English Morphemic Constituents Working for Discourse Wording: Extending Rank Scale from "Clause (Complex)" up to "Text (Type)"

Xuanwei Peng[1]

[1] The Collaborative Innovation Centre for Language Research and Service, Guangdong University of Foreign Studies, Guangzhou, China

Correspondence: Xuanwei Peng, The Collaborative Innovation Centre for Language Research and Service, Guangdong University of Foreign Studies, Guangzhou, China. E-mail: 201610003@oamail.gdufs.edu.cn

Abstract

This paper aims to elaborate Halliday's observation of "text as wording" alongside the already accepted view of "text as meaning" and, accordingly, to address two interrelated issues: (i) how morphemic options work for such grammatical units as words, groups / phrases, clauses, clause complexes and even text; and (ii) how they simultaneously create text wording apart from text meaning, the two being in complementarity, with wording as the main concern. The author first illustrates the grammatical and contextual functions morphemes serve for making text process as well as those units below. Next, it carries out a case study of a sample text to observe two aspects of the present issue: (i) the selections of relevant morphemic tense options, with a few lexical items, to construct their wording textures of discourse; and (ii) the underlying accumulations of identical categories into their expanding temporality domains on the one hand and the integrations and contractions into a meaning unit of the whole text on the other, both processes being visualised as two cones in opposite directions, with the two butts joint to form a spindle, a 3-dimensional model of text as "socio-semantic unit", a project to be further run.

1. Introduction

Over 20 years ago, Halliday read a paper at a conference, where he reconsidered his former wording that text was only "a socio-semantic unit" (Halliday, 1978) and advocated "text as wording" as well alongside "text as meaning" (Halliday, 1995/2006) in Systemic Functional Linguistics (SFL for short) (Note 1). This reflective thinking suggests that, whether "text as wording" should be understood as being one typical unit at the system end (i.e., accumulated linguistic patterns in paradigmatic sets available for uses), or at the instance end (i.e., temporary uses in particular contexts), or simultaneously both, then the topmost "rank" of lexicogrammar should be pushed upward to "text" from previous "clause (complex)" (see Halliday, 1961; McGregor, 1991; cf., e.g., Longacre, 1983; Pike & Pike, 1983; among many others). Otherwise, on the condition that (i) wording is never empty in meaning, and (ii) meaning is the meaning of wording and wording is the wording of meaning (Hjelmslev, 1943/1961; Firth, 1957), text cannot be extended to the unit of text without the extension of wording up to the same length or domain. However, so far as Halliday's extended model is concerned, no positive response has been truly devoted to the elaboration.

The theme here involves three areas of linguistic studies: morphology, lexicogrammatical rank and text. Previous studies in morphology has been one mainstream of linguistic science in modern times, such as Sweet (1891), Haito (1898/1932), Bloomfield (1933), Hjelmslev (1935 & 1937), Jespersen (1924, 1933, 1940, 1942, 1949a, b & c), Comrie (1976/1985, 1986), Quirk, Greenbaum, Leech & Svartvik (1985), Matthews (1991), Greenbaum (1996), Biber, Johansson, Leech, Conrad & Finegan (1999), Blake (2001), Corbett (2001, 2006), Spencer (2001), Huddleston & Pullum (2002), Aarts (2011), Huffman (2014), among countless other morphemic examinations of non-English, in particular minority, languages around the world from the historical and typological perspective (e.g., Greenburg, 1966; Lass, 1997, Heine, 1997; Campbell, 1998/2002; Croft, 2003; Song, 2013; to name just a few). The main concern of all these rests to a large extent with sorting out all possible types of morphemic elements into "systemic" or "paradigmatic" options, to use a SFL term. At the same time, the distinction of derivational and inflectional morphemes (see 2.1) suggests that linguists have noticed their uses for "rank hierarchy", to adopt a SFL term again (see below). To be specific, people have observed the "lexical" or

"syntactic" roles morphemes play, working for building up the lexicogrammatical units of word (e.g., prefixal and suffixal derivational: *international*; infix: *feet*; root or free morpheme: *headmaster*), word group (*John's siblings, interesting themes, wooden stools*) and clause (nominal-verbal agreement, accusative case change), with, however, only a very vague rank consciousness, not to mention their functions for helping construct clause complex and text (type). Fortunately, the idea in the other way round has been fully elaborated: these latter larger units or constructions, as well as the relevant contexts, work as "probability" constraint to orient morphemic uses and the formation of other rank units next below (see, e.g., Bateman & Paris, 1991; Halliday, 2006; see also the collections edited by Fontaine, Bartlett, & O'Grady, 2013 and O'Grady, Bartlett & Fontaine, 2013).

Previous explorations of text model in general that are essential or related to SFL have followed three principal approaches. First, Sinclair (e.g., 1970, 1991, 2004), Hoey (1991a, 2001, 2005) and other scholars in the British tradition have stuck to a bottom-up methodology to investigate lexical organization into patterns (i.e., nets and bonds) in text. Second, Mann and Thompson (1988, 1992), Matthiessen & Bateman (1992), and Webster (2002, 2014), for example, introduced into, and conducted in, SFL a top-down procedure called Rhetorical Structure Theory (RST) for demonstrating text structures with various layers. Third, Halliday & Hasan (1976, 1985) launched a lexicogrammatical paradigm, known as the Cohesion Theory, to observe text constitution that lies beyond the clause (see Halliday, 1978; cf. Hoey, 1983; Hunston & Francis, 2000; Hunston & Thompson, 2000); and on that basis, Hasan (1984) and Martin (1992) put forward a dynamic programme of cohesion to account for aspects of "text as process" (see also afterward studies in Lemke, 1991; Hoey, 1991; Parsons, 1991; Martin, 2001; Fries, 2002; a collection on Theme in Ghadessy, 1995; Forey & Thompson, 2008; Berry, 2013a & b; Matthiessen, 2013; Thompson, 2013; Hasan, 2015 & *in press*; cf. Stoddard, 1991; Goutsos, 1997; Esser, 2009). Of these three, the second approach, which may be characterized as space-oriented, is salient with the "text-as-product" nature (see also Cloran, Stuart-Smith & Young, 2007 for introducing Rhetorical Unit Model) whereas the first and the third are time-oriented, being characteristic of "text as process" (see also Gregory, 2002 on Phasal Model of text construction; Cloran, Stuart-Smith & Young, 2007 for introducing Phasal Model of text; Cloran, 2010 for rhetorical unit analysis of text from the perspective of historical, biographical and social time-space configuration).

The present attempt follows the Halliday-Hasan tradition to illustrate how morphemes help construct those lexicogrammatical ranks above the clause. In particular, the paper enquires two specific issues, with emphasis on the first one since it is the main concern of this essay, with the second to be very much schematic serving as a general backup for the first:

(i) how English morphemic options are deployed from the language system to help build up such grammatical units as words, word groups/phrases, clauses, clause complexes, text and even text type; and

(ii) along that line, how "text as wording" can be created in complementarity to the accepted view of "text as meaning", both together being an ongoing event.

To answer these questions, relevant key concepts or ideas from SFL will be utilised, such as (i) the rank notion, i.e., the scaled lexicogrammatical hierarchy (previous only morpheme, word, word group/phrase, clause and clause complex; see Halliday, 1961; cf. McGregor, 1991); (ii) the "structural" characteristic of the clause and the three typical ranks below (i.e., word order fixed to some extent) and the "organisational" nature of the text (i.e., flexibility in ways of constitution) to see how morphemes are deployed to make meaning (Halliday & Hasan, 1976); (iii) the idea of concurrent selections of grammatical units and morphemic items, for the latter to be inserted into the functional slots of the former; (iv) the approaches of both maximal and minimal bracketing for grammatical and textual datum analysis (for these two, see Halliday & Matthiessen, 2014, pp. 58-87) (Note 2); (v) the SFL conception of "tense", which is deductively figured out into 36 types (see Halliday & Matthiessen, 2014: 398-410; particular types to be briefly explained along the text below); (vi) the register (genre) theory in the sense of text type (Halliday, 1978; Halliday & Hasan, 1985); and (vii) the Extended SFL model of language where system and instance are theoretically demarcated and text is re-categorised as conceiving both meaning and wording (Halliday, 2006).

For characterising text as process, the "state-and-transition" methodology from Computational Linguistics is applied to describing the displacements of relevant items as ongoing events. It will exemplify how morphemic options are rendered into one facet of discourse under the orientation of grammatical ranks from word through text and text type. The description will focus on the forward progression of discourse rather than the backward identification of cohesion, as the former is more general and entails the latter (cf. Hasan, 1984; Martin, 1992; among others).

The main part of the text below is composed of two sections. Section 2 discusses the functions morphemes play

for rank scales; Section 3 that follows is a case study, observing the way tense morphemes, together with a few relevant lexical items, work for text sand text types in the relevant respect. The chief example to refer to is *Headless Angel*, a flash fiction text by a contemporary American writer named Tom Hazuka, along with another two sample texts for datum complementarity (Appendix).

2. Functions of "Morphemes" for Rank Scales: A Brief Illustration

This is the first step towards a general account for extending the scope of rank scale of lexicogrammar up to "text" that comprises both meaning and wording as complementary (Halliday, 2008). This does not mean of course that all morphemes work directly for text (type); but their selections and distributions are oriented by text (type), or both morphemic items and text (type) deployed (here text (type) should be understood as schematic option serving as a grammatical unit) should co-work to construct text in the instance sense from the temporality perspective.

2.1 Metafunctional Features of Morphemes

This preparatory sub-section discusses two points: a systemic description of morphemes and their potential contextual functions. It begins with the types of morphemes in English that constitute words. Take as example the first sentence in *Headless Angel*.

(1) Beth was three months pregnant when we went to France on our honeymoon.

Morphemes are "forms which can only appear as part of a larger form or larger sequence of morphemes" (Matthews, 1991, p. 210), as *head* and *-less* in *headless*, *be* and *-ed* in *was*, *month* and *-s* in *months*, and *we* and the genitive form that envelops *we* as *our*, where *-less*, *-ed*, *-s* and the genitive variant are Bound morphemes and the others are Base morphemes.

