

# 11 Teaching *Linguistic Approaches to Nonliteral Language*

or

## We really knew how to have fun

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### 11.1 Introduction

In fall 1997, I was ready for a change in the life of work, when an advertised position as visiting guest professor at a small, liberal arts college 2,100 miles away from Los Angeles, where I lived, began to appear and reappear in my email. At first it seemed an unlikely prospect. The job description was to teach four courses in the newly formed linguistics programme from February to June at this institution, sometimes called the ‘Harvard of the Midwest’. For some time, as a faculty member in a department of neurology of a medical school, teaching had been the least of my activities, and I was acutely aware that I missed teaching. I had been earning my keep performing clinical service as a speech pathologist in a Veterans Administration outpatient clinic and at the University Hospital, as well as submitting a continuous stream of grant proposals to fund our ‘Neurolinguistics and Speech Science’<sup>1</sup> research laboratory. Of the academic triad – clinical service, research and teaching – my energies were well captured by the first two. In the clinic and research lab, the teacher in me enjoyed working with student interns and research assistants, but the thrill of developing a syllabus and pursuing a semester-long set of ideas in class week after week, chalk in hand, was not to be.

The research laboratory had the benefit of unlimited patient visits to the rehabilitation facility and extraordinary referrals to the tertiary care university hospital. A rich variety of disorders was represented: aphasia,<sup>2</sup> motor speech and voice impairments, right hemisphere disease, and an exotic sampling of neurobehavioural cases: agnosias, apraxias and other cognitive disabilities. We had only to obtain

permission from the human subjects protection committee to pursue research topics of interest. A consistent observation reappeared in a variety of guises across all kinds of speech and language disorders, whether mild, moderate or severe: 'automatic speech' is preserved.

Automatic speech is the older term, popularized by the nineteenth-century neurologist, J. Hughlings Jackson (1874a, b), for overlearned, stored and memorized, familiar and known expressions, or, more generally, any speech that is not newly created using linguistic rules. Most people observing aphasia have identified this preserved ability (Bay 1962, 1964a, b; Critchley 1970; Pick 1973; Head 1926; Luria 1966, 1970; Goodglass and Mayer 1958<sup>3</sup>). It is striking to see a severely language-disabled individual counting fluently from one to ten and enunciating the days of the week with normal articulation and prosody.<sup>4</sup> In addition to the universally present serial speech, the majority of aphasic patients retain a set of formulaic expressions that they use: *Hello, how are you, thank you, well, ya know, that's about all, I guess so*. Recitation of nursery rhymes, poems and prayers, different ones for different people, is usually intact. Most patients swear and emit interjections, such as *gee, oh, dear, godsakes, gosh* and *wow*. The repertory in any language of such expressions is quite large,<sup>5</sup> such that each patient has a unique set. Singing familiar tunes – 'Happy Birthday' and 'Jingle Bells' – is often impressive. In the nonfluent speaker, the contrast in competency between halting, effortful, distorted novel utterances and fluent, normal-sounding, well-articulated formulaic expressions is dramatic. In fluent aphasic speakers, identifiable idioms and speech formulas appear among the otherwise incomprehensible neologisms<sup>6</sup> and jargon.

My interest in this phenomenon, beginning in graduate school, had spilled over into several studies through the years (Van Lancker 1973, 1987, 1990; Van Lancker and Bella 1996; Van Lancker and Canter 1981; Van Lancker and Kempler 1987). During the 1990s, Daniel Kempler and I developed a clinical protocol for evaluation of idiom recognition (Kempler and Van Lancker 1996). The notion of 'automatic speech' had expanded to include conversational speech formulas, idioms, proverbs, conventional expressions and so on. These have in common that they are not newly generated and they ordinarily do not subscribe to usual grammatical and lexical semantic processes,<sup>7</sup> and are thus often characterized as 'nonliteral'. So when the director of the linguistics programme at Carleton College, Professor Michael Flynn, hired me as 'Benedict Distinguished Visiting Professor' and asked me to choose a course title and content, my response was immediate (see Figure 11.1).

In the 1990s, generative grammar (Chomsky 1965; Pinker 1995<sup>8</sup>) was dominant in linguistics, so that studies of holistic, unitary expressions making up formulaic language, however ubiquitous and vital in everyday language use, were far from mainstream. There was no accepted term for these expressions, further handicapping progress in establishing a field of study. Nonetheless, fragments of evidence that normal language competence includes a separate facility for commonly shared

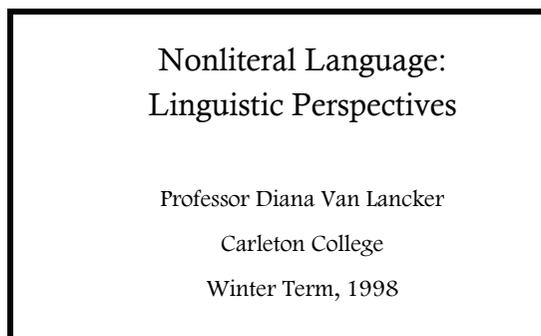


Figure 11.1. Flier for new course offering

fixed expressions had emerged in psychology, sociology, second-language learning, child development, literary criticism, corpus studies, journalism and the media, old-fashioned phraseology and, given the observations mentioned above, behavioural neurology. I had been scouting these outcroppings over many years, and now saw the opportunity to stitch them together into an official course. It seemed like this just might be almost more fun than humanly possible. I listed the topics (Table 11.1) on the syllabus and prepared to begin. As will be seen, due to the vibrant nature of formulaic language as a dynamic aspect of linguistic competence, many other topics and themes arose in the course of the semester.

