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DISCUSSION

Your phrases matter: Third waves in research approaches and new contexts for formulaic language

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Abstract

Background: This study reports on new contexts in which formulaic language has been used in the years since 2013 when the last synthesis was carried out. The background presents an old but still useful definition and lists themes under which research was arranged in 2013 and which continue to be used.

Aims: This study has a particular emphasis on the relevance of formulaic language to people living with dementia.

Methods: Section 3, identifying new directions, reviews new 'third waves' of research priorities in several fields in which formulaic sequences play a major role, including sociolinguistic variation, corpus-based and corpus-driven analyses, pragmatics, human-computer interaction, and psycholinguistics, all of which are relevant to speech-language therapists. Section 4, outreach and expansions, illustrates new contributions from cognitively impaired person-to-person exchanges in online environments, recent examinations of infant- and pet-directed speech incorporating formulaic language, and online graphic explorations such as emojis. Section 5 focuses on growth of research in theoretical and clinical applications by Van Lancker Sidtis, as illustrated by references to her recent work.

Main Contribution: The paper's main contribution is to summarize the work on formulaic language over the last 10 years, to indicate its continued importance and relevance in ordinary conversation, and especially in allowing people living with dementia to continue to interact with others.

Conclusion: The paper concludes by suggesting that more focus be placed on the analysis of formulaic language with an emphasis on its relevance for speech-language therapists and other clinicians.

KEYWORDS
collocation, formulaic sequence, infant-directed speech, lexical bundle, pet-directed speech, third wave

WHAT THIS PAPER ADDS

What is already known on the subject

- Research has been growing since the late 1970s and early 1980s on non-propositional language (as opposed at that time to the Chomskyan paradigm) and especially on lexical bundles, idioms, second language acquisition and multiword expressions. Studies beginning with Hughlings Jackson (1874) have been annotated through early 2012 (Wray, 2013).

What this study adds

- This study examines 'third waves' in pragmatics, sociolinguistics and areas of neurology and speech perception contributing to what Van Lancker Sidtis (2021) calls the third wave of acceptance of the range and depth of formulaic sequences in ordinary or familiar language.

What are the clinical implications of this work?

- Conversations with pet robots or web-based composition with emojis are but two of the developing areas built on formulaic sequences currently being used for communication interventions with persons living with dementia or other major neurocognitive disorder. Overviews of major contributions in theory and social contexts by Wray (2020, 2021) and theoretical and cognitive applications by Van Lancker Sidtis (2021) detail new areas for the study of formulaic sequences and their contributions to a range of neurocognitive disorders.

INTRODUCTION

This paper focuses on communication interventions for persons living with dementia or other major neurocognitive disorders. Since the late 1970s and early 1980s, research has been growing on non-propositional language (as opposed at that time to the Chomskyan paradigm) and especially on lexical bundles, idioms, second language acquisition and multiword expressions. Studies beginning with Hughlings Jackson (1874) through early 2012 are reviewed in Wray (2013) and are here used to recall key components. This study examines 'third waves' in pragmatics, sociolinguistics and areas of neurology and speech perception contributing to what Van Lancker Sidtis (2021) calls the third wave of acceptance of the range and depth of formulaic sequences in ordinary or *familiar language*.

Conversations with pet robots or web-based composition with emojis are but two of the developing areas built on formulaic sequences currently being used for communication interventions with persons living with dementia or other major neurocognitive disorders. Overviews of major contributions in theory and social contexts by Wray (2020) and theoretical and cognitive applications by Van Lancker Sidtis (2021) detail new areas for the study of formulaic sequences and their contributions to a range of neurocognitive disorders. New websites for collecting audio and transcripts of conversational and diary data from persons living with dementia communicating with others who are also living with dementia are now available for analysis—and filled with examples of formulaic language (FL) of all kinds. Other studies incorporating attitudes of caregivers concerning communication with persons having cognitive impairments and the potential impact of the language the caregivers choose to use have begun to appear.

BACKGROUND

Over the last 20-plus years formulaic language has accrued more than two dozen names for its various components, beginning with the issue that whatever 'it' is, it con-

sists of 'non-novel, non-propositional' utterances which are typically a sequence and which can often be used to express emotion. These may be collocations, lexical bundles, proverbs, idioms or colloquialisms which are to some extent already created and recognized within a speech community (see Van Lancker Sidtis, 2021:27–28 for multiple names). In addition, each of the names for a component or type of formulaic sequence suggests a slightly different language pattern, emphasizes one or more definitions and recommends one or more methodologies for identification of how the pattern is used. Our favourite definition is still this, if turn-of-the century, but reasonably elastic:

> a sequence, continuous or discontinuous, of words or other meaning elements, which is, or appears to be, prefabricated: that is, stored and retrieved whole from memory at the time of use, rather than being subject to generation or analysis by the language grammar (Wray & Perkins, 2000:1)

In that same article, the authors list the names at that time for different aspects of formulaic language (Wray & Perkins, 2000:3).