Bound morphemes are divided into derivational and inflectional, such as *-less*, *-ed*, *-s*, and the genitive form in *our*; they may either be in zero form (*Φ*) or non-zero form (*X*), as suggested by the plural variation of *write* (inflectional) or the zero morphological form of the verbal *focus* or *progress* and the nominal *focus* or *progress* (derivational) (*Φ*), or suggested by the third singular form *writes* (inflectional) or by *writer* (derivational) (*X*). Base morphemes are either Free (maybe also Root; for derivational) or Stem (for inflectional) (Bussmann, 1996, p. 453). The systemic network under discussion is drawn as Figure 1, where "{" stands for AND relation (i.e. conjunctive) and "[" for OR relation (disjunctive); and the curved arrow overhead means recursiveness by repetitive operation for generating lexemes.
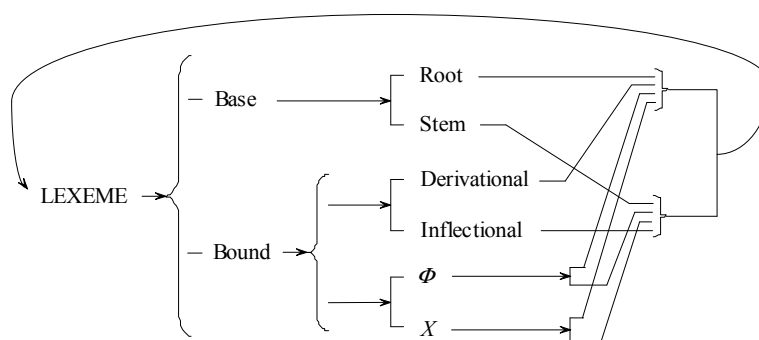

Figure 1. Systemic network for morphemic items

Let us proceed from here to address two points.

One, bound morphemes may function to work for any rank along the hierarchy of the lexicogrammatical, or meaning-wording, continuum (Mcgregor, 1991). On the one hand, for inflectional bound morphemes, they are specified, by Crystal (1997, p. 93), into 8 types of grammatical categories, which are cited below for their importance to highlight the main point of this sub-section (cf. Halliday's 2008, p. 172, summarisation of 5 types in English: number, person, tense, aspect and case):

(i) aspect (verb): (a) completeness, habituality, continuousness, duration, progressiveness; (b) perfect(ive), imperfect(ive);

(ii) case (nouns, pronouns, adjectives): (a) actor, possession, meaning, location, motion towards; (b) nominative,

vocative, accusative, genitive, partitive;

(iii) gender (nouns, verbs, adjectives): (a) male, female, sexless, living; (b) masculine, feminine, neuter, animate, inanimate;

(iv) mood (verbs): (a) factuality, possibility, uncertainty, likelihood; (b) indicative, subjunctive, optative;

(v) number (nouns, verbs, pronouns): (a) one, two, more than one, more than two, more than three; (b) singular, dual, trial, plural;

(vi) person (pronouns, verbs): (a) speaker, addressee, third party, fourth party; (b) first person, second person, third person, fourth person;

(vii) tense (verbs): (a) present time, past time, future time; (b) present, past, future;

(viii) voice (verbs): (a) who did action, what was acted upon, what caused action; (b) active, passive, middle, causative.

There are three facts about the classifications. First, those under (a) are the "typical meanings conveyed" and those under (b) are the "typical formal contrasts" or grammatical functions. Second, as for their respective semantic features, all or most are experiential, but those under (iv) mood, (vi) person and (viii) voice should and may be interpersonal (speech function/interactive and modal/appraisal; see Halliday & Matthiessen, 2014, pp. 134-210; Martin & White, 2005) and some under (vi) person may be textual as well (i.e., conventionalised given information potential in system; see below). Third, all these terms have a more grammatical rather than semantic weight for their categorisation purposes, that is, to "grammaticalise" (Note 3) into different stretches of structural units: word by case, gender, number and person; word group by aspect, tense, voice and number (e.g., **three bridges**; *a **tertiary** class*); and clause by mood and person (*they **go*** vs. *she **goes**; I go* vs. *we go*).

On the other hand, for the derivational bound morphemes, they are grammar-oriented as well, but have more or less weight on the semantic pole at the same time, and may all or either be (i) experiential (*interes**ting*** vs. *interes**ted**; **inter**cellular* vs. ***intra**cellular*; *evol**ve*** vs. *evol**ution**; arrival; **bi**lingual; **un**happy* vs. *happy* [antonymy]; *image* vs. *imag**ery**; nominal and verbal *progress*: φ morphemic variation), and/or (ii) interpersonal (modal/ appraisal: *afford**able*** ["reaction" in appreciation: *did I like it?*]*, speech**less*** ["normality" in judgement: *how special for human behaviour?* + "security" in affect: *surprise or diffidence at environment* + "deny" in engagement: *negation*]*, **un**happy* [deny]*, beaut**y*** [quality] vs. *beauti**ful*** ["epithet" in nominal group or "attribute" in predicate, both being "reaction" of appreciation in attitude] and *book* vs. *book**ish*** [negative "tenacity": *how dependable?*]).

Two, base morphemes work to a large extent for conveying either pure experiential meanings, as *nation* in *national* and *international*, and *form* in *formality, informal, reform* and *deform*; or both experiential and evaluative/interpersonal meanings, as *claim* (meaning *cry* or *shout*: experiential uttering + appraisal of "normality" and "distance": explicit authorial distancing from "attributed materials") in *acclaim, declaim, exclaim* and *proclaim*, and *clar-* (meaning *make clear*: experiential act + positive "tenacity" in appraisal) in *clarify, clare, clarion* and *declarative*. (For details of Appraisal, see Martin & Rose, 2003/2007; Martin & White, 2005.)

These grammatical categories can be summarised in systemic network under the headings of base and bound, both of which can be associated with their respective metafunctional potentials (see Figure 2).
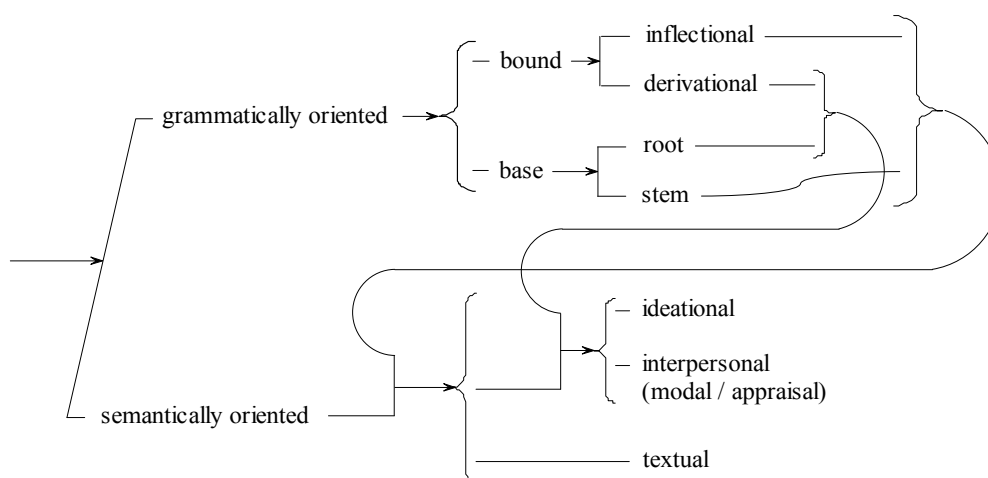
Figure 2. Potential metafunctions of morphemes

Note that both inflectional and derivational morphemes may have logical features too, as *John's book* (possessive) and *the wooden bell* (premodifier), apart from their experiential features (deictic and classifier respectively [classifier referring to taxonomic function]; see Halliday & Matthiessen, 2014, pp. 365-374, 377-378). Also, the figure employs a topological (or prototypical) way of presenting lexicogrammatical functions (see Lemke, 1987, cited in Matthiessen, Teruya & Lam, 2010, pp. 230-232), as indicated by the slant square system at the beginning, since almost all lexical items, whether semantically or grammatically oriented in categorisation, contain both grammatical and semantic features: either is just a matter of degree but all grammatical categories are semantically based, as suggested by the curve lines extended from "base" and "bound" in the top sub-system to those terms in the bottom sub-system.

2.2 Lexicogrammatical Functions of "Morphemes" for Rank Scales

To this end, all the morphemes are sorted out from the sample text according to their lexicogrammatical functions and listed in Table 1 (Appendix). They are all grammatically oriented as they each perform certain structural or syntagmatic functions at their respective ranks; but at the same time they are more or less meaning-characterised, whether with "implicit meaning orientation" (the left column) or with "overt meaning change" (the right column). From this perspective, it is hard to make discrimination between their lexical and grammatical roles, a fact that has been fully elaborated (Halliday, 1961, 2006; Halliday, McIntosh & Strevens, 1964; Hasan, 1987).

Let me clarify in a very brief way some of these presented in the table. Consider the first two sentences of the sample text, with the second cited as (2).

(2) The trip represented our promise not to let the baby change who we were, not to forget that there was so much world, all around, waiting.

First, there are morphemes that represent different occasions at the **word** rank, some of which are concerned with experiential features, others with interpersonal and still others with textual. The word *around* in (2), for example, may be replaced by *round* with little experiential meaning changing; however, the presence or absence of the prefix *a-* is attuned with interpersonal goal: "definite" with *round* and less so with *around* in Britain, and formal with *around* and informal with *round* in America (Pearsall, 1998, pp. 1618). This *a-* is an example of bound morpheme. Meanwhile, there are free morphemes in (1) that involve explicit experiential meaning change. The word *honeymoon*, for example, has two free morphemes *honey* and *moon*; and the meaning of this compound word is not comprised of the sum of the meanings of the two parts: *HONEYMOON ≠ HONEY + MOON*. That is, the meaning of the word changes from the sum of their constituents. The same goes to most of the items listed in the second cell under the word rank in Table 1. Regarding this case, Halliday (2008, pp. 59-61) lists a number of typical examples, clarifying the changes of the grammatical functions.

Second, some morphemes may work directly for the rank of **word group** and **phrase**, guided with either experiential or/and interpersonal or/and textual functions. For example, *-s* at the end of *month* is associated with the word group *three months* as it is attached to *month* for agreeing with the specific plurality manifested by the premodifier/numerative *three* in that context, which is experiential for specifying the length of the time

concerned. Some context does not have such a particular premodifier as *three*, and the "head" carries with it such a plural form as well, a case required for message particularisation, where an enumerative item may not be necessary, such as *men*, *suits*, *walls*, *spires*, *hands*, *generations*, *elbows*, *wings* and *feet* in the latter part of the sample discourse. A further illustration may be given in terms of the pair of examples absent from the sample text cited above: *a beautiful magazine* vs. *a beauty magazine*, the former being "epithet" (here subjective evaluation) while the latter "classifier" of nominal group. Also involved in the nominal group rank is *our* in *our honeymoon*, which implies a possessive relationship between *we* (inclusive of both *Beth* and *I*) and the thing called *honeymoon*, a grammatical construction by which the genitive case aligns different items for "thematic" purpose (and here "given information" as well) (see Halliday & Matthiessen, 2014, pp. 387-388). Other items, including *was*, *went*, *represented* and *were*, are verbal groups (in lexical form, though), where the finite morpheme *-ed* suggests the general temporality meaning in the specific text type, a discourse property to be exemplified shortly.