Table 11.1 Proposed topics for the course

- 1 Typology of nonliteral expressions
- 2 Popular examples in everyday life
- 3 History of nonliteral language studies
- 4 Structure of nonliteral expressions
- 5 Linguistic modelling
- 6 Second language studies
- 7 Cognitive theory underlying study of nonliteral expressions
- 8 Psycholinguistic studies
- 9 Neurolinguistic studies
- 10 Right hemisphere role
- 11 Laterality versus the cortical/subcortical axis
- 12 Integrating cerebral function and linguistic structure

The class began with definitions and properties of formulaic expressions discussing, as the syllabus indicated, 'The typology of nonliteral expressions'. Having tested experimental subjects on various idiom protocols, I had discovered that people are quick to recognize these kinds of language. Give them a few examples of

speech formulas (*Better luck next time*), idioms (*He kept a stiff upper lip*) or proverbs (*While the cat's away, the mice will play*) and they are nodding and smiling with appreciation of the genre. We noted that, without linguistic training, speakers easily recognize something about the role of these expressions. Insights centred on the need for mastery of these expressions to get by in social situations and to sound like a native speaker (Fillmore 1979; Pawley and Syder 1983). Jack Olson's journalistic study of female clerical workers quoted one as saying:

Most of my life had been spent completely alone, and I knew none of the code responses of young people. I didn't know what to *say*. Like when somebody comes up to you and says, 'How you doing, kid?' you're supposed to say something back, you're supposed to know a code answer. But I didn't make the proper responses because I didn't know them. I would have given anything to know them! (Olson 1972: 145).

## 11.2 Ubiquity of formulaic expressions

In the first week, our goal was to acknowledge the large presence of familiar nonliteral expressions in social settings. In order to become acquainted with the topic, students brought in utterance samples heard in the dormitories and around campus. Going over student submissions provided the class with instant entertainment, which seemed to arise from awareness of their common knowledge of the expressions. Each new contribution was met with vocal assent and interjections of appreciation, and, in some cases, hoots and hollers. The sharing of formulaic expressions seemed to breed a special solidarity among the students. On the other hand, lively amusement arose whenever the 'over thirty' instructor did not know an expression. Interestingly, the students did not expect me to know certain ones, such as *phat with ph*, meaning *cool* or (as we used to say) *hip*, which had just begun to make the rounds. The list of formulaic expressions gathered by class members at Carleton College in the winter of 1998 is presented in Table 11.2.

Table 11.2 Formulaic expressions contributed by students as heard in daily communicative interactions

(blank) has to do with (blank)	Are you going to eat that?
A few fries short of a happy meal.	Are you okay?
A few screws loose.	As sick as a dog
A long day.	At any rate
A picture's worth a thousand words.	Bats in the belfry
A red-letter day.	Biggest toad in the puddle
A stitch in time saves nine.	Black sheep
A watched pot never boils.	Break a leg.
All smooth sailing from there.	Can I come in?
Are they still an item?	Can you pass the napkins?

Cat's in the bag!	He's gone round the bend.
Cat's pyjama's	He's in the doghouse.
Caught red handed	He's interested in her.
Cold feet	He/she/that kicks ass!
Cool it.	Heart of gold
Cut-cheese and blow-nose	Heaven help us.
DBSD	Hit the head
Dip	How are you doing?
Do you have your keys?	How are your classes going?
Dog eat dog	How does that grab you?
Don't bite the hand that feeds you.	How was break?
Don't count your chickens before they hatch.	How's it going?
Don't cry over spilled milk.	How's it hanging?
Don't have a cow.	How's life?
Don't let the bedbugs bite.	Hurt like a bitch
Don't put all your eggs in one basket.	I booked it across the parking lot.
Don't shit in the nest.	I do.
Drive safe.	I have to piss like a racehorse.
Eat shit and die.	I was like '...'
Even monkeys fall from trees. (Japanese)	I was out of pocket at the time.
Fish out of water	I'll be there with bells on.
Flex (to leave)	I'll give you a piece of my mind.
Flip the patty.	I'm at the end of my rope.
Fools go where angels fear to tread.	I'm cooking with gas.
Fuck you!	I'm not crazy about it.
Get a little of your own back.	I'm on cloud nine.
Get your swerve/freak on.	I'm sorry.
Gets your goat.	I'm there.
Go figure.	I've been running around all day.
Go for the whole kielbasa.	I've been running in circles all day.
Go postal	I've got you wrapped around my finger.
Go to hell.	I've had it up to here with that kind of thing.
Green with envy	If the shoe fits, wear it.
Hang on.	If wishes were horses then beggars could ride.
Have a butchers (look – Cockney)	In a nutshell.
Have a granny (look – Cockney)	In the bag
Have you ever had...?	Is that you?
Having a full day	It just isn't me.
He has got a snowball's chance in hell.	It's all fun and games until someone loses an eye.
He hates my guts	It's all good.
He knows how to push my buttons.	It's dark over here.
He ripped me off.	It's Greek to me.
He was born with a silver spoon in his mouth.	It's like pulling teeth.

It's raining buckets.  
 It's raining cats and dogs.  
 It's really pissing down. (raining hard)  
 It's the tail wagging the dog.  
 It's way over my head.  
 Just in the nick of time.  
 Keep plugging away.  
 Keep your eyes peeled.  
 Knock on wood.  
 Knowing is half the battle.  
 Left and right  
 Let sleeping dogs lie.  
 Life's a bitch and then you die.  
 Like  
 Like three peas in a pod.  
 Look before you leap.  
 Mind your p's and q's.  
 My virgin ears  
 Never eat the seed corn.  
 Nice one.  
 Now you see it...  
 Off the hook  
 Oh boy oh boy!  
 Oh well.  
 Peace out dog.  
 Phat  
 Plates of meat (feet – Cockney)  
 Pull the rug out from under us  
 Quit cold turkey.  
 Red herring  
 Rejecting the mold  
 Roll with it.  
 Rome wasn't built in a day.  
 Same shit, different day.  
 Same shit, different shovel.  
 Scary!  
 Screw the pooch.  
 See ya later!  
 She likes to burst my bubble.  
 She screwed me over.  
 She was hanging around the house.