Much of the early work on formulaic language is with lexical bundles, phraseology, multiword expressions (Biber et al., 2004) and other areas of lexical focus: see Wray's *Formulaic language and the lexicon* (2002). Early emphasis was also often on sequences. Formulaic sequences regularly occur at places of topic-transition and as summaries of gist (Drew & Holt, 1998). Formulaic sequences do more than just carry denotative meaning and realize pragmatic function. This had led Sinclair (1991:74) to argue that the structure of language is dominated by the idiom principle rather than the open-choice principle. By 2011, researchers were asking how formulaic sequences were handled in first- and second-language education (e.g. Conklin & Schmitt, 2008): the latter field has stayed quite interested in the impact of FL in anything lexical or conversational and contributes frequently to its study.

Formulaic sequences have been investigated in multiple fields including poetics, phraseology and lexicography as well as different fields in linguistics, corpus analysis and recent developments in cognitive theory and computational theory and interaction. Especially valuable for establishing a context is Wray's set of themes from her 2013 timeline of studies that begins with Hughling Jackson's 1874 observation about a potential link between 'automatic' language and the brain's right hemisphere and runs through a 2012 volume of a major journal, *Annual Review of Applied Linguistics* (2013:320-34). These themes, with subtitles slightly reworded, are (2013:318-9): theory (language processing, words/lexis, and grammar); clinical (language disorders); development (acquisition of first language); learning and teaching (second language); culture (social roles and literary oral epics); and text (corpora and analysis).

During this period, Diana Van Lancker Sidtis expanded her earlier work in clinical analysis of the non-novel discourse so prevalent in the dementias to develop the well-known schematic and to expand her 'Formulaic and novel language in a "dual process" model of language competence…' (Van Lancker Sidtis, 2009:448; see Van Lancker Sidtis, 2021).

In 2012 and in 2013, Wray was reviewing a range of research on formulaic language, particularly lexical aspects, and its potential future directions in communication in general. Bridges and Sidtis (2013) went beyond the discussion by Van Lancker Sidtis (2012) of the importance of and need for further examination of formulaic language in communicative disorders. They focused on individuals with Alzheimer's disease who, regardless of age of onset, used significantly more formulaic expressions than healthy controls. These findings contributed to the initial validation of a *dual process model of cerebral function for formulaic language*, which proposes differing processing principles for formulaic and novel language 'expressions…as analytic and holistic, and as governed by principles of open choice and idiom' (Van Lancker Sidtis, 2015) (Figure 1).

In the present discussion, we will focus first on new waves of study, such as the use of formulaic language in language disorders and its current interaction with cognition and computational analysis, and then identify several new directions, such as pet- and child-directed language, online audio and transcripts of personal diaries, social robotic interaction and online emojis in interactions (this last, from caregivers).

PURPOSE: IDENTIFYING NEW DIRECTIONS

It is not surprising to see studies of formulaic language moving in directions and emphases that differ in some respects from those of twenty-odd years ago. Other fields either in or closely allied to linguistics describe these changes as 'new waves' and in 2023, the date of the present writing, we are currently in the third such wave in pragmatics, sociolinguistics and areas of neurology and speech perception. The new dimensions or trends developed in any of these have each had some degree of impact on the others. We begin with the use of formulaic language in the third wave of sociolinguistic variation and recent discussions of politeness in pragmatics.

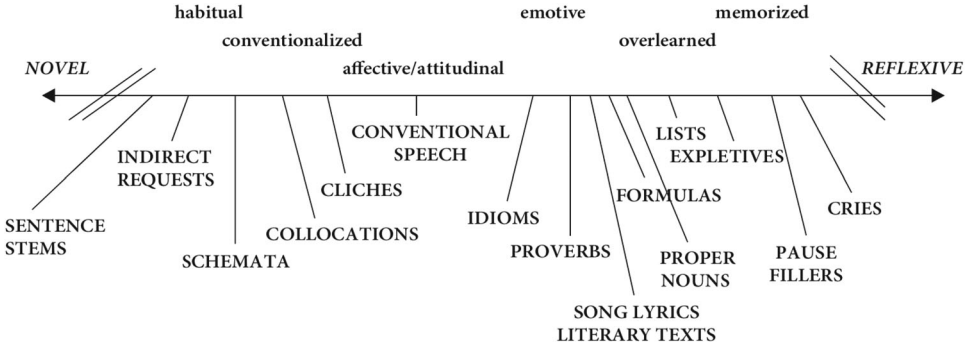

FIGURE 1 Early schematic, Van Lancker Sidtis (2009: 448).