Third, some morphemes are clearly **clause**-oriented. Consider for example the morphemes in the first cell at the "clause" rank in Table 1, most of which work for interpersonal, in particular for interactive/speech function, meanings by virtue of mood element "subject + finite", even though finites also help realise experiential temporality (see below). For example, the finite morpheme in *were*, which can be analysed as *be + -ed + plurality*, has a clausal construction relationship with the plural subjective *we*, known as subject-predicate agreement in the Indo-European linguistic tradition. This implicit *-ed* (compare the *-ed* in *represented* in Sentence 2 and also in the nominal group *untouched bread and cheese* in Sentence 11) works at the same time for governing a nominal group and a verbal group and is therefore clausal in function.

Others, such as *herself* in Sentence 7 and *her* in Sentence 19, are "complement" in the respective clauses, as they are commanded by the relevant verbal parts of the residues (residue being one constituent of Mood Structure, and the other being Mood; Mood + Residue makes a unit of mood structure, as *(John -s)* and *(love Mary)* in *John loves Mary*; see Halliday & Matthiessen, 2014, pp. 139-143). Also, each in the second cell has a clausal function too because it is the clause that transforms it into the form as it is. Here, they have a strong transitivity nature: *pregnant* in Sentence 1, *horrible* in 4, *oblivious to* in 9 and *hungry* in 11 are all "attribute" (i.e., adjectival ascription) of the relational processes respectively, that is, processes of classifying (e.g., *John is a teacher*) or identifying (*John is the teacher*; see Halliday & Matthiessen, 2014, p. 265); that is, their suffixes have been deployed for serving the attribute function. But of course, they can all be utilised as epithet in nominal groups, a systemic nature that suggests their bi-functional roles again. Note that the word *pregnant* is in the adjective form, a morphological alternative to *pregnancy*; the variation arises from the "attribute" status of participant in the clause concerned. To be specific, it is a kind of "quality" compared with what the nominal form *pregnancy* represents, namely, a "thing". Since a "quality" is not equal to a "thing", the lexical items *pregnant* and *pregnancy* are inconsistent in both semantic and grammatical categorisations. It is this quality that goes to the functional slot of attribute in the clause construction per se.

Incidentally, the attribute function can be confirmed with the affix *a-* (cf. *a-* in *around*), which is absent from the sample text. One of the grammatical functions of this *a-* lies in its unique use as what has been called "predicate" adjective or adverb, as in *abed, ashore, asunder, aside, afire, asleep, alike, aweary, aloud, aflutter, a-ringing, abuilding, a-hunting* among others. They exclusively collocate with a relational process element like *be* or *go* or *remain* or *keep* or *seem*, as in *the two vases look alike*. Once again, some such formations may be both clausal and group-natured, as *aloof*, for example, in *an aloof house* (group) and *she always remained aloof from her family members* (clause), although such bi-functional cases are not frequent to come up with.

The morpheme *-ing* in the last word in (2), that is, *waiting*, serves for constituting the rank of **clause complex**. That is, it implies a syntagm of a clause: *so much worlds were waiting (for us)*, which is dependent on *there was so much world* the dominant clause; or it has a similar grammatical function as that of an embedded clause, ("relative clause" in traditional grammar): *(there was so much world) that was waiting (for us)*. Meanwhile, the sample text has no instance for the second cell under "clause complex", but there are some examples at hand, such as *stop to do* and *stop doing*, *remember to do* and *remember doing*, and *forget to do* and *forget doing*. That is, the *to* and *-ing* markers make difference in logico-semantic meaning: those with *to do* represent a purpose (enhancement feature: purpose) whereas those with *-ing* construe the Range (Note 4) of material or mental process (the outer or inner flow of experience) (see Halliday & Matthiessen, 2014, pp. 213-214).

Therefore, all those morphemes in the first cell under clause complex indicate logico-semantic and interdependency relations. First, all of them express a hypotactic or dependent feature. Second, the three infinitives, *(not) to let, (not) to forget* and *to enter*, realise the logico-semantic meaning of "cause: purpose"; and the two after *saw*, with *to* being covert, are mental "phenomenon": what one saw. Third, the relevant process

components represent embedding (*waiting, reaching, polished*), temporal enhancement (X while Y: *strolling*) and positive addition of extension (one thesis added to another: *yelling, hugging, staring; broken, worn*) (see Halliday & Matthiessen, 2014, pp. 557-592).

Finally, there is one typical case implying that some morphemes may work directly for the process of **text**. For example, tense morphemes, apart from their finite functions for making the clause, may play such a role. To be specific, from the perspective of grammatical function, tense is a clausal conception (as in *John love**s** Mary* vs. *both John's love Mary*; see also above), although their expressions fall within the domain of verbal group (Halliday & Matthiessen, 2014, pp. 396-419); and from the contextual angle, the choice of tense morphemes is at the same time bound to the relevant context of discourse and/or the speaker's personal decision (see Table 1, where tense morphemes are grouped in three ranks). For example, the expressions *had (trembled)*, *was remembering* and *had killed* in Sentence 7 and *had happened* in Sentence 9 are all relevant tenses: "past in past" (i.e., past perfect) and "present in past" (i.e., past continuous); and it is the ongoing context of each that translates it as what it is according to the general temporality requirement of the text under discussion. In other words, the use of English tense is a case out of register or genre (i.e., text type in the Hallidayan sense; see Halliday, 1978; cf. Martin, 1992) because different text types may give rise to different tense frequencies. The text under discussion belongs to literary genre, with all the propositions of the text being in the general past tense (simple past, past in past and present in past). Meanwhile, it has long been acknowledged that a text of literary genre may utilise "historical present" (Romaine, 1998), so as to achieve stylistic/aesthetic effect, a characteristic that only appears in text but is hard to explain fully within the domain of the clause or verbal group. Generally, present tenses (i.e., past in present, present in present and simple present) amount to the highest in descriptive, instructional, expository and argumentative discourses as unmarked. However, there are disciplinary exceptions, as in, for example, psychology and sociology journal articles, which tend to use simple past to make their discourses sound more objective.

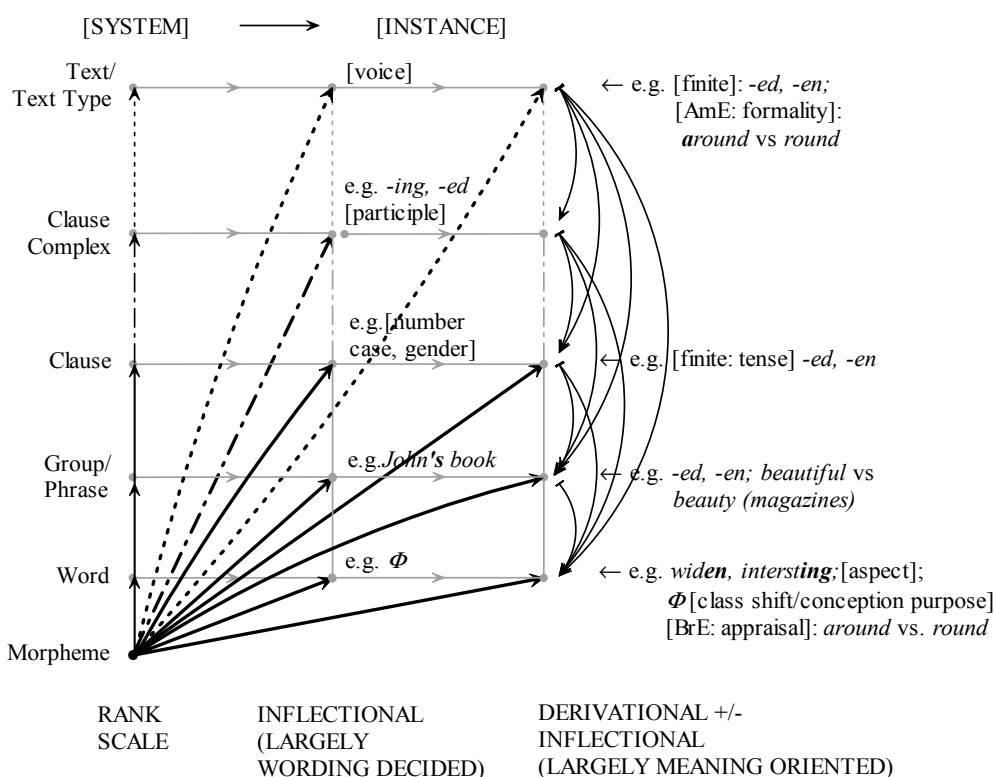What has been discussed so far can be visualised as Figure 3.

Figure 3. Lexicogrammatical functions of morphemes for text/text types

A little explanation is needed for the figure. First, the arc arrows downward on the right suggest choices of orientation and constraint: what possibilities there are and there are not by convention (for the idea of "probability", see Halliday, 2006; see also the various types of explorations in systemic studies in Fontaine et al.,

2013 and O'Grady et al., 2013). Second, the grey straight arrows from the left to the right represent the relevant grammatical constructions (functional slots in structure) deployed for morphemic items to fill in, a process of co-working or collaboration. Third, the arrows upward on the left side have two typical types: concrete and dotted, symbolising prototypical structural and organizational nature each; the line mixed with short lines and dots from clause to clause complex means that clause complex is both structural and organisational, since it has "structural" patterns ($α+β$ and $β+α$) on the one hand and also has "organisational" flexibility in position alternation ($α+β$ or $β+α$) according to contextual demands of various kinds, such as cohesion and coherence on the other hand. It is therefore a transitional area from the typical structural ranks to the typical organisational ranks of lexicogrammar (cf. Hoey, 1991a, p. 215). However, structural ranks and organisational ranks are no longer in stratum or level distinction between meaning and wording, but in that they are continuum at the same stratum of lexicogrammatical hierarchy: morpheme → word → word group/phrase → clause → clause complex → text (incl. paragraph → passage → chapter → book → text). Here further argumentation should be provided for the stretch between clause (complex) and text.

In one word, morphemes may function lexicogrammatically to make up word and to construct group (phrase) within the domain of clause (complex); but it is text (type) that decides their choices, e.g., whether in past or present form, and their probabilistic distribution in text. Section 3 below exemplifies the idea, with the principle of complementarity between meaning and wording.