She went ape-shit.  
 Shit happens.  
 Shit.  
 Shoot for the stars.  
 Shoot the shit.  
 Shut your cakehole.  
 Sleep with one eye open  
 Snapping dogs off lampposts (it's cold out)  
 Snug as a bug in a rug  
 Sour grapes  
 Sweet tooth  
 Sweet!  
 Swingin'!  
 Take it with a grain of salt  
 That bites.  
 That's a blast.  
 That's going to need some elbow grease.  
 The buck stops here.  
 The cat's out of the bag.  
 The early bird catches the worm.  
 The flip side of the coin  
 The needle becomes a stick. (Japanese)  
 They don't go in for that much.  
 They put two and two together.  
 They [jalapenos] make my head pop off.  
 Think outside the box  
 This city is hopping.  
 This sucks!  
 This vacuums.  
 Throw in the towel  
 Time flies when you're having fun.  
 To come full circle  
 underdog  
 Unhh...  
 Up the old ballet dancers. (go upstairs to bed –  
 Cockney)  
 We don't need any comments from the peanut  
 gallery.  
 What does that have to do with the price of eggs in  
 China?  
 What goes around, comes around.

What's up?	You can say that and hold one foot in the fire!
Whatever trips your tree.	You look blue.
Whatever.	You lucky dog
Where have you been all my life?	You're a fag.
Yeah, you're really fishing around here.	You're going to catch your death of cold.
You betcha.	You're playing with fire.

### 11.3 Origin and other matters

We posed questions about formulaic expressions. How are they learned? How are they comprehended in distinction to literally intended utterances, especially when both meanings are plausible? The notion that the listener first considers a possible literal interpretation, finds it not to match the current context and moves to a look-up list was discussed. How do speakers know to produce these utterances exactly correctly (as they must be), including using a certain intonation? Students quickly grasped the role of sociolinguistic features of register (formality, politeness, etc.), cohort, and other parameters determining where and when these utterances can occur.

We discussed the provenance of fixed expressions. Indeed, we reflected, they all come from somewhere. The idea arose that the students could invent some expressions, or borrow items not yet current in the American Midwest from other geographical locations, and attempt to ignite their use around the campus. Candidates were proposed: *Smaller than a moth's ear*, *I'm colder than an Eskimo without a coat*, for which the meanings were more or less clear. We preferred to select a candidate with a nonobvious meaning. Thinking about launching fresh, new formulaic expressions onto the campus, we prepared a table glossing the proper meaning or usage of our invented formulas (Table 11.3).

Table 11.3 Invented formulaic expressions

<i>Invented term</i>	<i>Example or meaning</i>
Sexcellent	That girl/boy is excellent.
Could you spell that for me?	What?
It's a ticker tape parade out there.	It's snowing really hard.
A monkey's bum	'It's hot/cold enough in here to boil/freeze...'
That's flat, man.	Harsh, cold, cruel, evil – 'A pop quiz? That was so flat!'

Shiva	Holy Shiva (Hindu god of destruction) or Holy Kali
B.C.	Initials of current president (Bill Clinton) – ‘I B.C.’d my way out of it.’ ‘I pulled some B.C. and nobody noticed.’
Flash	Leave/go – ‘Are you ready to flash?’ ‘Let’s flash.’
Green	Set or ready – ‘We’re green.’
Hit the snooze.	Catch oneself from falling asleep – ‘That class was so boring, I must have hit the snooze 20 x.’
PMS	Post-Marriott sickness
Da da da	Say when there’s a quiet moment in conversation.
I’m not going to eat any more Marriott fish.	I’m not going to take it any more.
Get/look spanky	To dress to be sexually appealing
She’s apples.	Australian response to ‘How’s it going?’
Fresh! Badd!	Terms from the 1980s
He’s fruit and cake.	West Coast saying
Flex	Leave – ‘She had to flex.’
She/he’s so 7-11	A promiscuous person
I can’t tell if it’s God’s gold or Satan’s scribble	It’s Greek to me.
Can I have the time?	Instead of ‘Do you have the time?’

The class voted on which expressions to adopt for the dissemination ruse. Figure 11.2 shows numbers of students voting for 8 expressions chosen from the list. The winner was B.C., with ‘Get/look spanky’ and ‘That’s flat’ as close second choices.

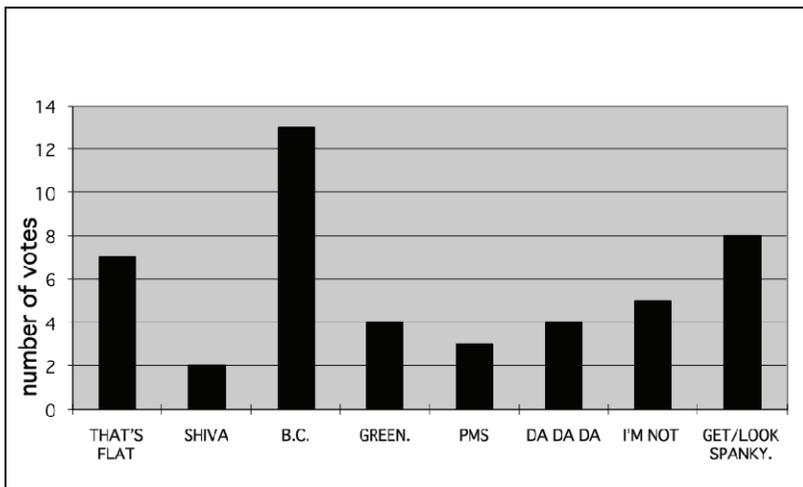


Figure 11.2 Numbers of votes (on ordinate) for proposed invented expressions

Students agreed to use the expression 'B.C.' in appropriate contexts during regular conversation, and at the end of the semester the class would assess the success of artificial formulaic propagation.