Eckert's article on 'Three waves of variation study' (2012) and collection of essays on *Meaning and linguistic variation* (2018) draw on her participation and leadership in all three waves of sociolinguistic variation, which she summarizes at https://web.stanford.edu/~eckert (last access December 2022). As Soukup (2018) reminds readers in her review of the collection, Wave 1 was keyed to quantitative studies of demographic variables including gender, ethnicity and social class. Wave 2 used ethnography to examine variation in smaller groups; Wave 3 moved from variation 'as a reflection of social dynamics to variation as a device used agentively by social groups…to construct and navigate their social worlds' (2018:3). Part of such agentive variation is the recent recognition of the use of formulaic sequences and familiar language. Daniel Kádár (2017:1) reviews the move in the politeness research encompassing a great deal of pragmatics from universal frameworks through emphasis on co-construction by individuals to co-construction through interaction 'across languages and cultures'. This is echoed from a different perspective in Acton (2019:61) who links pragmatics-based explanations with 'third wave variationist' emphases on context in his study of English definite articles.

Human-computer interaction (HCI) theorists are currently discussing a key question about what they see as third-wave interaction. That is, whether growing emphases in the field, such as the move to incorporate situated knowledge (in, e.g., socially affective robots, briefly discussed later), represent cultural changes, incoming waves or new paradigms (Filimowicz and Tzamkova I; II, 2018). Although these and other volumes in the new Springer HCI series include discussions of empathy and social features which are relevant for speech-language therapists, they have little emphasis on language although from a linguistic viewpoint and that of speech-language therapists, it could be useful to examine language responding to HCI products, particularly those intended for persons living with dementia or other cognitive impairments (Tables 1 and 2).

Third wave is emphasized in a discussion of new directions in psycholinguistics combining formulaic language with speech perception. Van Lancker Sidtis and Yang (2021:309) trace changes in how formulaic language is seen: from its early dismissal by generative linguistics, through the move to discussions of its classifications, and currently, to where

> formulaic language has entered the third, *'we always knew it was true'* stage: general acceptance of its important role in language use and earnest study of its properties (emphasis ours).

Formulaic language in the third wave is construed by linguists representing different approaches such as theoretical and clinical as having an emergentist framework (Van Lancker Sidtis et al., 2015), and may be best analysed within construction grammar (Van Lancker Sidtis, 2021; Wray, 2002, 2012).

Space precludes a reasonable discussion of new cognitive or social trends in first- and second-language acquisition, other than to note the continued and growing interest in studies of each, particularly involving additional fields such as cognitive science (Christiansen & Amon, 2017). For example, the website for the Benjamins series, *Trends in First Language Acquisition*, beginning in 2001, currently (December 2021) displays 30 titles, 24 of which have appeared in the last decade or since 2011.The last three decades have seen the increasing involvement of corpus-based and corpus-driven analysis in learner corpus research with issues in second-language acquisition, as traced by Meunier (2021), who identifies recent analyses of formulaic language as pulling together process and product (2021:92).

Examples of formulaic language in second language usage can be seen in the current collections online of dementia-related interviews in English with family member speakers from countries such as Africa. See, for example, several collocations, idioms and formulaic sequences

TABLE 1 Terms used in the literature to describe formulaic sequences and formulaicity.

Amalgams	Gambits	Preassembled speech
Automatic	Gestalt	Prefabricated routines and
Chunks	Holistic	patterns
Clichés	Holophrases	Ready-made expressions
Co-ordinate constructions	Idiomatic	Ready-made utterances
Collocations	Idioms	Rote
Composites	Irregular	Routine formulae
Conventionalized forms	Lexical(ised) phrases	Schemata
FEIs	Lexicalised sentence stems	Semi-preconstructed phrases
Fixed expressions	Multiword units	that constitute single choices
Formulaic language	Non-compositional	Sentence builders
Formulaic speech	Non-computational	Stable and familiar expressions
Formulas/formulae	Non-productive	with specialized subsenses
Fossilized forms	Petrification	Synthetic
Frozen phrases	Praxons	Unanalysed chunks of speech

Abbreviation: fixed expressions including idioms (Moon, 1998).

TABLE 2 Examples of formulaic language from Maureen Littlejohn.