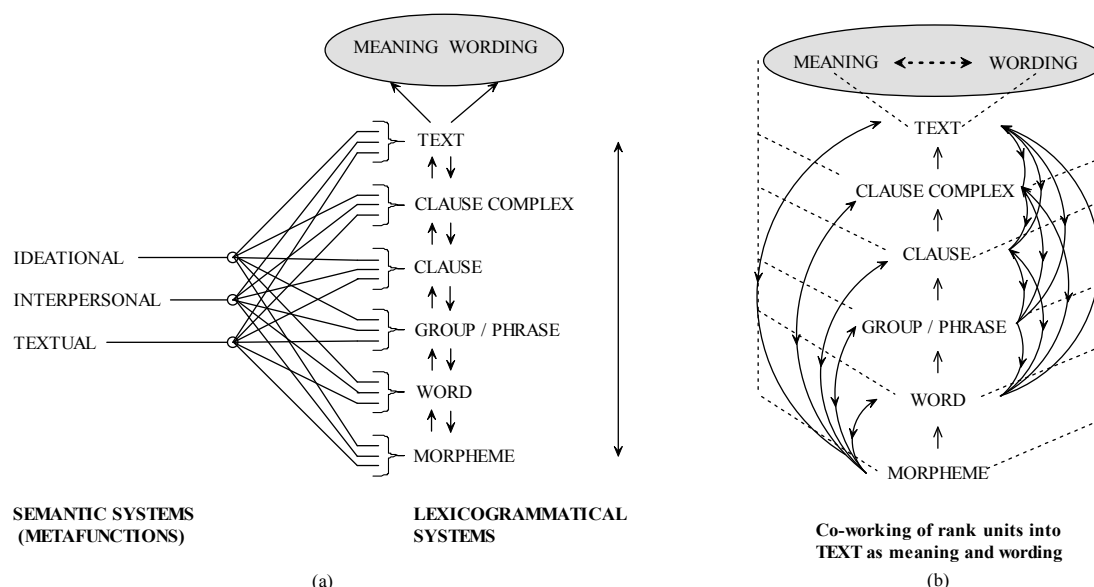It is then reasonable to draw out the whole theoretical framework here.

Figure 4. English morphemes for constructing rank scales

Figure 4(a) illustrates the ways by which the three metafunctions are associated with different typical ranks of lexicogrammar and Figure 4(b) indicates the constructing and orienting relations among different ranks (the curve lines along both sides); and both suggest the ways that meaning-wording unity may be produced in instantiation, as noted by the shadowed area. The distinctions into metafunctional components at different ranks are but analytical; in fact, these components serve the backbones in terms of which different ranks upward to text are constructed.

3. From Morpheme through Text/Text Type: A Case Study

The discussions so far have in a very general way focused on the illustration of the potential meaning and wording functions of "morphemes", with a particular reference to the extension of the "rank scale" hierarchy up to "text"; this section provides a specific categorical exemplification to support that idea; that is, how the lexicogrammatical features of tense morphemes are structured into groups and clauses and organised into discourse from both meaning and wording aspects. This is one of the "segmental" displacements in the ideational grammar (Halliday & Matthiessen, 2014, p. 85).

The choice pattern of tense finites should be discourse-oriented. That is, finite morphemes help make up verbal

groups, which, with finite lexemes, are aligned and disposed by the relevant clauses and co-text. In fact, all finite elements in a text, whether morphemic (most of them of course) or lexical (in minor percentage), are chosen for constituting as well as representing one ideational facet of discourse wording and meaning.

Consider the first two sentences of the sample (see citations 1-2 above), which have 5 finite verbs (5 tense morphemes): *was, went, represented, were* and *was*, listed in the order as they occur in sequence. The sequentiality, as described in Figure 5, is suggested by the left-to-right overhead arrows. The small circles symbolise the state of each position in discourse and the arrows symbolize the transition, displacing from one state of entity occurrence to another.
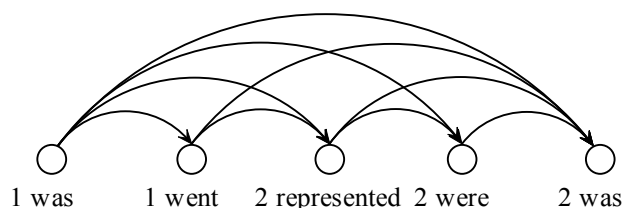
Figure 5. Tense morphemic displacements along sentences 1-2

The overhead arc arrows imply that all the items are associated to form a plane of their own in the local area. In fact, this correlation is a characteristic of any like categorical items in text: they are associated or onlined with one another in net and bond (Hasan, 1984; Hoey, 1991a & b).

In describing longer text, such a chain like Figure 5 would look rather clumsy and miscellaneous if all arrows and the entity circles are presented. So the model should be simplified. Figure 6 is such an attempt that visualises the tense presentation along the text. This is the wording side of the temporality per se because it is characterised with linearity as formal characteristic on the "surface of discourse". In this figure, projected elements are enclosed in "[ ]" ('projection' here being in the sense of logico-semantic relation that introduces an idea or locution by thinking or saying verbs; traditionally 'objective clause'). The number at the beginning of each item stands for the sentence sequential order; the capitalised elements in "( )" are those omitted along the text process; each dotted arrow beginning with a cross dash head (therefore in "T" shape) means start or continuity of identical category whereas each concrete arrow beginning with a small circle stands for the due entity or feature, that is, the state of that moment of discourse continuity: it is no longer drawn in the arc shape; and its general displacement implies logogenetic sequentiality unfolding as being temporal. When category continuity line and sequentiality continuity line conflate, only the latter is manifested for visual obviousness.
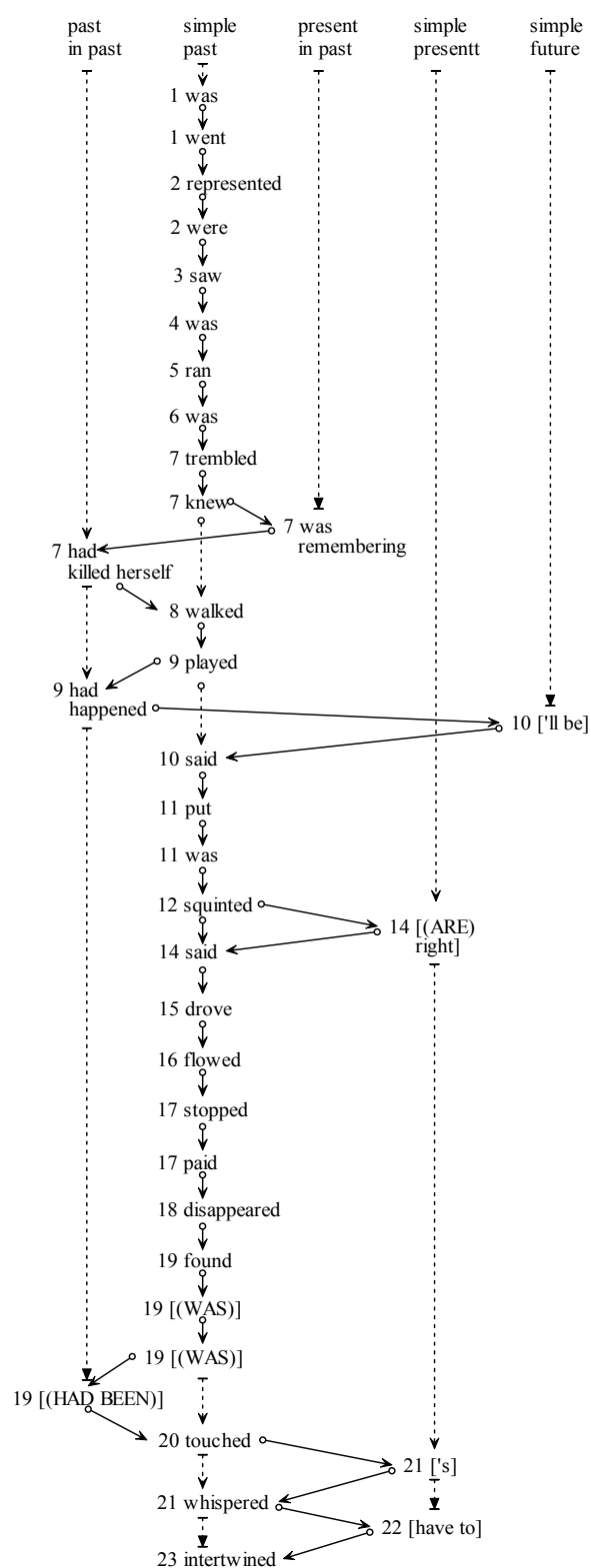
Figure 6. Tense morphemes and lexemes working for text wording

The text is permeated with "past" time construal, a general frame projecting other tense types by embedding (Sentence 7) and by verbal or mental projections (Sentences 7, 9, 10, 13, 21 and 22).

Narrative genre may proceed with pure present tenses as can be evidenced, for example, with another flash fiction text entitled *Centerfold* (Appendix). The tense types are a kind of grammatical metaphor (i.e., incongruent

way of meaning realisation), resulting from personal interest; they should all be in the past form when unmarked, but all are presented in the general present, a metaphorical mode of encoding.

There are also texts in which tense types are determined by subject matters, as in the third flash fiction text *The Human Pyramid* (Appendix). The tenses are lexicogrammatically congruent with the events that take place. The first clause of the text (*These neighbors of mine **are driving** me nuts*) describes an ongoing, "current" event in which the narrator is suffering, where the tense is present in present ("present progressive"). The two clauses in the second sentence are in simple past, narrating how the situation came into being (*it **was** a matter of clothing, then it **got** out hand*). The second and third paragraphs (Sentences 3-10) present the general state of what the first clause describes, and all the clauses are in simple present (3 *walks,* 4 *there're,* 5 *they're,* 6 *wear,* 7 *keep,* 8 *that's,* 8 *can,* 8 *wears,* 9 *trains* and 10 *can't*). The next three paragraphs (Sentences 11-17) are concerned with the past, where the tenses are past-oriented in general, and the presents are all embedded by verbal projections as *asked* (11 *what's, what's*), *said* (12 *am guessing,* 13 *get*) and *said* (15 *(IS)*). The paragraph that begins with *Now* (Sentences 18-23) shuffles with the alternations of simple present (18 *don't,* 20 *like,* 22 *that's*; 23 *(WERE)*), past in present (19 *I've got*; traditional "present perfect tense") and simple past (21 *wasn't, became,* 22 *started*) as the events construed are related to the present and to the past respectively. The last clause in this paragraph, namely, sentence 23, omits its predicate, which should be simple present too as it identifies the current state, in a metaphorical way though: *naked-human pyramids*. Sentences 24-30 are all in simple present that conveys the constant present state (24 *try, comes,* 25 *it's,* 26 *it's,* 27 *have to, they're,* 28 *knows, need,* 29 *(NEED),* 30 *that's, what's*). But sentences 31-43 are in alternative simple present and simple past: the events take place in the past, with the present projected (32 *don't know,* 35 *thanks, no thanks,* 36 *how about,* 37 *tight shorts and a cap,* 38 *it's,* 39 *we're,* 41 *can, can,* 43 *get*). 33 *could* should be a kind of metaphorical use, which is modality-oriented (evaluative). Sentences 45-47 (the last paragraph) are all in simple past (45 *turned, laughed, ran,* 46 *stopped, watched, fell off, seemed, tumbled, delighted, danced up*) as they construe the state of the past.

To sum up, here what happened is represented as it was. This is also the case with *Headless Angel*, where the whole situation is set up in the past. *The Human Pyramid* differs, however, in that it contains all spans of time: past, present and future, although the simple future (in sentence 42) is modality-natured again.