#### 11.4 Previous literature on formulaic language

We surveyed linguistic mention about any type of utterance that was not strictly newly created. Most of these early comments had been lost to current thought about language structure. In his one-time popular *Introduction to theoretical linguistics*, John Lyons (1968) recommended separate analysis of 'ready-made utterances', which he described as being learned as a whole and passed on from one generation to the next. These were distinguished from newly created expressions, he stated, and are 'not profitably regarded as sentences... Their internal structure... is not accounted for by means of (grammatical) rules' (p. 177). Otto Jespersen in his 1933 text *Essentials of English grammar* described the 'important distinction between formulas or formular units and free expressions' that 'pervades all parts of the grammar' (p. 18). He proposed that formulas are 'felt and handled as a unit' and that they therefore may involve different kinds of mental activity (pp. 19-21). We looked in many places for perspectives on our topic. In a chapter called 'Collocation and commonplace knowledge', Tyler (1978) discusses certain kinds of speech occurring 'as whole units which we do not, on every occasion of their use, assemble from their component words' (p. 230). Tyler goes on to say that the usual meanings of the words are not used to process an idiom. The class read about irreversible binomial expressions such as 'pepper and salt', and trinomials such as 'red, white and blue' (Malkiel 1959; Cooper and Ross 1975) and about the currently popular discussions of indirect speech acts; conventionalized utterances were seen to routinely communicate a different – a nonliteral – meaning (Searle 1975; Sadock 1974; Lewis 1969).

We considered passages where writers from different disciplines mentioned two types of language processes, corresponding roughly to novel and formulaic. The linguist Dwight Bolinger often alluded to memorial processes in language use (1976, 1977) as distinct from newly generated expressions. The psychologist Lounsbury (1963) had outlined the differences between novel and formulaic expressions quite succinctly:

Of two constructions made according to the same pattern, one may be an *ad hoc* construction of the moment and the other may be a repetition or use of one coined long ago, often heard, and much employed as a whole unit, e.g., as an idiom, a cliché... It is apparent that as behavioral events they are quite different and that in some sense their psychological statuses and in the actual speaking behaviour may be quite different (1963: 561).

## 11.5 Properties and typology

Table 11.4 presents characteristics which are unique to formulaic expressions, or occur in greater degree than seen in literal expressions.

Table 11.4 Properties and characteristics of formulaic expressions

- Cohesion, unitary structure, holistic, strong coherence of items
- Stereotyped form, including prosody
- Conventional meaning
- Flexibility of form, leading to flexibility of meaning
- Schemata, with slot-filler format
- Incomplete parts sufficient to cue the entire expression
- Portions of utterances serve to keep speech fluent
- Introductory parts to begin utterances<sup>9</sup>
- Literal *or* figurative meanings (figurative meaning not required)
- Often highly context-bound (social and linguistic context)
- If ditropic<sup>10</sup> meanings, literal use is less likely or common
- Affective and attitudinal content usually present
- Evaluative (approval, disapproval) content often present.
- Require heavy inferencing<sup>11</sup>
- Involve pragmatic factors such as conversational postulates
- Carry innuendo of group membership, social commitment revealed
- Establish register or 'formality' index
- Contain archaic or extremely rare lexical items<sup>12</sup>
- Words used in nonstandard ways<sup>13</sup>
- Archaic or odd grammatical forms<sup>14</sup>
- Indefinite reference<sup>15</sup>

Formulaic expressions can be classified according to structure, usage, content, context, function and/or type. Idioms, for example, are relatively context free and utilize lexical items nonliterally. Proverbs are generally in the present tense and point toward a generalized meaning. Many conversational speech formulas are just that – phrases that occur in conversation, are highly situation-bound, and can be either literal or nonliteral in meaning (Goodwin 1981; Schegloff 1998; Tannen 1980). The difficulty of having rigid categories became clear.

## 11.6 Incidence question: How many in a day?

At this time, studies of actual speech examined as texts and in naturalistic corpora were underway (Halliday and Hasan 1976; Svartvik and Quirk 1980) and certain

estimates of recurrent combinations of words, indirectly indexing different kinds of formulaic expressions, were in print (Altenberg 1998; Sinclair 1987; Strässler 1982; Moon 1998a, b; Cowie 1992). Students had brought in samples of formulaic expressions continuously through the first half of the quarter, bearing witness to a subjective sense of their magnitude in everyday language use (Table 11.2). Questions arose amongst us about actual incidence. How many formulaic expressions did a given student use or hear each day? Was the number something like 10? Or was it nearer to 200? We entertained various suggestions for making objective measures: a few students volunteered to ‘wear a wire’ throughout the day, for example, and to audio-record and transcribe all conversations. The legal, logistical, and practical implications of this were daunting, if not prohibitive.

Somehow we hit upon the idea to count the number of formulaic expressions used in a film. The class agreed to select a date for ‘Movie Night’. A film on videotape would be projected over the digital projector system and the entire class would write down every formula heard in the dialogue. We would then collate these responses and determine the number of formulas per minute of film action. A hearty debate arose around which film to select. I had not heard of most of the films on the list (see Table 11.5), and some of the titles worried me a bit, given thoughts about the instructor’s position as implicit moral authority and explicit role model.