Year in which she begins using extender	Historical context for extenders
Expression used from	They can be 'pragmatic operators' showing how to interpret relations between speaker and utterance or addressee (see Overstreet, 1999).
I don't know if/what/how 2009	
And so on 2009	**'Or whatever'**—construction seen in 1810 as subject of embedded clause
Or what have you 2010	**'and stuff'**—construction begins in 1822
Or something like that2010	**'and so on'**—construction seen in 1817
I just got through saying 2012	
You know, I guess 2013	

in the online data from the Inclusion, Diversity, Equity in Mobility (IDEM) project in the United Kingdom (https://discovery.ucl.ac.uk/id/eprint/1473180/):

> G01BAF08 … if such people also live with family… with somebody else in the family, the main reason why the black minority don't look for help, is actually, that it's our background, *sort of*, because from Africa, we've never heard terms like dementia.… if it is myself and if I'm living with *somebody like that*, still I would just think that *it's a phase* that that person is going through, *you know*. So, I wouldn't seek for help for that person.

> G01BAM03 *What she's saying*, in Africa, we don't have homes to take our elderly. Elderly people live in the houses, to be *looked after* by the family, which is very known in Africa. So, when they're sick, everybody knows they're sick, the family knows.

Distinctions among various categories of formulaic language are shown in the examples in Table 2 from 'Talking with Maureen', a woman in her 80s in the moderate stage of dementia, living in a semi-rural memory care facility in North Carolina (Davis & Maclagan, 2013:87–88). The total length of her corpus is 8 h and 16 min or 455:41 min (455 min and 41 s). The total number of words is 74,750, with 'Maureen' contributing 52,250. We found 2019 examples of FL in our analysis of 27 stories in 105 conversations. For example, Maureen's extenders usually substitute for noun phrases (See Overstreet, 1999). Despite living in a special care community for persons classified as having any kind of dementia, Ms Littlejohn's fluency and fast-paced, charming anecdotes caused most people who met her to think she was unimpaired. But the fluency depends on her manipulation of formulaic and colloquial phrases, especially extenders, and the anecdotes are beginning to be

more frequently repeated within a single conversation. Her favourite stories are coalescing, behaving as if they were simply much longer formulaic units, selected to illustrate or exemplify more difficult topics (2013:87).

OUTREACH AND EXPANSIONS

Reviewing the numerous perspectives on multiword expressions, idiomaticity and formulaicity for the introduction to a new collection, Trklja (2021:iv) summarizes linguistic, psycholinguistic and sociolinguistic approaches, reminding readers that translation studies also have distinct perspectives and that new corpus-driven software products warrant review. Keyed to corpus-based investigations are the studies of lexical bundles. In their analysis of how non-idiomatic lexical bundles such as *in the case of* have changed in academic English over the last 50 years, Hyland and Jiang (2018:1) draw on earlier explorations by Biber to explain them as

> Statistically the most frequent recurring sequences of words in any collection of texts: extended collocations which appear more repeatedly than expected by chance across a given range of texts. (Biber et al., 1999:990)

The changes include the increasing use of verb bundles and of bundles emphasizing the author's role in presenting claims with which to engage the reader.

Collocations (see Schmitt et al., 2019), or two or more words that habitually occur together, again beyond chance, are also considered to be formulaic sequences. Notice how several of the collocations and lexical bundles in the opening of this online solicitation, addressed to the first author's first name (Boyd) by an unknown writer, work to establish a temporary social relationship, suggesting that we are familiar with each other (and speed up processing):

> Dear Boyd,
>
> *I have to* admit, sometimes I *lose hope* that we can *turn things around*. We're facing such *massive problems*. The *mental health crisis* has only worsened in the pandemic. Our planet is nearing the *point of no return* in *carbon emissions* and *species loss*. And polarization *in our society* is escalating when we most need *to be coming together*.

Online interactivity is also growing among people with dementia, with and for each other. As an example, Stephen's 300+ diary entries are part of https://dementiadiaries.org/ in the United Kingdom. From their entry-page: *Dementia Diaries* gives a voice to people with dementia through more than three thousand audio and video diaries. It is run by https://www.innovationsindementia.org.uk

People dictate their diary entries and volunteers transcribe and post them. There are no set topics. One group of people with dementia has created—and runs—a radio station; others set up their own zoom meetings. Excerpts from Stephen's entries posted February 2021 and June 2022 let researchers enjoy his repetitions, collocations, fillers and the like:

> Hi everybody. Welcome to my 139th video of living with vascular dementia. Voice is *a bit croaky*, just got up from lying down, *little bit croaky* but *never mind*. It's *nice and sunny* outside today, *makes a change*, *doesn't it*. Had such *rotten weather*, now it's *good weather* out there *at the moment*, hopefully tomorrow *will be even better*, *but who knows*.... There's things I can remember *back then*, but what I done yesterday I can't imagine. *That's what it's like*, *isn't it*. *That's what it's like*, *but there you go*. I had to restart me computer *just now*, nothing working, so. *There you go*. They changed me settings here when I wasn't looking, *that's what it was*. Computers, eh? When they're sleeping who knows what they're up to. *But there you go*. [2021]

