Phraseology

The periphery and the heart of language

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> Good leaders make people feel that they're at the very heart of things, not at the periphery (Warren G. Bennis)

Words mean things in the context of other words. Out of context, the default meaning of the word *leader* might well be a person who leads or commands a group, organization, or country, or an organization or company that is the most advanced or successful in a particular area. In the context of marketing, instead, it often appears in the collocation "loss-leader," referring to a commodity offered at cost or below cost to attract customers. But in British English (more so than American English), the word *leader* can also refer to a leading article or editorial, a preface such as this. The collocation "leader comment" appears 37 times in the British National Corpus, all occurrences being found in the register of broadsheet newspapers reporting national affairs.

Leaders in our realization of the inseparability of lexis and linguistic context of usage were Firth, Fries, and Harris. Firth's words are engrained in our memories: "You shall know a word by the company it keeps" (Firth 1957). Quotations such as this become entrenched in our minds. Its meaning is at the core of Structuralist linguistics which explored language as a self-contained relational structure, whose elemental constructions derive their forms and functions from their distributions in texts and discourse. Fries, the founder of the English Language Institute at the University of Michigan, distinguished between lexical and structural meaning, with structural meaning concerning the patterns relating a particular arrangement of form classes to particular structural meanings. In this view, language acquisition is the learning of an inventory of patterns as arrangements of words with their associated structural meanings. Fries' (1952) *Structure of English* presented an analysis of these patterns, Roberts' (1956) *Patterns of English* was a textbook presentation of Fries' system for classroom use, and *English Pattern Practices, Establishing the Patterns as Habits* (Fries, Lado & the Staff of the Michigan English

Language Institute 1958) taught beginning and intermediate EFL students English as patterns using audiolingual drills. Harris (1955, 1968), founder of the first US linguistics department at the University of Pennsylvania, developed rigorous discovery procedures for phonemes and morphemes, based on the distributional properties of these units. For Harris too, form and information (grammar and semantics) were inseparable. He developed mathematical analyses of sequences or ntuples of word classes (plus invariant morphemes) in order to specify subsets of sentences that are formally alike. Operator Grammar, a mathematical theory of how language carries information, is the culmination of his lifelong continuation of this work. It proposes that each human language is a self-organizing system in which both the syntactic and semantic properties of a word are established purely in relation to other words, and that the patterns of a language are learned through exposure to usage in social participation (Harris 1982, 1991).

What in the 1950s were known as structural patterns would today also be referred to by other names – "constructions" or "phraseologisms". Constructions, a term used in Cognitive Linguistic circles, are form-meaning mappings, conventionalized in the speech community, and entrenched as language knowledge in the learner's mind. They are the symbolic units of language relating the defining properties of their morphological, syntactic, and lexical form with particular semantic, pragmatic, and discourse functions (Croft 2001; Goldberg 1995, 2003, 2006). The term phraseologism, more the currency of Corpus Linguistics, adds an additional statistical emphasis to its definition as the co-occurrence of a lexical item and one or more additional linguistic elements which functions as one semantic unit in a clause or sentence and whose frequency of co-occurrence is larger than expected on the basis of chance (Gries in press; Howarth 1998a).

Consider *lead* again. As a verb, the first meaning that comes to mind out of context is transitive – to cause an animal to go on by holding them with a hand or halter while moving forward. In conversation and fiction, the subject is usually animate, as is the object: in BNC fiction, people lead things like horses, men, and soldiers (Davies 2007). But in academic prose, where *lead* occurs roughly three times more often, 99% of full noun subjects are inanimate and abstract, and this "activity" verb commonly has a causative or facilitative sense (Biber et al. 1999). Its typical pattern then is [cause *leads to* effects]. It is a common structure in academic spoken language too (Simpson et al. 2002), where cause is some policy, process, decision or tendency, and effects can be abstract, like problems, good, victory, and conflict, or concrete like respiratory failure, or cell survival. In many ways it operates like the verb *cause*. But not in all ways. First, syntactically, *lead to* is not used with human subjects and does not appear in the passive. Second, semantically, *lead to* is less direct than *cause*, implying a series of steps between cause and effect. And third in terms of its semantic prosody (Louw 1993). Con-