Table 11.5 Films from which to choose for a group project

Clueless
Wayne’s World
Beavis and Butthead Do America
Swingers
The Princess Bride
Monty Python and the Quest for the Holy Grail
Ferris Bueller’s Day Off
Clerks
The Breakfast Club
Austin Powers
Some Like It Hot

Lack of class consensus led to a rating exercise. Students rank ordered their first, second and third preferences (Figure 11.3).

As can be seen in Figure 11.3, *Swingers* and *Austin Powers* gained the most votes. I previewed the Austin Powers movie in the privacy of my own home, and although the star’s frequent outburst of ‘Yeah, Baby!’ provided an outstanding example of unique intonation and voice on the formulaic utterance (features we had discussed), I judged the overall ambience as too raucous. I cannot remember why I

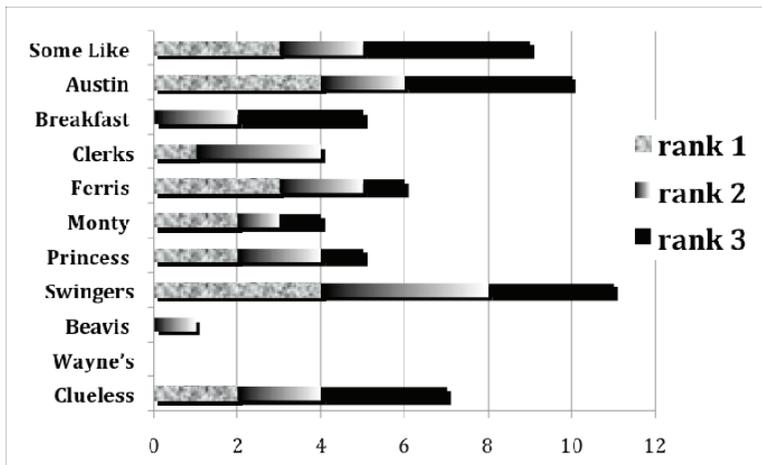


Figure 11.3 Student votes for 11 proposed films to use in class project

rejected *Swingers*. I settled on the third class pick, *Some Like it Hot*, and several students assured me that it was a classic film and very humorous.

I reserved a classroom with a digital projector and screen for an evening time slot, and Movie Night was scheduled. As incentive to appear, a listing of preferred snacks was obtained, later annotated with special preferences by those with strong opinions on the topic. Most students attended Movie Night. Writing tablets and utensils were provided and we rolled the film. Everyone watched intently and wrote down formulaic expressions as they emerged in the dialogue. The lists were handed in at the end of the evening and collated for discussion the next day. In class, we did our best to categorize the expressions in terms of how many students identified each item and its classification as formula, idiom or proverb. This method did not allow us to account for repetitions of utterances; we tabulated unique instances only. The total count was 276 formulaic expressions in a film lasting 122 minutes, resulting in an average of 2.3 formulaic expressions per minute.

### 11.7 Linguistic and psycholinguistic modelling

It became apparent that the standard generative theory in linguistics of constituent structure and transformational rules did not accommodate idioms and other formulaic expressions very well. The few attempts to enfold idioms into the generative model were unconvincing. Weinreich (1969) had called idioms ‘an unfashionable topic’ and a ‘basic theoretical stumbling block’ (1969: 23) within current linguistic approaches. Chafe (1968) viewed idioms as anomalous, suggesting that other descriptive methods were required for them. Katz (1973) identified ‘idiomaticity’ as a property of language distinct from ‘compositionality’, a notion carried forward by

Bolinger (1977) and by Fillmore, Kay and O'Connor (1988) in their treatment of the persistent idiomaticity of the expression 'let alone'.

Treatments of alleged degrees of frozenness in idioms, as an inroad into a structural description, proliferated (Gibbs, Nayak and Cutting 1989). While Fraser (1970) proposed that relative fixedness of idioms was related to which transformations they could undergo, Cutler (1982) suggested that the proposed frozenness parameter may actually reflect the age of the expression. But the notion of degrees of frozenness itself, if it were to be seen as any stable metric, was severely challenged by contradictory reports arising from linguistic analyses and psycholinguistic performance measures. Linguistics studies blended into psycholinguistics studies, as questions about native speaker competence were cast into measures of performance. Numerous experiments by Gibbs and his colleagues (1980, 1994; Nayak and Gibbs 1990) and others strove to uncover mental processing for idioms and their constituents (Cutting and Bock 1997; Titone and Connine 1994; Cacciari and Tabossi 1993). Extensive analyses of idioms and their semantic processes appeared, each proposing criteria for degrees of compositionality and semantic transparency (Burgess and Chiarello 1996; Nunberg, Sag and Wasow 1994; Cacciari and Tabossi 1988, 1993; Estill and Kemper 1982; Gibbs and Gonzales 1985) as well as determining the effects of context and familiarity on listeners' judgments (Bobrow and Bell 1973; Schweigert 1986). Some classified the idiom as a fixed lexical item (Heringer 1976; Swinney and Cutler 1979) while others disagreed (Burt 1992; Gibbs 1994). The results of subject testing were inconsistent and discrepant, which likely arose from varying task demands in metalinguistic procedures, so that a definitive model of idiom structural properties did not emerge (see review in Van Lancker Sidtis 2006).