> Yeah nice, good meeting this morning. The ENLIVEN project, yeah, enjoyed that and met some new people *as well*, *so that was good*....Yeah it's a *crappy old day out there*, *cloudy and yuck*, '*orrible weather*. Weather's not quite *settled down, yet*, *has it*. Unsettled then, *put it that way*. Yeah unsettled *but never mind*, *it is what it is*, *innit*. [2022]

Collocations and other features of formulaic language are key components of infant- and pet-directed speech, each of which is of interest to current researchers. As Genovese et al. (2020) assert, infant-directed speech is a simplified register, but it is not simple. This was earlier explained by Ochs and Schieffelin (1984:279) as baby talk register which had its own lexicon, high pitch and slowed intonation combined with short sentences and repetition.

Wray's early 2002:106) chapters on language acquisition by children describe the process:

> Formulaic sequences are understood to fall into two types in child language. Either they have been borrowed from input (underanalysed strings), or they have been created by the child and then stored whole (fused strings).

The pitch and prosodic characteristics of infant-directed speech, particularly as it may be emotional, are currently of interest in examining mothers' speech to as-yet unborn children (Parlato-Oliveira et al., 2021; see Saint-Georges et al., 2013, for a systematic review that includes a discussion of just what may be enclosed in prosodic boundaries). Ota et al. (2018) illustrate the importance of reduplication or diminutive endings of words in frequently repeated formulaic sequences in a baby talk register—which can surface as well in terms of endearment and pet-directed speech. Indeed, dogs, especially younger ones, are more attracted to the 'repetitions' and other features in the pet-directed speech register than to adult speech (Jeannin et al., 2017). Such response is also noted for horses (Lansade et al., 2021). Hypocoristics (pet names, like Munklet for my cat, Munk) and diminutives are frequently used with pets, as with children. Mattiello et al. (2021) look at their wide use for play or endearment in Italian, Austrian German, Tunisian Arabic and English.

There seems to be a hierarchy of just who can have the endearment of a pet name, with dogs more often being the recipients, mothers and girls using more diminutives, and English more seldom using hypocoristics. We see this spilling over into names for robot or animatronic pets designed for persons with cognitive impairment such as dementia. For example, nearly half of the Taiwanese interviewees having mild cognitive impairment or dementia in talking about interacting with Paro, the robot seal (Chen et al., 2022), revealed that they had given pet names to the seal: Poki-poki, Du-du, Yen-yen, Ying-ying, Xiao Xiang and various terms translating roughly as Cutie, Baby or Fatty. Both formulaic sequences and hypocorism surface in Morford's interviews with three dementia caregivers about the recipient of Dash, an animatronic puppy. The woman is described as talking to the puppy every day, praising his cuteness, or inviting him to take a nap with her. The physical therapist working with M, the older woman, comments that M now not only goes outside, she engages Dash in conversation with repeated phrases of encouragement as she asks him to join her:

> '*Come on* Dash – *we can do it'* or 'Dash, let's try to walk outside today– *it is a beautiful day*'. (Morford, personal interview with therapist, November 2021:2)

The online webiverse displays formulaic sequences in several ways, not just in the written word, but also with culture-specific pictographs, called emojis. Ge and Herring call them an 'emergent graphical language' filled with 'stand-alone utterances' which are frequently repeated (2018:11). Cohn et al. (2019:1) explain that an emoji can appear as a single utterance or as part of a sequence, a formulaic expression usually showing emotion. A common example is a series of hearts to show strong approval of a prior comment or writer. Many serve a pragmatic function by 'signalling closing sections or by helping to negotiate openings (discourse domain) as well as serving as a way to frame playful interactions (stylistic domain)' and may be influenced by cultural preferences (Sampietro, 2019:109).

Pulling contexts together: research on theoretical and clinical aspects of formulaic language

The many articles and monographs on dementias and on formulaic language by Alison Wray since her first prize winner in 2002 have shown her increasing her emphasis on communication as opposed to memory and her determination to further develop a theoretical framework explaining what in 2020, she calls the Communication Impact Model in *The dynamics of dementia communication*. The linkage of this model with formulaic sequences is explained directly in Wray (2017:569) where she focuses on their use to achieve social goals by minimizing processing, identifying old information and holding the floor (p. 575). As she says in the abstract and subsequently expands, the model explains the interlinkage of cognitive processing with social interaction. Hydén's review of the monograph outlines the model neatly:

> Central to the model is the assumption that communication starts with the speaker having an intention directed toward another person ('What I want to achieve'). This intention is then forwarded to the 'Communicative Demand Management System', an internal component that gathers necessary linguistic resources ('the resource component'). Finally, this intention designed for a specific context and expressed in words is expressed as a verbal speech output ('the processing component'). (Hydén, 2021:149)