sider the alternatives "tourism may cause economic improvement" vs. "tourism may lead to economic improvement". The latter seems more felicitous. *Cause* (something causes an accident/catastrophe/other negative event) has a negative semantic prosody or association (Hoey 2005). Its general tendency is to co-occur with negative expressions; its deep objects (or effects) are overwhelmingly negative and thus it acquires this "consistent aura of meaning" from these collocates. The generalization comes from usage – there are no defining aspects of the meaning of *cause* which entails that it will take negative rather than positive objects. But *lead to* does not have this semantic prosody – the split between positive and negative objects for *lead to* are approximately 50/50 (Johns 2007). And thus, of our two alternatives above, we prefer *lead to* in describing the positive outcomes of economic improvement. The patterns of *lead* illustrate quite clearly how patterns of usage become ingrained in the language, how repeated pairings of particular morphological, syntactic, and lexical form become associated with particular semantic, pragmatic, and discourse functions. High type frequency gives generalization (Bybee & Thompson 2000) – the greater the ratio of negative to positive objects, the greater the negative prosody (Ellis, Frey & Jalkanen 2007a). High token frequency leads to increasing entrenchment and idiomaticity (Bybee in press; Ellis 2002a), from the semi-productive 'lead [someone] up/down the garden path', to the idiomatic, 'lead the life of Riley' or 'you can lead a horse to water but you can't make him drink'. There is structural patterning at all levels of language.

Structuralism was the dominant approach in linguistics for the earlier part of the twentieth century. It was overtaken in the 1960s by Generative approaches. Harris' student, Chomsky (1965, 1981) abandoned construction-specific rules and developed the Principles-and-Parameters approach, the general grammatical rules and principles of Universal Grammar. Grammar became top-down and rule-governed, rather than bottom-up and emergent. Constructions were no longer interesting for such theories of syntax – instead they were epiphenomena arising from the interaction of more fundamental and universal principles. Chomsky (1981) classified grammatical phenomena into the 'core' of the grammar and a 'periphery', where the core phenomena were those describable by the parameterized principles of Universal Grammar, and peripheral phenomena were those marked elements and constructions that are not widespread. Grammar was modularized, encapsulated, divorced from performance, lexis, social usage, and the rest of cognition. Patterns, structures, constructions, formulas, phraseology, all were peripheral.

A ProQuest-CSA search through Social Science publications over the last 50 years identifies just 53 papers relating to *phraseology* in the 1960s and 199 in the 1970s.

But then something happened. There were 529 in the 80s, and 709 in the 90s. Which thinkers and what ideas brought phraseology back to the centre of things?

Within *Core Theories of Grammar*, the leaders were Fillmore, Goldberg, and Croft. Fillmore (1988; Fillmore, Kay, & O'Connor 1988) argued that far from being peripheral, constructions were in fact central to the grammar. A main tenet of this approach was that the grammatical mechanisms needed to account for the grammatical periphery can also be used to account for the core phenomena. Goldberg's (1995, 2003) Construction Grammar argues that all grammatical phenomena can be understood as learned pairings of form (from morphemes, words, idioms, to partially lexically filled and fully general phrasal patterns) and their associated semantic or discourse functions: "the network of constructions captures our grammatical knowledge in toto, i.e. It's constructions all the way down" (Goldberg 2006: 18). There are close relations here with Functional linguistic descriptions of the associations between particular lexico-grammatical patterns and their systemic functions (their propositional, interpersonal, and textual semantics) (Halliday 1985; Langacker 1987, 2000). Coming from a typological perspective, Croft's Radical Construction Grammar (2001; Croft & Cruise 2004) rejects the idea that syntactic categories and relations are universal and argues instead that they are both language- and construction-specific. What is universal is the ways that meanings map onto form.[1]