While structural descriptions within the large set of idioms remained controversial, psychological studies revealed reliable, gross performance differences between formulaic and novel exemplars (Horowitz and Manelis 1973; Osgood and Housain 1974; Swinney and Cutler 1979; Pickens and Pollio 1979). In these studies, subjects could recall individual words from novel expressions more successfully than the same words presented in formulaic expressions. Simon's (1974) article outlining memory processes gave credence to the concept of 'chunks' as units of processing containing different numbers of elements. Simon (1974) demonstrated that when people are asked to remember and recall a list of items, the number of recallable items – or chunks – is nearly the same for syllables, words, compound words and idiomatic phrases.

A few hints had emerged to suggest that motor speech and prosodic processes differ for the two types of language. Lieberman (1963) demonstrated that individual words matched in novel and formulaic expressions yield different articulatory sequelae. The word 'nine' in a sentence like 'I say the number nine' is spoken differently from the word 'nine' in a proverb such as 'A stitch in time saves nine.'

Early studies by Van Lancker and Canter (1981) demonstrated that listeners could distinguish literal from idiomatic meanings of ditropic sentences (those with balanced ambiguity between literal and idiomatic meanings, such as 'It broke the ice') from auditory presentation alone, without benefit of other context, and later studies indicated that pitch contours, pausing and word length were significantly involved in distinguishing the meanings (Van Lancker, Canter and Terbeek 1981).

Studies of child language describe two interactive processes underlying acquisition: holistic and analytic, bringing in again a viable chunking process alongside an unfolding of analytic grammatical rules for the language (Peters 1977, 1983; Wong Fillmore 1979; Vihman 1982; Kempler, Van Lancker, Marchman and Bates 1999). These insights supported the picture of two essentially different modes that unfold, seemingly in parallel, during child language acquisition and continue to be operative throughout language competence.

### 11.8 Neurolinguistic perspectives

Coming around full circle to the original observations stimulated by J. Hughlings Jackson, we viewed videotapes of aphasic persons who demonstrated a dissociation between novel and formulaic expressions. Most striking to the students were otherwise nonfluent patients who could emit a range of swearwords fluently and with normal articulation and prosody. Further, students heard the recorded speech of persons with Tourette's syndrome, with the frequent emission of taboo phrases occurring in the regular stream of talk (Friedhoff and Chase 1982; Shapiro, Shapiro, Bruun and Sweet 1983). This led to interest in the phenomenon of expletives, a topic that can readily stimulate a classroom of undergraduates. We found a scattered literature of books and papers (Hughes 1991; Jay 1992, 1996; Montagu 1967; Foote and Woodward 1973) as well as a creative field study by Gallahorn (1971), who documented use of swearwords by clinical personnel in hospital team meetings. Class enthusiasm inspired a review article on the neurology of expletives, which was completed during my sojourn at Carleton College (Van Lancker and Cummings 1999).

Other types of 'automatic' speech were often described in many kinds of aphasic disorders: preserved counting, conversational speech formulas, and a variety of other conventional expressions. These had been anecdotal, clinical reports. The first scientific surveys of preserved automatic speech had appeared (Blanken 1991; Code 1982, 1989), identifying the categories – formulaic expressions, sentence stems, interjections and proper nouns – that remain fluent in severe aphasia. Lum and Ellis (1994) performed a controlled study showing that automatic speech was relatively preserved in aphasia in most tasks, except for repetition, which was replicated by Van Lancker and Bella (1996). We viewed video footage of a fluent aphasic patient with transcortical sensory aphasia, who spoke nearly exclusively in speech for-

mulas; similar other cases had appeared (Nakagawa *et al.* 1993; Whitaker 1976).

The aphasic patients had in common that their right hemispheres are intact, and so we explored evidence for a right hemispheric site of these preserved utterances. Several studies had attributed residual speech in aphasia to right hemisphere functionality (Czopf 1981; Kinsbourne 1971); indeed, such residual speech was observed in a normally developed, right-handed adult who had undergone removal of the left hemisphere for treatment of malignancy (Smith 1966). Interesting to us at the time were measurements of mouth asymmetries in stroke patients by Graves and Landis (1985). This study revealed that counting (a type of 'automatic speech') was spoken with greater left-sided mouth opening, implicating control by the right hemisphere, while spoken words were generated with asymmetrically larger opening on the right side of the mouth, suggesting left hemisphere control. These and other studies drew on a large body of information contrasting types of behaviours attributed to left- or right-hemisphere specialization, or the horizontal axis. Holistic processing had often been associated with the right hemisphere abilities (Bever 1975; Bogen 1969; Martin 1979; Bradshaw and Nettleton 1983), for which a different kind of language processing, involving rich contextual cues, had been also reported (Drews 1987; Sidtis, Volpe, Holtzman, Wilson and Gazzaniga 1981; Brownell, Gardner, Prather and Martino 1995).

Related ideas arose from the contemporary rise in interest in pragmatic topics, and their association with right-hemisphere function. At this time, the new field of pragmatic studies was burgeoning. Naturalistic texts were subjected to meticulous analyses. Comprehension studies using the test of Formulaic and Novel Language Comprehension (FANL-C; Kempler and Van Lancker 1996) and other approaches had revealed that persons with right-hemisphere damage were impaired in recognizing idiomatic meanings (Winner and Gardner 1977; Van Lancker and Kempler 1987). Other studies of communicative disorders in right-hemisphere damage revealed the role that social and linguistic context plays in language comprehension, and in what ways this communicative ability is diminished in right-hemisphere damage (Brownell, Simpson, Bihrlle, Potter and Gardner 1990; Gardner, Brownell, Wapner and Michelow 1983; Joannette and Brownell 1990). These insights provided a bridge to our thinking about cerebral representation of formulaic expressions, which have as a main feature that proper use is contingent on appropriate social context.