Wray's emphasis on cognition and cognitive processing as she continues to work with theory is a fine complement to the lifetime of work by clinician Diana Van Lancker Sidtis on discourse in cognitive impairment, primarily aphasias and dementias, but including as well other issues such as deafness. Since her 1975 dissertation, Van Lancker Sidtis (1975) has laid out and explained the components of formulaic sequences. In working with John Sidtis on brain hemispheres, they espouse a Dual Hypothesis, oversimplified here, with the right hemisphere retaining formulaic sequences and the left in charge of novel expressions, which can explain the retention of formulaic sequences by persons with cognitive impairments. In 2021, she pulled her articles and reports together into a new volume encapsulating her cognitive research and its theoretical and clinical underpinnings, *Foundations of familiar language: Formulaic expressions, lexical bundles, and collocations at work and play*.

Sidtis begins gently, by explaining that familiar language is primarily comprised of the three classes named in the title, each with 'objective and describable characteristics, which are relevant to language learning and to neurological representation' (p. 29) although each is a fuzzy set and differs in how literal and how nuanced they may be. Lexical bundles are literal; formulaic expressions, which are used to 'maintain the flow and form of conversation, enhance theme, facilitate social bonding, infuse humour, and display mutual affirmation' (p. 71) are not. One of the most outstanding features of the monograph is the 18 appendices, 12 of which are lists of familiar expressions from different contexts, whether from a *New York Times* columnist or newspapers in general. How are these expressions, these sequences acquired? In addition to frequency of use, it is of neurological importance that 'much of language use occurs in chunks' (p. 131) which reduces processing complexity and the calls on memory.

By Chapter 6, 'Familiar language in psychiatric and neurologic disorders', Sidtis can move from social situations, word combinations in expressions and child reliance on chunking in language acquisition, to the brain and 'to what extent specific aspects or areas of cerebral processing are associated with certain classes of familiar expressions' (p. 169). These are early days, says Sidtis, prefacing an extended and highly useful discussion of autism, Tourette's, stroke, global aphasia, schizophrenia, Alzheimer's and moving to hemispheric specialization (the schematics, sketches, tables, and photos are especially helpful in this section). She concludes by praising the 2002 monograph by Wray—despite differences in their respective fields, the two have always read each other's work. We are ready now for the next 20 years.

WHAT THIS PAPER ADDS

This paper provides a summary of the work on formulaic language over the years from 2014 to 2022. Formulaic language, including idioms, collocations, proverbs and common expressions, is essential as part of ordinary and familiar conversations. In this paper we focus particularly on its use by people living with dementia and show how it helps them to conduct conversations with others, whether their conversation partners do or do not have dementia.

DISCUSSION AND CONCLUSION

Formulaic language was initially bypassed in speech-language therapy; perhaps it did not seem to be a way of formulating new language constructions (see Van Lancker Sidtis, 2012). As this paper has demonstrated, formulaic language is an extremely important aspect of language use and is currently studied in a number of situations, including post-stroke speech-motor planning (Stahl et al, 2020). Formulaic language is particularly useful for people living with dementia when they find constructing new language material difficult (Davis & Maclagan, 2013). The third author found herself sharing a series of formulaic strings with KT who was in the mild-moderate stage of dementia (Maclagan et al., 2008). In this extract, full stops (.) represent brief pauses and angle brackets < > enclose brief responses by MM.

KT: you look forward to your . whole holiday *don't you* <*you do*> going away *and that sort of thing* <yeah> yeah so no *it's just a break away you know*
MM: and this is the time when *everyone goes away*
KT: yes . mm . yeah they do . well people are working *and that* and they . *look forward to it don't they* . you got to have a holiday
MM: did . yes you do . you have to have one
KT: yes mm . *relax and sit around* and
MM: yes
KT: [laughs] yes so . *that's the way it is*, *I'm afraid* (20 December 2004)

When we read the transcripts of her interactions with KT, they held relatively little content, yet at the time, they were thoroughly enjoyable interactions and the use of formulaic language by both participants allowed the conversations to flow freely (and yes, we consider 'to flow freely' to be another example of formulaic language). Appropriate use of formulaic language by people living with dementia allows discussions to flow so that the communication partners are often not aware of the extent to which the

person living with dementia is impaired. Its usefulness for speech-language therapy cannot be questioned.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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REFERENCES

Acton, E. (2019) Pragmatics and the social life of the English definite article. *Language*, 95, 37–65. DOI: https://doi.org/10.1353/lan.2019.0010 .

Biber, D., Conrad, S. & Cortes, V. (2004) If you look at ….: lexical bundles in university teaching and textbooks. *Applied Linguistics*, 25, 371–405.