Figure 7 is the model of displacements on the "surface" of the discourse. For space limitation, both the simple future in 42 and the present in past in past in 44 (traditional "past perfect" or "pluperfect") are not singled out with proper vertical category lines from those of the simple past and simple present respectively, but they are boldfaced for distinction.
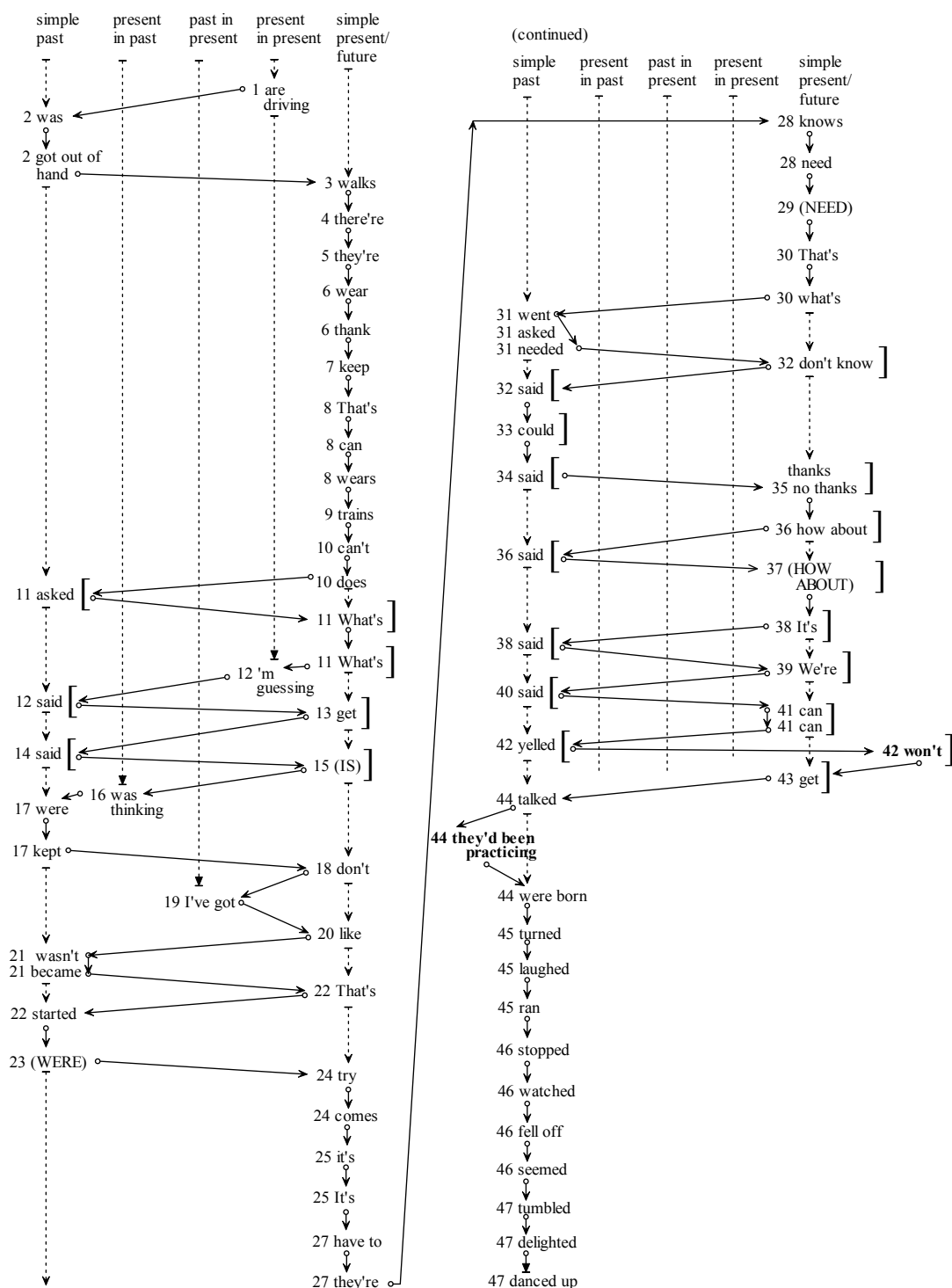
Figure 7. Unmarked tenses in *The Human Pyramid*

Note that all that have been figured out are grammatical in the SFL sense as they are presented so in terms of their respective syntagms.

So far in this section I have been illustrating that the view that the deployed tense morphemes, along a few lexical items, are structured into word groups and clauses and organised into text, with clause complex in the middle bearing both structural and organisational natures. Meanwhile, morphemic choices are oriented with text types: different text types may demand different ways of organisation of tense items.

Now, a schematic description of the underlying meaning aspect is needed to support the wording texture presented above. In fact, from what has been contented so far, the whole systemic network that underlies the generation of tense wording texture may be described as: (i) time domain + (ii) particularisations by delicacy + (iii) sequentiality, all being in AND relationship. The system contains all those general factors that generate the meaning and wording aspects of the discourse. Intertextually, all practical or potential discourses in different social contexts, including those that have already appeared and those that are potentially possible, constitute the tense systems of 36 types; instantially, however, only some of the systemic options occur each time that work towards sequential organisation. The relevant systemic network looks like that in Figure 8.

past time → ⎡ past in past, e.g., *her younger sister who had killed herself*

⎢ simple past ──embedding──→ ⎡ simple present, e.g., *vacation's over*
⎢ ⎣ simple future, e.g., *it'll be all right*

⎣ present in past, e.g., *she was remembering her younger sister*
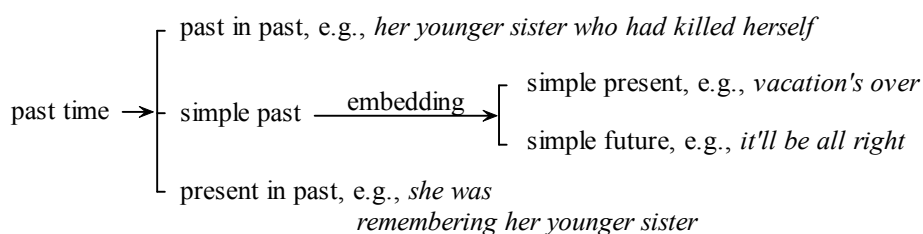
Figure 8. The temporal unit of meaning in *Headless Angel*

This is no longer sequential, but an integrated categorical unit from the instantiated options per se that yield all the temporal pieces construed by the relevant finite clauses.

However, this figure blurs two aspects of temporality meaning behind the two-dimensional wording plane presented in Figure 7. This can be explained from two angles.

One, the respective temporality domains witness a process of due accumulations: present in past appears 1 time (3.03%: 7 *was remembering*); past in past 3 times (9.09%: 7 *had killed herself*, 9 *had happened* and 19 *(HAD BEEN)*); and simple past amounts to 29 times (87.99%), three of which (10 *said*, 14 *said* and 21 *whispered*) in turn project 3 times of simple present (14 *[ARE] right*, 21 *'s* and 22 *have to*), and one of which projects 1 time of simple future (10 *'ll be*).

All these figures can be described with a pie chart with the different distributions; however, the pie chart comes to its current shape by a course of accumulation from the first categorical components to the last ones. The accumulation process can then be visualised as a cone to advance the discursive categorical progression, a model that starts from one categorical component and then switches to another and so on till the text reaches its full fledge and ends there. At this stage of concern, a discourse is a course of accumulation along tense texturing as wording in the foregrounding sense on the one hand and a vertically expansion cone with the alternative relevant temporal categories as meaning on the other. Since the latter is not able to be directly "observed", it is then said to lie behind the "surface" plane of discourse, gathering the relevant temporality domains from the currently ongoing tense elements (see Figure 9).
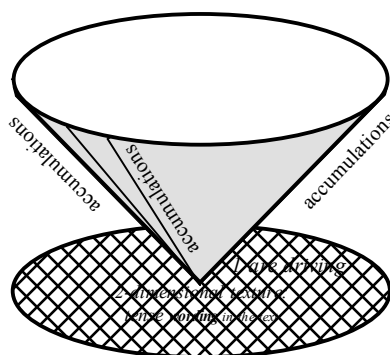

Figure 9. Accumulation model of temporal meanings

Here the bottom plane stands for the tense texture that was presented in detail in Figure 7; and the up-growing cone stands, analytically, for the expanding process of the respective domains of temporal meanings out of their tense texturing. The cone is no longer understood as a 2-dimentional pie chart, which is the final stage of accumulation, overlooking the accumulation process, which concerns the ever increasing process in each domain of temporality meaning. Note, however, that the projected tenses are not separately presented for the purpose of brevity; in fact, they form a domain of their own attached to the meaning unit of the past.

Two, PAST in this text is the underlying meaning unit of the entire text, which should be one at a more abstract level that lies further behind the accumulations. This can be treated as the other way round of the growing process. That is, it is a course of generalisations and integrations from the semantic assembling by attending all the way to its holistic motif(s) of the speaker or writer. In fact, it is this motif that guides the discourse to proceed as it appears to be in the expansion. This is also a concomitant process along the interwoven surface texturing and the immediate underlying categorical domain accumulating. The model can also be envisaged as a cone, but in the opposite direction (see Figure 10).
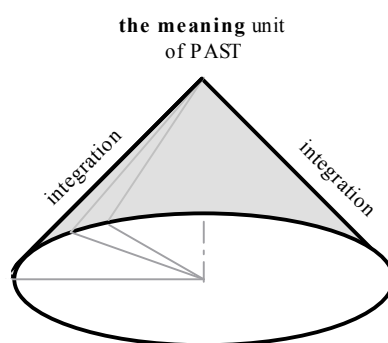
Figure 10. The integration process of meaning making