Next we considered the vertical axis of the cerebrum, whereby cortical and subcortical structures (which include the basal ganglia, the site of motor output, and the limbic system, seat of the emotions) stand in a certain relation to each other with respect to types of behaviour. One study up to that time had implicated portions of the basal ganglia in modulation of formulaic expressions. This was a description of a 75-year-old right-handed man, who, following a stroke in the right basal ganglia, had impaired prayer recitation and other formulaic performance (Speedie, Wertman,

Ta'ir and Heilman 1993). Other papers had drawn increasing attention to basal ganglia nuclei as important modulators of motor initiation, monitoring and control (Marsden 1982). Whereas previously the cortex was identified as representing all language behaviours, an important role of subcortical structures in speech and language functions was proposed (Lieberman 1963; Robinson 1987). Some of these proposals included two types of processing on the vertical axis of the brain – with habits and routinization associated with subcortical structures as popularly outlined by Koestler (1967) and presented in other contexts by neurologists (Mishkin, Malamut and Bachevalier 1984), while voluntary, controlled action was cortically modulated. When formulaic utterances are viewed in their capacity as overlearned motor gestures, it is easy to imagine that the basal ganglia may play a major role in production of formulaic expressions.

Understanding of the speech of Alzheimer's disease was in its early stages; anecdotal clinical observations told of preserved formulaic expressions in persons with severe dementia affecting language and cognition. In contrast, it had been shown that auditory recognition of formulaic expressions was impaired even in mild Alzheimer's disease, those with a definitive diagnosis based on biopsy results (Kempler, Van Lancker and Read 1988). These and other studies suggested that cortical damage impairs comprehension of the nonliteral meanings of formulaic expressions, while intact basal ganglia, the site of motor initiation and management in the brain, allow for facile output of formulaic expressions, which are overlearned and behave like motor gestures in the individual with cortical dementia. It is known that the basal ganglia are preserved quite late into the progression of Alzheimer's disease.

In summary, our review of the neurolinguistic studies of the time suggested that, for production, a right-hemisphere subcortical circuit might be involved in modulating formulaic expressions, and that the right hemisphere played an important role in comprehending the holistic meanings of these expressions.

### 11.9 Student papers

Students' research projects explored formulaic language into a dizzying range of domains at a time when little knowledge of the topic existed. Formulaic language, with all its intrinsic interest, unleashed a fresh, dynamic creativity. Table 11.6 provides a list of student topics on 'FEs' (Formulaic Expressions).

Table 11.6 Topics for research projects involving formulaic expressions (FEs)

1	Survey of origins and familiarity ratings of FEs
2	FEs in old and new Russia
3	Translations into German of FEs in <i>Calvin and Hobbes</i>

- 4 Phonology versus lexicology in idiom recognition
- 5 Use of FEs compared in TV vs radio transmission
- 6 Grammaticality judgments of transformed idiomatic expressions
- 7 How geographic location affects speech patterns: FEs
- 8 Online processing differences in propositional and formulaic sentences
- 9 Preserved automatic speech in transcortical sensory aphasia
- 10 Differences in perception of spoken vs written sarcasm
- 11 Advertising and nonliteral language: use and recognition studies
- 12 Role of popularity in FE usage in comic strips
- 13 Minnesotan FEs by natives and others
- 14 Idiom decomposability reconsidered
- 15 The role of FEs in rap music: the language of rap
- 16 FEs as used in taboo topics
- 17 FEs in presidential addresses from a historical perspective
- 18 Gender differences in FE usage in pop TV shows
- 19 FEs in ME Chaucer and Modern English translations
- 20 FEs in chat rooms: role of experience and topic
- 21 Comparing nonliteral language in sports and news
- 22 Nonliteral language in James Bond movies: use and alterations
- 23 FEs in speeches vs interviews of B. Clinton and R. Reagan
- 24 FEs in the media
- 25 FEs in *Rolling Stone* vs *New Yorker* magazines: usage differences
- 26 The gendering of familiar phrases
- 27 Role of FEs in ratings of movie dialogues, good vs bad

A survey<sup>16</sup> (Paper 1) drew out information about recognition and usage of an array of formulaic expressions in relationship to geographical background and other sociolinguistic factors. One of the students had visited Russia twice, once as the former Soviet Union and a second time after the collapse of that government (Paper 2). She noted how during the interim, sayings on billboards and public spaces had undergone a radical change. She documented and described these changes in her research project entitled 'Formulaic expressions in old and new Russia'. A delightful study on cartoon translation was based on the correct assumption that many esoteric formulaic expressions, including onomatopoeia, expletives and exclamations, arise from cartoon characters (Paper 3). This student found published German translations of *Calvin and Hobbes* (designed by Bill Watterson, appearing from 1985 to 1995). Paper 9 analysed the videotapes of speech-therapy sessions from the previously mentioned aphasic patient, diagnosed with transcortical sensory aphasia. This patient spoke fluently and almost exclusively in fixed expressions. The student transcribed selected portions of the spoken material and classified expressions into speech formulas, idioms and proverbs, and compared their incidence with novel expressions. With the help of Professor Ohnesorge on the psychology faculty

at Carleton College, another of our students tested reaction times in a computerized design to matching of idiomatic and literal expressions to response drawings derived from the Formulaic and Novel Language Comprehension Test (Kempler and Van Lancker 1996) (Paper 8). The result corresponded to those reported in previous studies (Ortony, Schallert, Reynolds and Antos 1978; Swinney and Cutler 1979) suggesting that formulaic expressions are processed holistically and independently from novel expressions. Two tales from Chaucer's *Canterbury Tales* were studied, comparing specific formulaic expressions in Middle English with Modern English editions (Paper 19). The student noted the effect of adherence to rhyme and metre, compared to free form translations, on the translated results. Shorter utterances were more likely to retain their original formulaic shape. In Paper 27, eight categories of formulaic expressions were identified in movies with allegedly bad dialogue (*Speed 2* and *Robocop 3*) and those judged to have good dialogue (*Pulp Fiction* and *Glengarry Glen Ross*). Slightly more idioms were counted in the better-written movies, but all the movies contained a lion's share of expletives and other speech formulas. Many of these projects were so well done that I recommended just a little more effort to prepare the papers for publication. But these undergraduate students had other goals and other miles to go, and none accepted my suggestion at the time. As they say: so many topics, so little time. Perhaps some day the chickens will come home to roost – hope springs eternal.