Biber, D.D., Johansson, S., Leech, G., Conrad, S. & Finegan, E. (1999) *Longman grammar of written and spoken English*. Harlow: Longman.

Bridges, K. & Sidtis, D. (2013) Formulaic language in Alzheimer's disease. *Aphasiology*, 27, 799–810.

Chen, S., Davis, B., Maclagan, M., Chin, C. & Lin, M. (2022) Can the Paro be my buddy? Meaningful experiences from the perspectives of older adults. *Geriatric Nursing*, 43, 130–137.

Christiansen, M. & Amon, I. (2017) More than words: the role of multiword sequences in language learning and use. *Topics in Cognitive Science*, 9, 542–541.

Cohn, N., Engelen, J. & Schilperoord, J. (2019) The grammar of emoji? Constraints on communicative pictorial sequencing. *Cognitive Research: Principles and Implications*, 4, 33–51.

Conklin, K. & Schmitt, N. (2008) Formulaic sequences: are they processed more quickly than nonformulaic language by native and non-native speakers? *Applied Linguistics*, 29, 72–89.

Davis & Maclagan, M. (2013) *Talking with Maureen: Extenders and formulaic language in small stories and canonical narratives. Dialogue and dementia*. R Schrauf, & N Müller (Eds.). London: Psychology Press.

Drew, P. & Holt, E. (1998) Figures of speech: figurative expressions and the management of topic transition in conversation. *Language in Society*, 27, 495–522.

Eckert, P. (2012) Three waves of variation study: the emergence of meaning in the study of variation. *Annual Review of Anthropology*, 41, 87–100.

Eckert, P. (2018) *Meaning and linguistic variation: The third wave in sociolinguistics*. Cambridge: Cambridge University Press.

Filimowicz, M. & Tzankova, V. (2018) *New directions in Third Wave human-computer interaction*, vols 1 & 2. Berlin: Springer.

Ge, J. & Herring, S. (2018) Communicative functions of emoji sequences on Sina Weibo. *First Monday*, 23(11), (5 November). https://firstmonday.org/ojs/index.php/fm/article/view/9413/7610

Genovese, G., Spinelli, M., Romero Lauro, L., Aurell, T., Castelletti, G. & Fasolo, M. (2020) Infant-directed speech as a simplified but not simple register: a longitudinal study of lexical and syntactic features. *Journal of Child Language*, 47(Special Issue 1), The Influence of Input Quality and Communicative Interaction on Language Development Part 1: 22 - 44

Hydén, L. (2021) Book review: *the dynamics of dementia communication*. *Journal of Pragmatics*, 177, 149–150

Hyland, K. & Jiang, K. (2018) Academic lexical bundles: how are they changing? *International Journal of Corpus Linguistics*, 23, 383–407.

Jackson, J. Hughlings. (1874) On the scientific and empirical investigations of epilepsies. *Medical Press Circular*, 18: 325–327, 347–352, 389–392, 409–412, 475–478, 497–499, 519–521.

Jeannin, S., Gilbert, C. & Leboucher, B. (2017) Effect of interaction type on the characteristics of pet-directed speech in female dog owners. *Animal Cognition*, 20, 499–509.

Kádár, D. (2017) Politeness in pragmatics. Oxford Research Encyclopedia of Linguistics. https://doi.org/10.1093/acrefore/9780199384655.013.218

Lansade, L., Trosch, M., Parias, C., Blanchard, A., Gorosurreta, E. & Calandreau, L. (2021) Horses are sensitive to baby talk: pet-directed speech facilitates communication with humans in a pointing task and during grooming. *Animal Cognition*, 24, 999–1006.

Maclagan, M., Davis, B.H. & Lunsford, R. (2008) Fixed phrases, extenders and metonymy in the speech of people with Alzheimer's disease. In S. Granger, & F. Meunier (Eds.) *Phraseology: an interdisciplinary perspective*. Amsterdam/Philadelphia: John Benjamins Publishing company, pp. 175–187.

Mattiello, E., Ritt-Benmimoun, V. & Dressler, W. (2021) Asymmetric use of diminutives and hypocoristics to pet animals in Italian, German, English, and Arabic. *Language & Communication*, 76, 136–153

Meunier, F. (2021) Introduction to learner corpus research. In N. Tracy-Ventura, & M. Paquot (Eds.) The Routledge handbook of second language acquisition and corpora, NY, pp. 23–36.

Moon, R.E. (1998) Fixed expressions and text: a study of the distribution and textual behavior of fixed expressions in English. Oxford studies in lexicology and lexicography. *Q18 Oxford*, UK: Clarendon Press.

Morford, C. (2021) Personal interview, Therapist for M. Charlotte, NC.