Fifty years after Firth, *Corpus Linguistic* analyses of large collections of text have affirmed that natural language makes considerable use of recurrent patterns of words and constructions. Lexical context is crucial to knowledge of word meaning and grammatical role. Sinclair (1991: 100) led here, summarizing the results of corpus investigations of such distributional regularities in the *Principle of Idiom:* "a language user has available to him or her a large number of semi-preconstructed phrases that constitute single choices, even though they might appear to be analyzable into segments," and suggested that for normal texts, the first mode of analysis to be applied is the idiom principle, as most of text is interpretable by this principle.[2] Kjellmer (1987: 140) reached a similar conclusion: "In all kinds of texts, collocations are indispensable elements with which our utterances are very largely made". Erman & Warren (2000) estimated that about half of fluent

1. While there would be disagreement at the core, the growing recognition of constructions in language has prompted their analysis within generative approaches too (Culicover 1999; Jackendoff 1997).

2. Note that linguistic constructions are not *either* memorized formulas or open constructions, instead this distinction is a matter of degree. The phenomenon is entirely graded, depending upon frequency of usage (Ellis 2002a).

native text is constructed according to the idiom principle.[3] Comparisons of written and spoken corpora suggest that phraseological units are even more frequent in spoken language (Biber et al. 1999; Brazil 1995; Leech 2000).

But there are other external forces motivating the revival too. Phraseology binds words, grammar, semantics, and social usage, and research in these areas provides further support. *Cognitive Linguistics* (Croft & Cruise 2004; Langacker 1987, 2000; Robinson & Ellis 2008b; Taylor 2002) shows how language draws on basic cognition, on perception, attention allocation, memory and categorization, that it cannot be separated from these as a distinct, modularized, self-governed entity, that knowledge of language is integrated with our general knowledge of the world, and that language use and language function interact with language structure. Thus Phraseology resonates with a wide range of research areas within Cognitive Linguistics and Cognitive Science more generally. Cognition, consciousness, experience, embodiment, brain, self, and human interaction, society, culture, and history are all inextricably intertwined in rich, complex, and dynamic ways in language, so an understanding of language is incomplete without them.

Usage-based theories of language acquisition (Barlow & Kemmer 2000) hold that we learn constructions while engaging in communication, the "interpersonal communicative and cognitive processes that everywhere and always shape language" (Slobin 1997). They have become increasingly influential in the study of child language acquisition. They have turned upside down again generative assumptions of innate language acquisition devices, the continuity hypothesis, and top-down, rule-governed, processing, bringing back data-driven, emergent accounts of linguistic systematicities. *Constructionist theories of child language acquisition* use dense longitudinal corpora to chart the emergence of creative linguistic competence from children's analyses of the utterances in their usage history and from their abstraction of regularities within them (Goldberg 1995, 2003, 2006; Tomasello 2003, 1998). Children typically begin with phrases and they are initially fairly conservative in extending the use of the particular verb within them to other structures. The usual developmental sequence is from formula to low-scope slot-and-frame pattern, to creative construction. They learn words from phrases as much as phrases from words. Each of the language subsystems develops hierarchically by repeated cycles of differentiation and integration: "Language, as a complex, hierarchical, behavioral structure with a lengthy course

3. Note that idiomaticity is a graded phenomenon too. Think instead of a collocation-idiom continuum (Fernando 1996) with a variety of factors (their compositionality and syntactic, lexicosyntactic, and morphological flexibility) determining the degree of idiomaticity (Wulff submitted). Collocations and idioms are two poles of the very same thing, namely phraseological language.

of development . . . is rich in sequential dependencies: syllables and formulaic phrases before phonemes and features . . . , holophrases before words, words before simple sentences, simple sentences before lexical categories, lexical categories before complex sentences, and so on" (Studdert-Kennedy 1991: 10).

