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On prepositions and particles: a case for lexical representation in systemic functional linguistics

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The focus of this paper is on lexical items which are traditionally referred to as prepositions, adverbs and particles, grouped here under the term P-items. It is argued that the relative lack of detail concerning lexical representation within systemic functional linguistics (SFL) theory means that there are some issues related to the status of lexis within the framework that require some development. As pointed out by Tucker [2009. In search of the grammarian's dream: locating lexis in a systemic functional grammar. In Stefaan Slembrouck, Miriam Taverniers, & Mieke van Herreweghe (eds), *From will to well: studies in linguistics offered to Anne-Marie Simon-Vandenbergen*, 415–426. Gent: Academia Press, 424]:

if the theoretical principles are not fleshed out by way of description of both the actual grammatical and lexical resource of a given language, it is of little use to the majority of consumers, those who adopt it for (ultimately) the socio-semantic analysis of actual texts.

By examining the treatment of P-items within the SFL framework and by drawing on the rich literature on this topic in cognitive linguistics, this paper aims to offer some proposals for integrating a more comprehensive, cognitively informed approach to lexis in SFL.

Keywords: lexical representation; systemic functional linguistics; prepositions; adpositions; polysemy

1. Introduction

In any study of lexical representation, linguistic theory is faced with the classic problem of polysemy vs. homonymy. For many years this was almost exclusively a primary concern for lexicographers but more recently there has been some convergence on this issue for linguistics more generally including language description. In some respects, articulating a position on the related issues can be revealing as it allows one to reflect on assumptions and implications within a theory. As Davidse (2017: 79) states, "linguistic theories specify one's fundamental assumptions about language and the nature of the linguistic sign. It is within these assumptions that

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the facts of a language are described – that is, its categories identified and interpreted". The position of lexis in systemic functional linguistics (SFL) is, theoretically, fully integrated into the grammar if we accept the theory's assumption that "there is no need to postulate a separate 'lexicon' as a pre-existing entity on which the grammar is made to operate" (Halliday & Matthiessen 1999: 199). Indeed, Halliday's well-cited reference to the "grammarian's dream" (see Halliday 1961; Hasan 1996) suggests lexis as most delicate grammar. However, as argued in this paper, there are some questions related to lexical representation within the SFL framework that need to be asked, specifically related to polysemy, homonymy and the nature of the lexeme. As Tucker (2009: 424) has argued:

> if the theoretical principles are not fleshed out by way of description of both the actual grammatical and lexical resource of a given language, it is of little use to the majority of consumers, those who adopt it for (ultimately) the socio-semantic analysis of actual texts.

Lexical representation, or how lexical items are stored in the lexicon, is relatively infrequently articulated within SFL but this is due to the attention given in the theory to language as a social-semiotic system. It has never been a priority within SFL to address the more cognitive concerns surrounding lexis. In contrast, cognitive linguistics (CL) and psycholinguistics have centralized the issues in this area. While psycholinguistics is not a linguistic theory per se, CL is more readily comparable to SFL and has made significant progress in this area. As Butler (2013: 206) explains there is potential for complementarity between the two theories:

> For SFL, grammar and lexis are seen as realizations of less delicate and more delicate options, respectively, in lexicogrammatical system networks. For cognitive theories, the discussion is couched in terms of constructions, in the specific sense of a pairing of a form with a meaning. But the overall idea is much the same, both approaches cite as evidence the occurrence of patterns which lie somewhere between abstract structures and individual lexical items or combinations of these, and which have been extensively studied under the heading of phraseology.

While phraseology is an important area for investigation, it must be based on an understanding of how lexical items are represented in the model and it must include some basis for assumptions related to how lexical units larger than the morpheme are stored, i.e. moving beyond the notion of the orthographic word (see Wray 2014). In developing its position on lexical representation, SFL may have something to gain by considering the advances made within CL. Indeed, the development of an integrative functional-cognitive approach to grammatical description has been shown to work very well, e.g. Heyvaert (2003) and Rompaey and colleagues (2015) to list only two.

