON, MARGARETA (1977) *Intelligibility : an evaluation of some features of English produced by Swedish 14-year-olds*. Goteborg: Acta Universitatis Gothoburgensis.
- OXFORD, R. (2001) "Language learning styles and strategies." In: Celce-Murcia, M. (ed.), *Teaching English as a second or foreign language* (3rd ed.). Boston: Heinle & Heinle. 359-366.
- PAWLEY, ANDREW AND FRANCES SYDER (1983) "Two puzzles for linguistic theory: Nativelike selection and nativelike fluency." In: *Language and Communication*, Richards, J. C. and R. W. Schmidt (eds.). London: Longman. 191-226.

- RIFKIN, BENJAMIN (1995) "Error Gravity in Learners' Spoken Russian: A Preliminary Study." *The Modern Language Journal*, 79 IV, 477-490.
- RIFKIN, BENJAMIN AND FELICIA D. ROBERTS (1995) "Error Gravity: A Critical Review of Research Design." *Language Learning* 45:3 September 1995, 511-537.
- SELINKER, LARRY (1972) "Interlanguage." *International Review of Applied Linguistics*, Vol. 10:3, 1972. In: Richards, Jack C (Ed.). (1974) *Error analysis: Perspectives on Second Language Acquisition*. Essex: Longman. 31-54.
- SINCLAIR, JOHN (1991) *Corpus, Concordance and Collocation*. Oxford: Oxford University Press.
- SKEHAN, PETER (1989) *Individual Difference in Second-Language Learning*. London: Arnold.
- SKEHAN, PETER (1998) *A Cognitive Approach to Language Learning*. Oxford: Oxford University Press.
- TARONE, E. (1977) "Conscious communication strategies in interlanguage: a progress report." *On TESOL 1977*, TESOL, Washington.
- VAN HEST, ERNA (2000) "Analyzing Self-Repair: An Alternative Way of Language Assessment." In: Ekbatani, Glayol and Herbert D. Pierson (eds). *Learner-directed assessment in ESL*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- WRAY, ALISON (1999) "Formulaic language in learners and native speakers." *Language Teaching* 32: 213-231.
- WRAY, ALISON (2000) "Formulaic Sequences in Second Language Teaching: Principle and Practice." *Applied Linguistics* 21: 463-489.
- WRAY, ALISON (2002) *Formulaic Language and the Lexicon*. Cambridge: Cambridge University Press.
- WRAY, ALISON (2008) *Formulaic language: pushing the boundaries*. Oxford: Oxford University Press.