#### 11.10 Concluding remarks

Because of time restrictions in the course, some topics received only brief mention, such as the place of formulaic expressions in second-language learning (Wray 1999a, b) and literary uses (Kiparsky 1976; Tannen 1980). Our major class project, capturing fixed expressions in real time in the movie *Some Like it Hot*, and collating the results from the whole class, provided a count of expressions-per-minute that was close to the number obtained in a later, systematic analysis using the written screenplay (Van Lancker and Rallon 2004).

Our secondary class project – to cause expressions invented by students to be taken up and carried forth by the college constituency – did not bear measurable results. Students were unable to report any independent usages of these invented expressions. It was interesting to find that we could not demonstrably conquer the originating processes underlying formulaic expressions. We concluded that it requires some mysterious feature manifest by the *Zeitgeist* to generate a proper energy for social acceptance and further diffusion of formulaic phrases into the language community.

A surge of understanding of formulaic language has occurred in the ten years since these materials were patched together to form an academic course at Carleton College. The importance of formulaic language in language competence has

enjoyed increasing recognition (Wray 2002; Kuiper 2009; Van Lancker Sidtis 2009) and other courses on the topic have appeared. While it is clear that there is much more to be revealed, formulaic language has become a strong player in the academic scene, offering endless domains of challenge. And we also know how to keep it fun.

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## Notes

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I became a linguist because my Greek cousins talked their bubbly language at our family gatherings on religious holidays, and, as a very young child, I wondered how they did that. I took language and philosophy courses in college but only after graduating did I read Sol Saporta's *Psycholinguistics* and knew what I wanted to learn. I studied Anglistics at the University of Chicago and for the linguistics PhD pursued Indo-European languages at Brown University, mainly in order finally to learn Greek, even if it had to be ancient Greek. Another book influenced the course of study to an enthusiasm for systematic testing and observation: Eric Lenneberg's *Biological Foundations of Language*. From then on, following a move to Los Angeles, CA, the great mentor Peter Ladefoged led the way to scientific approaches in the UCLA Phonetics Laboratory. Thanks to an NIH postdoctoral fellowship at Northwestern University in Evanston, Illinois, Dr Jerry Canter and I alternated listening to classical music with developing innovative projects on familiar voice recognition and perception of idioms. He taught me the subtleties of designing clinical studies and the even more subtle art of interpreting results. In 1982 I returned to UCLA on my own NIH grant, pursuing voice perception studies with Jody Kreiman, who is now co-author of our book *Voices and Listeners*. In 1988, several hardy students joined me in establishing a research laboratory in Fargo, North Dakota, where there was plenty of space and many chronic language impairments. There we discovered the preservation of famous proper noun recognition in severely aphasic subjects. Because I had paused to earn certification in speech-language pathology, clinical service had become an option; seeing patients again in Los Angeles was interesting and stimulating for research, but I missed teaching. The opportunity arose to teach in a temporary position at Carleton College in Northfield, MN, which became the scene of the accompanying chapter on teaching. Later, in 1999, my husband-to-be wanted to settle in New York, so I applied for the position of Chair of Communicative Sciences and Disorders at New York University, and since have enjoyed all the teaching I ever wanted.

<sup>1</sup> We called it 'NaSSlab' because of the crosslinguistic pun on the German word for 'wet'.

<sup>2</sup> Aphasia: a language disorder as a result of brain damage.

<sup>3</sup> Lenneberg (1967) distinguishes 'emotional' but not overlearned speech (p. 190).

<sup>4</sup> Prosody: intonation or melody of speech.

- <sup>5</sup> Estimates by experts range from 200,000 to 500,000 formulaic expressions known to the native speaker, depending on classification criteria.
- <sup>6</sup> Invented words that do not exist in the language
- <sup>7</sup> E.g. the illocutionary force of 'Have a nice day' is not a command and 'She has him eating out of her hand' is not referring to eating or hands.
- <sup>8</sup> Steven Pinker had visited the Carleton Campus earlier that year and had greatly impressed the student population.
- <sup>9</sup> 'I'd like to say,' 'I was wondering if'.
- <sup>10</sup> Sentences such as 'It broke the ice,' which carry either a literal or an idiomatic meaning.
- <sup>11</sup> 'Birds of a feather!' means that persons with similar personal features associate with each other. Inferencing is required in all conversational interaction, but more so in formulaic language.
- <sup>12</sup> 'country bumpkin', 'run amok', 'look askance', 'wreak havoc'.
- <sup>13</sup> 'nick of time', 'pledge troth', 'hazard a guess', 'cut the mustard', 'fancy meeting you here'.
- <sup>14</sup> 'trip the light fantastic', 'come hell or high water', 'don't take it so hard', 'far freaking out!', 'first come, first served', 'from here to kingdom come', 'funny you should...'
- <sup>15</sup> 'chalk one up for...', 'give it everything you've got', 'let's give it the old one-two', 'let's give it the acid test', 'I gotta hand it to you'.
- <sup>16</sup> Students remain anonymous in this report.