Psycholinguistic research demonstrates language users' exquisite sensitivity to the frequencies of occurrence of different constructions in the language input (Gernsbacher 1994) and to the contingencies of their mappings of form and meaning (MacWhinney 1987), and thus is clear testament of the influence of each usage event, and the processing of its component constructions, upon the learner's system. *Probabilistic and frequency-based theories* of language analyze how frequency and repetition affect and ultimately bring about form in language and how probabilistic knowledge drives language comprehension and production (Bod et al. 2003; Bybee & Hopper 2001; Ellis 2002a, 2002b; Hoey 2005; Jurafsky 2002; Jurafsky & Martin 2000). Collocations and formulaic sequences are processed more fluently than openly constructed language (Ellis, Frey & Jalkanen 2007a, 2007b; Ellis & Simpson-Vlach in preparation; Ellis, Simpson-Vlach & Maynard in preparation). *Cognitive theories of categorization and generalization* show how schematic constructions are abstracted over less schematic ones that are inferred inductively by the learner in acquisition (Harnad 1987; Lakoff 1987; Taylor 1998).

Phraseological analyses demonstrate that much of communication makes use of fixed expressions memorized as formulaic chunks, that language is rich in collocational and colligation restrictions and semantic prosodies, that the phrase is the basic level of language representation where form and meaning meet with greatest reliability, that formulaic sequences play a central role in child language acquisition, and that fluent language users have a vast repertoire of memorized language sequences (Ellis 1996; Granger & Meunier in press; Pawley & Syder 1983; Sinclair 1991, 2004; Wray 2002). The unit of language is "the phrase, the whole phrase, and nothing but the phrase" (Sinclair 2005). The phrase is at the centre of language, and thus calls the attention of the broad range of language sciences.

What of the phrase in second language acquisition and instruction? What of those early theories of Fries and colleagues concerning phrases and other structural patterns? How have they fared over the last 50 years? In *SLA Description and Theory* they have cropped up repeatedly under various guises as holophrases (Corder 1973), prefabricated routines and patterns (Hakuta 1974), formulaic speech (Wong-Fillmore 1976), memorized sentences and lexicalized stems (Pawley & Syder 1983), lexical phrases (Nattinger 1980), formulas (R. Ellis 1994; McLaughlin 1995), chunks (Ellis 1996), and constructions (Ellis 2003, 2006). There has never been more interest in second language phraseology, as recent reviews in applied linguistics (Cowie 1998; Granger & Meunier in press; Schmitt

2004; Wray 2002) and cognitive linguistics (Gries & Wulff 2005; Robinson & Ellis 2008b) make clear. In *Testing*, the novice stages of adult language acquisition are characterized in the ACTFL Oral Proficiency guidelines as "relying heavily on learned phrases or recombinations of these" (American Council on the Teaching of Foreign Languages (ACTFL) 1999: 8). Phraseology features centrally in special purposes tests, for example the International Civil Aviation Organization language proficiency requirements establishes clear minimum proficiency level ~~requirements~~ for native and non-native speaking flight crew members and air traffic controllers in the use of both plain language and ICAO phraseologies (Mathews 2004). Every genre of English for Academic Purposes and English for Special Purposes has its own phraseology, and learning to be effective in the genre involves learning this (Swales 1990). Lexicographers develop their learner dictionaries upon large corpora (Hunston & Francis 1996; Ooi 1998) and dictionaries focus upon examples of usage as much as definitions, or even more so. In *Instruction*, Nattinger & DeCarrico (1992) argue for the "lexical phrase" as the pedagogically applicable unit of pre-fabricated language, "for a great deal of the time anyway, language production consists of piecing together the ready-made units appropriate for a particular situation and ... comprehension relies on knowing which of these patterns to predict in these situations. Our teaching therefore would center on these patterns and the ways they can be pieced together, along with the ways they vary and the situations in which they occur" (Nattinger 1980: 341) The Lexical Approach (Lewis 1993), similarly predicated upon the idiom principle, focuses instruction on relatively fixed expressions that occur frequently in spoken language. Corpora now play central roles in language teaching (Cobb 2007; Römer in press; Sinclair 1996). Phraseology is everywhere in current SLA research.