The motivation for the particular focus of this paper was triggered by the relatively simple clause given in example (1) below.

(1) he is gone out golfing

The analysis of *out* troubled me, leaving me with more questions than answers. For example, we might ask whether *out* is part of a prepositional phrase, *out golfing*, part of a phrasal verb, *go out*, some kind of locational adverb or indeed something else and we

might even wonder whether it matters or not. There is often a conflict for the analyst when trying to determine what the speaker has done with language and how the model used by the analyst can fit the instances of language being analyzed. The speaker is generating language, while the analyst is parsing language, and each is using completely different criteria. Within SFL, the problem of how to handle lexical items is underdeveloped in relation to the rest of the theory as a whole and to other theories (e.g. CL). With the exception of Tucker (e.g. 1998, 2006, 2009), there has been relatively little attention to the treatment of lexis but this is a developing area within SFL. It could be argued that work on transitivity and grammatical metaphor, to name two examples, suggests more extensive work in the area of lexical representation, however, it is not typically framed in terms of developing an account of lexical representation in SFL but rather to account for the semantics, often as viewed from above.

This paper takes up the challenge of the homonymy/polysemy problem in order to examine and evaluate lexical representation in SFL. By considering the treatment of P-items specifically within the theory, the intention is to provide some proposals for integrating a more comprehensive, cognitively informed approach to lexis in SFL. With this in mind, the aim of the chapter is to illuminate the approach to lexical representation with SFL by considering the case of P-items.

It is worth clarifying, before moving on, that the aim is not to resolve the problem of P-items within the theory; doing so would require a different type of study, for example one similar to Mackenzie (2013) which attempts "to clarify and refine the FDG [Functional Discourse Grammar] treatment of spatial adpositions" (90). The underlying assumptions that require clarity within the theory are similar to this paper, i.e. what is the nature of lexical representation within the theory.

For any linguist interested in these particular lexical items, it is clear that they challenge our notions of lexical categorization. This includes so-called word class labels such as noun, verb, adverb, etc. as well as the content/function (or lexical/grammatical) word distinction. They also raise difficult questions concerning grammaticalization and lexicalization. Many P-items arise through a process of grammaticalization from nouns (e.g. *back*), which shows that it is not easy to simply draw a boundary between nouns and P-items for example. It also shows that a diachronic perspective is very important. While these questions are non-trivial, it would be futile to pursue them within SFL without some clarity about the assumptions within the theory concerning lexical representations. In this sense, the paper concentrates on the place of homonymy and polysemy (cf. Hanks 2013 on "lumpers" and "splitters") within the theory and raises important questions about the storage of units larger than single morphemes and the implications of this for lexical representation. Within the area of polysemy, evidence from corpus linguistics plays an important role in the description of the polysemes but not unless there is an assumption of polysemy in lexical representation. Therefore, the scope of this paper is limited to setting out a theoretical agenda that will identify key questions that need to be addressed before we would be in a position to refine the treatment of P-items in SFL.

The organization of the paper is as follows. The next section will discuss the main issues with respect to the lexical items under study here (P-items) including difficulties surrounding their classification. Section 3 will consider two opposing views of lexical representation; i.e. polysemy and homonymy. The implications of favoring polysemy are explored in Section 4 where the issues of transitivity and ellipsis are discussed. In Section 5, we consider the treatment of these prepositional items within SFL by

first providing an overview based on Halliday & Matthiessen (2004) and then by exploring the position taken in Fawcett (2000). The paper then closes in Section 6 by proposing a more cognitive basis for lexical representation in SFL.

2.   On prepositions

There are two main difficulties in defining prepositions. The first is the assumption prepositions are defined in relational terms by the nominal group which follows it, e.g. we can identify a preposition if it is followed by a nominal groups and if it is not then it is not a preposition. The second relates to the content vs. function word distinction where, for example, *by* in *the car was stolen by the bank robber*, marks the nominal group for Agency but in *I left the bag by the door*, *by* has spatial meaning (Debras 2010: 2).