Putting together all the three aspects of the text, namely, (i) the surface texture, and the underlying spindle of meaning making process of (ii) expansion and (iii) contraction, then the textual mechanism of the temporality making model per se can be drawn as something like Figure 11. Note that the general motif built into the contraction process is here singled out and placed beside the spindle and texture for analytical purpose: In fact, a motif becomes a motif only along the process during which the speaker or writer is creating his text; one does have something beforehand in the mind, but that is usually vague and sometimes even unconscious and is able to be concretised only after it is realised by lexicogrammatical means, whether laid out by medium modes or not.
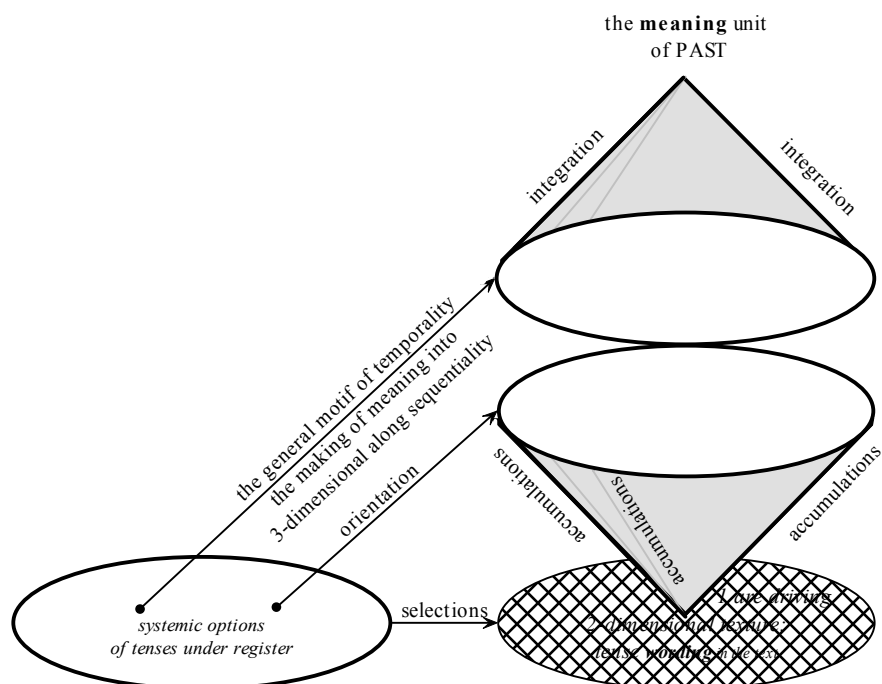
Figure 11. Making temporality along sequentiality by general motif

The bottom level of the model symbolizes the two-dimensional wording plane, which in turn amasses the temporality categorical components into the increasing cone upward toward a plane, the two of which in turn enable the general motif realisation into the ever-contracting cone up to a point.

Centerfold has simple present (e.g., *goes, leaves*), present in present (*is bleeding*) and past in present (*has disappeared/vanished*), all focusing on the PRESENT as the underlying socio-semantic unit of the text (see Figure 12).
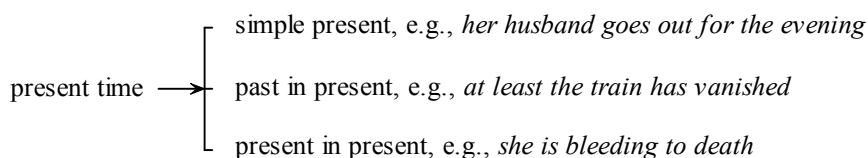
Figure 12. The temporal unit of meaning in *Centerfold*

A multi-dimensional model like Figure 11 can be visualised as well for this text *Centerfold*, which is omitted here for saving space.

The Human Pyramid appears to have both the present and the past; but, with the "present" as the perspective from which the "past" is implicitly projected, the temporal meaning of this text is still PRESENT. Altogether, there are 6 primary tenses: past in past (past perfective; 1 time, 1.64%), simple past (32 times, 52.46%, projecting 1 time of present in present (present progressive), 14 times of simple present and 1 time of simple future, present in past (past progressive; 1 time, 1.64%), present in present (1 time, 1.64%) and simple present (25 times, 40.98%). These accumulate respectively their due temporality domains, as envisaged in Figure 13. The bottom point refers to the first temporal element in the text: *are driving*; and the top point, the general "present", is the end that has contracted from all the temporality domains (see Figure 13).
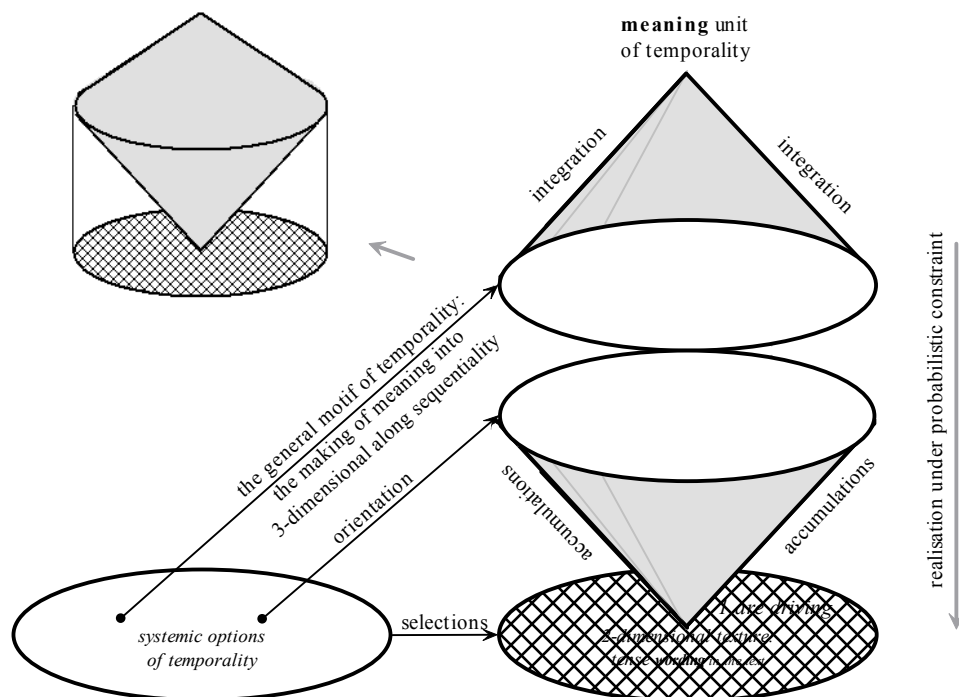
Figure 13. Accumulating and integrating of temporality along texturing

To sum up, repetitive uses of finite morphemes and the relevant lexical items gather their systemic potentials (recursive patterns) whereas systemic options are in turn chosen to orient the production and comprehension of temporality meanings as the integrated socio-semantic unit out of the ongoing tense types in use. The two aspects in terms of selection and orientation depend on each other for making the logogenetic process with the selected options in system(s) underlying the sequence of the foregrounding level, the two sides of which form a unity of their own and contribute to each other in collaboration, hence complementary: the separated presentation in the figure is analytical for clarity.

4. Summary

This paper has so far argued for a general theoretical model of text for which morphemes work in terms of their grammatical and contextual roles, and then illustrated the idea with three sample texts. It clarifies that the meaning and the wording of a text are complementary in the sense of a build-up process from the smallest meaningful grammatical unit through the largest one, namely text and text type.

This suggests that text should be treated as the topmost rank of lexicogrammar, at least from the instance perspective with the current morphemic case. It is rational, however, that text should also be a unit of lexicogrammar in the system respect, as can be argued by the acknowledged idea of "text types", which have come up to being ready-made paradigmatic options available for use. In summary, both from the temporary or instance angle, or from the long-term or system angle, text should be one unit of lexicogrammar, and it should be the top-most rank of the lexicogrammatical hierarchy along the correspondent semantic-meaning stratum.

The case study also implies that any element in a text is not isolated. The relevant general motif starts to deploy the first choice and constructs the foregrounding details; and at the same time the selected options are rendered into constituents by assigning them with different syntagmatic and contextual roles. Here, the process is realising something "visible", as can be singled out through analysis, which is what the speaker or author chooses to present as it is and what the reader or analyser wishes to see (Halliday, 1971). Meanwhile, the process is simultaneously making something that lies behind, something only retrieval can "see".

This understanding of lexicogrammar may provide a new angle to look back at what systemicists have undertaken so far and where to go next, concerning both the general theoretical construct and the applications of SFL. It also invites one to think about the way text or discourse is generated and comprehended. In fact, the two butt-to-butt model of meaning unit along wording texture, a spingle as a whole, points toward a direction for

discourse teaching and learning: it is constant accumulations and integrations that foster language learning capacity, increase knowledge construction complexity, and train students' intelligence for extension and summarisation of text meanings. But of course the present paradigm is just at the beginning and so demands many times the present length of wording to further account for the issue from other organisational aspects of text.

Acknowledgements

References

Aarts, B. (2011). *Oxford modern English grammar*. Oxford: Oxford University Press.

Bateman, J. A., & Paris, C. L. (1991). Constraining the deployment of lexicogrammatical resources during text generation: Towards a computational instantiation of register theory. In E. Ventola (Ed.), *Functional and systemic linguistics: Approaches and uses* (pp. 81-106). Berlin & New York: Mouton. http://dx.doi.org/10.1515/9783110883527.81

Berry, M. (2013a). Towards a study of the differences between formal and written English and informal spoken English. In L. Fontaine, T. Bartlett, & G. O'Grady (Eds.), *Systemic Functional Linguistics* (pp. 365-383). http://dx.doi.org/10.1017/cbo9781139583077.022

Berry, M. (2013b). Contentful and contentlight subject themes in informal spoken English and formal written English. In G. O'Grady, L. Fontaine, & T. Bartlett (Eds.), *Choice in Language* (pp. 243-268).

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

Blake, B. J. (2001). *Case* (2nd ed.). Cambridge: Cambridge University Press. http://dx.doi.org/10.1017/CBO9781139164894

Bloomfield, L. (1933). *Language*. New York: Holt, Rinehart & Winston.

Bussmann, H. (1996). *Routledge dictionary of language and linguistics*. London: Routledge.

Campbell, L. (1998/2002). *Historical linguistics: An introduction* (2nd ed.). Edinburgh: Edinburgh University Press.

Cloran, C. (2010). Rhetorical unit analysis and Bakhtin's chronotype. *Functions of Language, 17*(1), 29-70. http://dx.doi.org/10.1075/fol.17.1.02clo.

Cloran, C., Stuart-Smith, V., & Young, L. (2007). Models of discourse. In R. Hasan, C. Matthiessen, & J. J. Webster (Eds.), *Continuing discourse on language: A functional perspective* (vol. 2, pp. 646-670). London: Equinox.

Comrie, B. (1976/1985). *Aspect: An introduction to the study of verbal aspect and related problems*. Cambridge: Cambridge University Press.

Comrie, B. (1986). *Tense*. Cambridge: Cambridge University Press.

Corbett, G. G. (2001). *Number*. Cambridge: Cambridge University Press.

Corbett, G. G. (2006). *Agreement*. Cambridge: Cambridge University Press.

Croft, W. (2003). *Typology and universals* (2nd ed.). Cambridge: Cambridge University Press.

Crystal, D. (1997). *The Cambridge encyclopedia of language* (2nd ed.). Cambridge: Cambridge University Press.

Esser, J. (2009). *Introduction to English text-linguistics*. Frankfurt: Peter Lang.

Firth, J. R. (1957). A synopsis of linguistic theory 1930-1955. *Studies in linguistic analysis* (special volume of

the Philological Society) (pp. 1-32). Oxford: Oxford University Press.

Fontaine, L, Bartlett, T., & O'Grady, G. (Eds.). (2013). *Systemic functional linguistics: Exploring choice*. Cambridge: Cambridge University Press. http://dx.doi.org/10.1017/CBO9781139583077

Forey, G., & Thompson, G. (Eds.). (2008). *Text type and texture*. London: Equinox.