Yet, at the same time, there are many gaps in our understanding. Despite formulas being "one of the hallmarks of child second language development" (McLaughlin 1995) and, as the ACTFL guidelines demonstrate, their being central in novice adult learners' second language, advanced learners of second language have great difficulty with nativelike collocation and idiomaticity. Many grammatical sentences generated by language learners sound unnatural and foreign (Granger 1998; Howarth 1998b; Pawley & Syder 1983). This dissociation with proficiency suggests that the formulaic knowledge of the novice is different from that of the fluent language user, and is created differently. There are several consequences.

The first relates to explicit and implicit knowledge and their interface. Many of the novice's formulas are explicitly learned (N. C. Ellis 1994b) as wholes, fast mapped as declarative memories like other aspects of vocabulary (N. C. Ellis 1994a), whereas the graded statistical knowledge of sequences that underpins much of collocation knowledge is implicitly acquired from usage, with the system

requiring hundreds of hours of usage for its appropriate tuning (Ellis 2002a, in press). The relations between explicit and implicit knowledge and their interface is as important for formulaic language as it is for other aspects of SLA (Ellis 2005), and the resolution of these issues lies at the core of second language instruction.

The second relates to language transfer. Languages lead their speakers to experience different 'thinking for speaking' and thus to construe experience in different ways (Slobin 1996). Learning another language involves learning how to construe the world like natives of the L2, 'rethinking for speaking' (Robinson & Ellis 2008a), and transfer affects L2 phraseology at numerous levels (Ellis 2007; Gass & Selinker 1983; Kellerman 1995; Odlin 1989; Neff van Aertselaer this volume; Paquot this volume).

The third relates to the ways in which schematic constructions are abstracted over less schematic ones inductively in acquisition, and how prototypicality of meaning and type and token frequency conspire in determining which formulaic patterns are learned first and how generalized productive schema then emerge around them. Research suggests that category learning is optimized by an initial, low-variance sample centered upon prototypical exemplars. We learn about the category of birds, for example, better if we are first exposed to typical birds like sparrows, thrushes, and blackbirds, than if our initial experience is of diverse exemplars like ostriches, penguins, and humming-birds. This allows us to get a 'fix' on what accounts for most of the category members. Zipf's law describes how a few words in the language occur very often while many others occur rarely. Consequently, the more input of a language we get, the more salient the common words become. Goldberg (2006) proposes that Zipf's law applies within individual construction profiles too, so their learning as categories by children is optimized because there is one very high frequency exemplar that is also prototypical of their meaning (e.g., the [Subj V Obj $Obl_{path/loc}$] construction is exemplified in the children's speech by *put* 31% of the time, *get* 16%, *take* 10%,and *do/pick* 6%). This profile closely mirrored that of the mothers' speech to these children (with, e.g., *put* appearing 38% of the time in this construction that was otherwise exemplified by 43 different verbs). These important insights have led us at least (Ellis in press; Ellis, Ferreira Junior & Ke in preparation; Robinson & Ellis 2008b) to consider how one cannot understand second language acquisition without considering the combined effects of form-meaning correspondences, construction types and tokens and their distributional properties, and prototypicality effects.

Phraseology 2005 (the "Many Faces of Phraseology") conference in Louvain in 2005 organized by Sylviane Granger and Fanny Meunier was an important landmark in that it was truly interdisciplinary, bringing together research specialists from the range of approaches which I have outlined in this preface. Only in the interactions of these fields will we understand second language acquisition

and the instructional implications that ensue. The chapters that follow here, first discussed at that conference, concern these important themes of second language learning of formulaic language, its analysis in learner corpora, its limitations, its susceptibility to transfer, and, particularly, the types of support which might be given to learners through appropriate instructional methodologies, materials, digital resources, and dictionaries. They make it clear that phraseology pervades theoretical, empirical, and applied linguistics. Like blood in systemic circulation, it flows through heart and periphery, nourishing all.

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