Ochs, E. & Schiefflin, B. (1984) Language acquisition and socialization. *Sscnet.ucla.edu*

Ota, M., Davies-Jenkins, N. & Skarabela, B. (2018) Why Choo-Choo is better than Train: the role of register-specific words in early vocabulary growth. *Cognitive Science*, 42, 1974–1999.

Overstreet, M. (1999) *Whales, candlelight and stuff like that*. Oxford Sociolinguistics Series.

Parlato-Oliveira, E., Saint-Georges, C., Cohen, D., Pellerin H., Pereira I., et al. (2021) "Motherese" prosody in fetal-directed speech: an exploratory study using automatic social signal processing. *Frontiers in Psychology, Frontiers*, 12. https://doi.org/10.3389/fpsyg.2021.646170

Saint-Georges, C., Chetouani, M., Cassel, R., Apicella, F., Mahdhaoui, A., Muratori, F., et al. (2013) Motherese in interaction: at the cross-road of emotion and cognition? (a systematic review). *PLoS ONE*, 8, e78103. doi: 10.1371/journal.pone.0078103

Sampietro, A. (2019) Emoji and rapport management in Spanish WhatsApp chats. *Journal of Pragmatics*, 143, 109–120.

Schmitt, N., Sonbul, S., Vilkaite-Lozdiene, L. & Macis, M. (2019) Formulaic language and collocation. In: C. Chapelle (Ed.), *The encyclopedia of applied linguistics*, pp. 1–10.

Sinclair, J. (1991) *Corpus, concordance and collocation*. Oxford: Oxford University Press.

Soukup, B. (2018) Contextualizing the third wave in variationist sociolinguistics: on Penelope Eckert's (2018) *Meaning and Linguistic Variation*. *Vienna English Working Papers*, 27, 51–67. http://Anglistik.univie.ad.at/research/views/

Stahl, B., Gawron, B., Regenbrecht, F., Floel, A. & Kotz, S. (2020) Formulaic language resources may help overcome difficulties in speech-motor planning after stroke. *PLoS ONE*, 15(6), e0233608-e0233608, 1–12.

Trklja, A. (2021) Introduction. In: A. Trklja, L. Grabowski (Eds.) Formulaic language: theories and methods*: I–VIII (Phraseology and Multiword Expressions 5)*. Berlin: Language Science Press. DOI: 10.5281/zenodo.4727623

Van Lancker Sidtis, D. (1975) Heterogeneity in Language and Speech: Neurolinguistic Studies Working Papers in Phonetics 29, UCLA, 1975 [PhD Dissertation: http://escholarship.org/uc/item/8zw4z7ch] .

Van Lancker Sidtis, D. (2009) Formulaic and novel language in a 'dual process' model of language competence. In: R. Corrigan et al. (Ed.) formulaic language, volume 2. Acquisition, loss, psychological reality, and functional explanations. John Benjamins Publishing.

Van Lancker Sidtis, D. (2012) Formulaic language and language disorders. *Annual Review of Applied Linguistics*, 32, 62–80.

Van Lancker Sidtis, D. (2015) Formulaic language in an emergentist framework. In: B. MacWhinney, & W. O'Grady (Eds.) *Handbook of language emergence*. NY: John Wiley, pp. 578–599.

Van Lancker Sidtis, D. (2021) *Foundations of familiar language: expressions, lexical bundles, and collocations*. NY: John Wiley.

Van Lancker Sidtis, D., Choi, J., Alken, A. & Sidtis, J., (2015) Formulaic language in Parkinson's Disease and Alzheimer's disease: complementary effects of subcortical and cortical dysfunction. *Journal of Speech, Language, and Hearing Research*, 58, 1493–1507.

Van Lancker Sidtis, D. & Yang, S. (2021) Perception of formulaic speech: structural and prosodic characteristics of formulaic expressions. In J. Pardo et al., eds., *The handbook of speech perception*, 2nd ed. NY: John Wiley, pp. 310–332.

Wray, A. (2002) *Formulaic language and the lexicon*. Cambridge: Cambridge University Press.

Wray, A. (2012) What do we (think we) know about formulaic language? An evaluation of the current state of play. *Annual Review of Applied Linguistics*, 32, 231–254.

Wray, A. (2013) Research timeline: formulaic language. *Language Teaching*, 46, 316–334.

Wray, A. (2017) Formulaic sequences as a regulatory mechanism for cognitive perturbations during the achievement of social goals. *Topics in Cognitive Science*, 9, 569–587.

Wray, A. (2020) *The dynamics of dementia communication*. Oxford: Oxford University Press.

Wray, A. & Perkins, M. (2000) The functions of formulaic language. *Language and Communication*, 20, 1–28.

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