Fries, P. H. (2002). Some aspects of coherence in a conversation. In P. H. Fries, M. Cummings, D. Lockwood, & W. Spruiell (Eds.), *Relations and functions within and around language* (pp. 346-375). London & New York: Continuum.

Ghadessy, M. (Ed.). (1995). *Thematic development in English texts*. London: Frances Pinter.

Goutsos, D. (1997). *Modeling discourse topic: Sequential relations and strategies in expository texts*. Norwood, NJ: Ablex.

Greenbaum, S. (1996). *The Oxford English grammar*. Oxford: Oxford University Press.

Greenburg, J. H. (1966). *Language universals, with special reference to feature hierarchies*. The Hague: Mouton.

Gregory, M. (2002). Phasal analysis within communication linguistics: Two contrastive discourses. In P. H. Fries, M. Cummings, D. Lockwood, & W. Spruiell (Eds.), *Relations and functions within and around language* (pp. 316-345). London & New York: Continuum.

Haito, H. (1898/1932). *Practical English Grammar* (1st ed.). Tokyo: The S.E.G. Press.

Halliday, M. A. K. (1961). Categories of the theory of grammar. *Word*, *17,* 241-292. http://dx.doi.org/10.1080/00437956.1961.11659756

Halliday, M. A. K. (1971). Linguistic function and literary style: an inquiry into the language of William Golding' *The Inheritors*. In S. Chatman (Ed.), *Literary style: A symposium* (pp. 330-368). London and New York: Oxford University Press.

Halliday, M. A. K. (1978). *Language as social semiotic: The social interpretation of language and Meaning*. London: Arnold.

Halliday, M. A. K. (1995/2006). *Computing meanings: Some reflections on past experience and present prospects*. Paper presented at the 2nd Conference of the Pacific Association for Computational Linguistics, Brisbane, 19-22 April, 1995. Reprinted in M. A. K. Halliday (2006), pp. 239-267.

Halliday, M. A. K. (2006). *Computational and quantitative studies, vol. 6 in the collected works of M. A. K. Halliday*. J. J. Webster (Ed.). London: Continuum.

Halliday, M. A. K. (2008). *Complementarities in language*. Beijing: The Commercial Press.

Halliday, M. A. K., McIntosh, A., & Strevens, P. (1964). *The linguistic sciences and language teaching*. London: Longmans.

Halliday, M. A. K., & Hasan, R. (1976). *Cohesion in English*. London: Longman.

Halliday, M. A. K., & Hasan, R. (1985). *Language, context and text: Aspects of language in a social semiotic perspective*. Melbourne: Deakin University.

Halliday, M. A. K., & Matthiessen, C. (2014). *Halliday's introduction to functional grammar* (4th ed.). London & New York: Routledge.

Hasan, R. (1984). Coherence and cohesive harmony. In J. Flood (Ed.), *Understanding reading comprehension* (pp. 181-219). Newark: International Reading Association.

Hasan, R. (1987). The grammarian's dream: Lexis as most delicate grammar. In M. A. K. Halliday & R. P. Fawcett (Eds.), *New developments in systemic linguistics, 1: Theory and description* (pp. 185-211). London: Pinter.

Hasan, R. (2015). *Context in the system and process of language: The collected works of Ruqaiya Hasan, 4*. J. J. Webster (Ed.). London: Equinox.

Hasan, R. (In Press). *Unity in discourse: The collected works of Ruqaiya Hasan, 6*. J. J. Webster (Ed.). London: Equinox.

Heine, B. (1997). *Cognitive foundations of grammar*. Oxford: Oxford University Press.

Hjelmslev, L. (1935 & 1937). *Catégorie des cas: Étude de grammaire générale, I & II*. Acta Jutlandica VII & IX.

Hjelmslev, L. (1943). *Prolegomena to a theory of language*. F. J. Whitfield (Trans.). Madison: University of Wisconsin Press, 1961.

Hoey, M. (1983). *On the surface of discourse*. London: George Allen & Unwin.

Hoey, M. (1991a). *Patterns of lexis in text*. Oxford: Oxford University Press.

Hoey, M. (1991b). Another perspective on coherence and cohesive harmony. In E. Ventola (Ed.), *Functional and systemic linguistics: Approaches and uses* (pp. 385-414). Berlin & New York: Mouton. http://dx.doi.org/10.1515/9783110883527.385

Hoey, M. (2001). *Textual interaction*: *An introduction to written discourse analysis*. London: Routledge.

Hoey, M. (2005). *Lexical priming: A new theory of words and language*. London: Routledge. http://dx.doi.org/10.4324/9780203327630

Hopper, P. J., & Traugott, E. C. (1993). *Grammaticalization*. Cambridge: Cambridge University Press.

Huddleston, R., & Pullum, G. K. (2002). *The Cambridge grammar of the English language*. Cambridge: Cambridge University Press.

Huffman, D. S. (2014). *Verbal aspect theory and the prohibitions in the Greek New Testament* (Bilingual Edition). Frankfurt: Peter Lang. http://dx.doi.org/10.3726/978-1-4539-1400-7

Hunston, S., & Francis. G. (2000). *Pattern grammar: A corpus-driven approach to the lexical grammar of English*. Amsterdam: Benjamins. http://dx.doi.org/10.1075/scl.4

Hunston, S., & Thompson, G. (2000). *Evaluation in text*. Oxford: Oxford University Press.

Jespersen, O. (1924). *The philosophy of grammar*. London: George Allen & Unwin.

Jespersen, O. (1933). *Essentials of English grammar*. New York: Henry Holt & Company.

Jespersen, O. (1940). *A modern English grammar: On historical principles: Part V, syntax, fourth volume*. Copenhagen: Einar Munksgaard.

Jespersen, O. (1942). *A modern English grammar: On historical principles: Part VI, morphology*. Written with the assistance of P. Christophersen, N. Haislund & K. Schibsbye. Copenhagen: Einar Munksgaard.

Jespersen, O. (1949a). *A modern English grammar: On historical principles: Part II, syntax, first volume*. Copenhagen: Einar Munksgaard; London: George Allen & Unwin.

Jespersen, O. (1949b). *A modern English grammar: On historical principles: Part IV, syntax, third volume: Time and tense*. Copenhagen: Einar Munksgaard; London: George Allen & Unwin.

Jespersen, O. (1949c). *A modern English grammar: On historical principles: Part VII, syntax*. Copenhagen: Einar Munksgaard; London: George Allen & Unwin.

Langacre, R. E. (n.d.) *The grammar of discourse*. New York & London: Plenum.

Lass, R. (1997). *Historical linguistics and language change*. Cambridge: Cambridge University Press. http://dx.doi.org/10.1017/CBO9780511620928

Lemke, J. L. (1987). *The topology of genre*. Unpublished manuscript.

Lemke, J. L. (1991). Text production and dynamic text semantics. In E. Ventola (Ed.), *Functional and systemic linguistics: Approaches and uses* (pp. 23-38). Berlin & New York: Mouton. http://dx.doi.org/10.1515/9783110883527.23

Mann, W., & Thompson, S. (1988). Rhetorical structure theory: Toward a functional theory of text organization. *Text, 8*(3), 243-281. http://dx.doi.org/10.1515/text.1.1988.8.3.243

Mann, W., & Thompson, S. (Eds.). (1992). *Discourse description: Diverse linguistic analyses of a fund -raising text.* Amsterdam: Benjamins. http://dx.doi.org/10.1075/pbns.16

Martin, J. R. (1992). *English text: System and structure*. Amsterdam: Benjamins. http://dx.doi.org/10.1075/z.59

Martin, J. R. (2001). Cohesion and texture. In D. Schiffrin, D. Tannen, & H. E. Hamilton (Eds.), *Handbook of discourse analysis* (pp. 35-53). London: Blackwell.

Martin, J. R., & Rose, D. (2003/2007). *Working with discourse: Meaning beyond the clause* (2nd ed.). London: Bloomsbury.

Martin, J. R., & White, P. (2005). *The language of evaluation: Appraisal in English*. London: Macmillan.

Matthews, P. H. (1991). *Morphology* (2nd ed.). Cambridge: Cambridge University Press. http://dx.doi.org/10.1017/CBO9781139166485

Matthiessen, C. (2013). Appliable discourse analysis. In Y. Fang & J. J. Webster (Eds.), *Developing systemic functional linguistics: Theory and application* (pp. 138-208). London: Equinox.

Matthiessen, C., Teruya, K., & Lam, M. (2010). *Key terms in systemic functional linguistics*. London: Equinox.

Mcgregor, W. (1991). The concept of rank in systemic linguistics. In E. Ventola (Ed.), *Functional and systemic linguistics: Approaches and uses* (pp. 121-138). Berlin & New York: Mouton. http://dx.doi.org/10.1515/9783110883527.121

O'Grady, G., Bartlett, T., & Fontaine, L. (Eds.). (2013) *Choice in Language: Applications in text analysis*. London: Equinox.

Parsons, G. (1991). Cohesion coherence: Scientific texts. In E. Ventola (Ed.), *Functional and systemic linguistics: Approaches and uses* (pp. 415-429). Berlin & New York: Mouton. http://dx.doi.org/10.1515/9783110883527.415

Pearsall, J. (1998). *The new Oxford dictionary of English*. Oxford: Clarendon.

Pike, K. L., & Pike, E. G. (1983) *Text and tagmeme*. Norwood, NJ: Ablex.

Quirk, R., Greenbaum, S. Leech, G., & Svartvik, J. (1985). *A comprehensive grammar of the English language*. London: Longman.

Romaine, S. (1998). *The Cambridge history of the English language, IV, 1776-1997*. Cambridge: Cambridge University Press.

Sinclair, J. M. (1970). *A course of spoken English: Grammar*. Oxford: Oxford University Press.

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

Sinclair, J. M. (2004). *Trust the text: Language, corpus and discourse*. London & New York: Routledge.

Song, J. J. (2013). *The Oxford handbook of linguistic typology* (reprint edition). Oxford: Oxford University Press.

Spencer, A. (2001). Morphology. In M. Aronoff & J. Rees-Miller (Eds.), *The handbook of linguistics*. London: Blackwell.

Stoddard, S. (1991). *Text and texture: Patterns of cohesion*. Norwood, NJ: Ablex.

Sweet, H. (1891). *A new English grammar*. Oxford: Oxford University Press.

Thompson, G. (2013). Labelling discourse acts: Interpersonal projection across registers. In Y. Fang & J. J. Webster (Eds.), *Developing systemic functional linguistics: Theory and application* (pp. 209-226). London: Equinox.

Webster, J. J. (2002). *Text linguistics*. Chinese version translated by Jiujiu XU. Beijing: China Press of Social Sciences.

Webster, J. J. (2014). Text and texture. In M. A. K. Halliday & J. J. Webster (Eds.), *Text linguistics: The how and why of meaning* (pp. 181-425). London: Equinox.

Notes

Note 1. This paper follows the SFL tradition that single quotation marks are used for technical expressions and double quotation marks for direct quotation or a stance neutral toward the idea of certain wording (see Halliday & Matthiessen, 2014).

Note 2. "Maximal" is close to the Bloomfield's idea of Immediate Constituent Analysis, as in *(((seven) maids) (with ((seven) mops))) swept ((the) floor)* whereas "minimal" is labelling functional class of lexicogrammatical units, as in *(seven maids with seven mops) swept (the floor)*.

Note 3. This concept of "grammaticalisation" here refers to the syntagmatic process from semantic options to lexicogrammatical constructions (see Halliday, 2008, pp. 170-183; cf., the same term but in different sense: the process from notional to functional changes, see, e.g., Hopper & Traugott, 1993).

Note 4. Range in SFL is that functional component to which the process extends, as in the typical case: *John built a house*, where *a house* is the extending range for *building*.

Appendix

The sample texts (with each sentence labeled by sequential number in the first and third texts):

0 *Headless Angel*, by Tom Hazuka

1 Beth was three months pregnant when we went to France on our honeymoon. 2 The trip represented our promise not to let the baby change who we were, not to forget that there was so much world, all around, waiting. 3 Then in Normandy, strolling down to the beach for lunch, we saw a woman dive from a fourth-floor window and die on the sidewalk, right across the street. 4 It was horrible, a shock out of nowhere on a gorgeous sunny day. 5 People ran to the rag-doll body, yelling for a doctor, yelling for the police. 6 But it was hopeless. 7 Beth trembled against me in a way she never had before; I knew she was remembering her younger sister who had killed herself. 8 Hugging each other hard, Beth and I walked to the shore. 9 Young men in tiny bathing suits played volleyball on the sand, oblivious to what had happened two hundred feet away.

10 "It'll be all right," I said finally, to both of us. 11 I put the untouched bread and cheese in my backpack, though I was very hungry. 12 I squinted against the glare off the Atlantic. 13 The water was cold here, all year round.

14 "Right," she said.

15 The next day we drove the abbey road, along the Seine.

16 The river flowed slow and perfect in the morning mist. 17 We stopped at the Abbaye de Jumièges and paid to enter the magnificent ruin, roofless walls and white stone spires reaching for the sky.

18 Beth disappeared.

19 I found her in a courtyard staring at a decapitated marble angel, its childlike hands palm-to-palm in prayer, the front of its bare feet broken off and worn as smooth as a windowsill polished by generations of elbows.

20 Beth touched the angel's wings. 21 "Vacation's almost over, lover," she whispered. 22 "Soon we have to fly home."

23 Our fingers intertwined on the cold, hard stone.

Centerfold, by John Briggs

When her husband **goes** out for the evening, he **leaves** her, now even months pregnant, at loose ends. She **decides** to clean out drawers. In the bottom drawer of his bureau she **finds** a several-months-old men's magazine. She **opens** to the "Dream Girl Centerfold." It**'s** a nude photo of herself lying seductively on a beach.

He legs **stretch** out in a V across the pages. Her elbows **prop** her up from the sand as she **reclines** in a pose that **causes** her pelvis to tilt out and her breast to arch back a little unnaturally. She **smiles** fetchingly along her shoulder at the camera. Behind her a fat blue wave **curls** itself into a glassy tube about to shatter against the shore.

On the next double page this image **repeats** exactly, except for a red line beginning to show between her legs. On the following pages the stain **grows** larger. She **is bleeding** to death.

As she **turns** the pages, the provocative pose and her smile never **change**, but the stain **reaches** past her feet. Throughout, the wind **blows**, lifting the ends of her hair.

Eventually, elbows still propping her up, her head **lolls** at a grotesque angle and her body **rots**. Her skin **turns** to rags. The wind **gusts** her hair.

When the last of her flesh **has disappeared**, presumably picked off by gulls and ants, she **remains** as a skeleton propping herself up on the beach with the waves arching over. As least the stain **has vanished**. Her bones **gleam** sleekly in the sunlight. The figure of her skeleton **cuts** a stylish composition against ocean and sky.

She **doesn't** exist on the magazine's last two pages. The beach **looks** pleasant and inviting. The waves **strike** a cool, clean blue.

The Human Pyramid, by Neno J. Perrotta

1 These neighbors of mine are driving me nuts. 2 At first it was only a matter of clothing, then it got out hand.

3 The big woman, the one with short hair, walks around naked talking on a cordless phone. 4 there're always at least four or five little kids hanging on her legs or tagging along. 5 The ones over there, they're naked, too. 6 Babies wear diapers, thank God.

7 And four ponies and a llama they keep inside an electric fence. 8 That's where you can always find the other woman, the one that most of the time wears at least underwear. 9 She trains the ponies. 10 I can't even guess what she does with the llama.

11 I asked the mailman, "What's with those people over there? What's their story?"

12 "Circus, I'm guessing," he said. 13 "But they both get unemployment checks and letters to the kids from all over the world."

14 "Yeah. Sure," I said. 15 "A world-renowned, nude circus." 16 And to be honest, I was thinking lesbians, too. 17 But, since there were so many kids, I kept my mouth sht.

18 Now don't get me wrong. 19 I've got nothing against nakedness. 20 And I like kids and ponies as much as they next guy. 21 it wasn't until a few weeks ago that the carnival-like goings on became too much for me. 22 That's when they started with the human pyramids. 23 To be specific, the naked-human pyramids.

24 Every time they try, the whole thing comes crashing down. 25 With those diapers on top it's a snow-capped mountain of naked flesh. 26 It's a miracle no one ever gets hurts.

27 So, now I have to worry that they're not too bright. 28 Hell, everyone knows you need at least one strong man to anchor a human pyramid. 29 Maybe more.

30 That's what's driving me crazy. 31 I even went over and asked them if they needed help. 32 "I don't know about the nude business," I said. 33 "But I could wear a bathing suit."

34 "Thanks," said the naked woman. 35 "But, no thanks."

36 "How about a cape?" I said. 37 "Tight shorts and a cape?"

38 "It's a family thing," said the "bra and panties" woman. 39 "We're all in one, big happy family."

40 "Okay," I said. 41 "But kids can get hurt. Somebody can get hurt."

42 "No we won't," yelled all the kids. 43 "We never get hurt." 44 They talked at the same time, like they'd been practicing since the day they were born.

45 When I turned to go home the kids laughed and ran to ride the ponies. 46 I stopped and watched while some of them fell off and seemed to crack their heads on rocks. 47 One of babies tumbled onto the electric fence, laughing and delighted by the steam that danced up from her soggy diaper.

Table 1. Lexicogrammatical functions of MORPHEMES in *Headless Angel*

		Not meaning oriented (implicit meaning orientation)	Meaning characterised (overt meaning change)
1	Word	2 (so much world) all **a**round	0 head**less**
			1 **honey**moon
			2 **re**presented [*vs.* present], **pro**mise [*vs.* mise]
			3 **wo**man, side**walk**, **a**cross
			4 **no**where
			5 **rag-doll**
			7 **ne**ver [*vs.* ever], **be**fore [*vs.* fore]
			9 men, suit**s**, volley**ball**
			11 **un**touched, back**pack**
			15 **a**long
			17 wall**s**, spire**s**
			18 **dis**appeared, dis**ap**peared
			19 court**yard**, **de**capitated, child**like**, hand**s**, pray**er**, its bare f**ee**t, window**sill**, gene**ra**t**i**ons, genera**tions,** genera**tion**s, elbow**s**
			20 wing**s**
			21 vaca**tion**, 21 **al**most [*vs.* most], love**r**
			23 **inter**t**win**ed

2	Group/ Phrase	1 **our** honeymoon [*deictic*] 2 **our** promise [*deictic*] 7 against **me** [*compl.*]**, her** young**er** sister [*classifier*] 9 you**ng** men, tiny bath**ing** suits [*class.*] 11 untouch**ed** bread and cheese [*class.*], **my** backpack 17 the magnificen**t** ruin [*epithet*] 19 a decapitat**ed** marble angel [*class.*], **its** childlike hands, **its** bare feet [*deic*] both of **us** [*compl.*] 20 angel**'s** [*deictic*] 23 **Our** finger**s** [*pl.*]	1 **was, went**, three month**s** [*head*] 2 represent**ed**, **were, was** 3 **saw**, a **fou**rth-floor window [*num*] 4 **was**, a gorge**ous**, sun**ny** day [*ep, cl*] 5 **ran** 6 **was** 7 trembl**ed**, **had**, **knew**, **was** remember**ing**, **had** kill**ed**, 8 walk**ed** 9 play**ed**, **had happened**, tin**y** bathing suits, two hundred fee**t** **a**way [*h, q*] 10 **said** 11 **put, was** 12 squint**ed**, **glare** [*v. → n.*] 13 **was** 14 **said** 15 **drove** 16 flow**ed** 17 stopp**ed**, **paid**, roof**less** walls [*classifier*] 18 disappear**ed** 19 **found** 20 touch**ed** 21 Vacation**'s**, whisper**ed** 22 **have** to 23 intertwin**ed**
3	Clause	1 **we** [*subj.*] 2 **we were** [*subj. + pl.*], there **was** [*sgl.*] 3 **we** saw [*subj.*] 4 **It** (was) [*subj. + sgl.*] 6 **it** was (hopeless) [*subj. + sgl.*] 7 **she**, **I**, **she** [*subj.*], **her**self [*goal; compl.*] 8 **I** [*subj.*] 10 **It**'ll [*subj. + sgl.*], **I** [*subj. + sgl.*] 11 **I** [*subj.*], **I** [*subj.*] 12 **I** [*subj.*] 14 **she** [*subj.*] 15 **we** [*subj.*] 17 **We** [*subj.*] 19 **I** [*subj.*], **her** [*compl.*] 21 **she** [*cf.* her] 22 **we** (have to) [*subj. + pl.*]	[tense finites cited in the previous cell] 1 pregnan**t** [*vs.* pregnancy] [*attr.*] 4 horri**ble** [*attr.*] 6 hope**less** [*attr.*] 9 obliv**ious** to [*attr.*] 10 final**ly** [*circ.*] 11 hung**ry** [*attr.*]
4	Clause Complex	2 not **to** let, not **to** forget, wait**ing** 3 stroll**ing**, (saw X) [to] dive, [to] die 5 yell**ing, yelling** 8 Hug**ging** 17 **to** enter, reach**ing** 19 star**ing**, **broken**, **worn**, polish**ed**	[stop **to** do vs. stop do**ing**; remember **to** do vs. remember do**ing** forget **to** do vs. forget do**ing**]
5	Text		[tense finites listed in 2 Group / Phrase]

Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.