Lexical classification is reached in various ways. For example, nouns can be identified "in terms of (i) potential for interaction with other parts of the linguistic system; and (ii) their morphology, that is, the 'shapes' they can take, their 'endings' etc." (Bloor & Bloor 2004: 19). Classification is further complicated by terminology, which sometimes leads to certain traps.

There are many problems associated to the labels that linguists use. A preposition may be defined as a "closed class of uninflectable morphemes showing the link between its object and another word in the sentence" (Liles 1987: 229 in Debras 2010: 1). However even this is disputed (e.g. O'Dowd 1998) and some contest the closed class feature of these morphemes. One consistent feature is the notion that the preposition is relational but this is too vague for a definition (cf. Halliday's, e.g. 1985 treatment of prepositions as verbs).

For the purposes of this discussion, let us assume there is a class, called simply P, that includes items such as *in*, *on*, *out*, *up*, *behind*, *to*, *under*, *over*, and many more. We can then refer to these items as P-items[1] (cf. adposition; Keizer 2008 and P-lexeme; O'Dowd 1998). As with all lexical classes, we can assume there will be some items that are more typical, exhibiting most features of the class (e.g. *in* or *from*), and others that may be questionable (e.g. *away* or *back*). It is generally accepted that when a P-item takes a complement, e.g. <u>over</u> *the fence*, it is a preposition. However, in an expression such as *tip* <u>over</u> *the cup*, *over* is generally viewed as a particle. In other uses, e.g. *can she come* <u>over</u>, *over* can be viewed as an adverb. The form remains unchanged in these uses (cf. Mackenzie 2013 for some phonological differences) and this raises questions concerning lexical representation which any linguistic theory should have to address (see Section 3). The main question of interest here is whether these items are all instances of the same lexeme or not.

Tyler & Evans (2003: 61–62) use the term "spatial particle" to capture four uses:

(1) Prepositions, which "mediate a linguistic relationship", e.g. <u>up the tree</u>
(2) Verb–particle constructions (VPCs), where the landmark is linguistically covert, e.g. *he threw* <u>out</u> *the trash*
(3) Adpreps, as in *the movie is* <u>over</u>
(4) Particle prefixes, as in <u>overflow</u>, <u>underspend</u>.

Many of the lexical items in the class of spatial particles appear across all sub-categories (e.g. *over*). In a corpus study of P-lexemes, O'Dowd (1998) classified each item as a preposition if it realized a landmark or a particle if not. Her results show that while

many P-lexemes appeared both as prepositions and particles, each lexeme had a tendency towards one type or the other (1998: 32). For example, *in* was far more likely to be used as a preposition (81%) than as a particle, but *up* is almost always used as a particle (98%). Furthermore, she found that some lexemes always appear as prepositions (e.g. *from*, *of*, *at*) and others never appear as prepositions in her data (e.g. *away*, *toward*, *forth*) (1998: 32).

As mentioned above, P-items in English do not inflect,[2] except derived lexemes such as *ups and downs* and *ins and outs*. Their form distinguishes them other classes of words.[3] They can, however, be modified by *right*, as in *right out*. This modification does not generally (in Standard English) occur with other classes (Debras 2010: 3). This helps identify the word class but not its function.

A P-item functioning as an adjunct is traditionally labeled as an adverb. However, according to Keizer (2008: 230), "there is a relation between these locative adverbs and prepositions, as in many cases we are dealing with the same lexical element". She argues that they are stored in the lexicon as lexical elements with a meaning definition (Keizer 2008: 248) but see Mackenzie (2013) who disagrees. The distinctions are dealt with by the (in)transitive nature of the item. A linguistic theory must take a position on this in relation to how it models lexical representations. For example, should a given model prefer homonymy or polysemy in these cases? This topic is addressed in the following section.

3. Lexical representation

The issue of lexical classification is directly related to lexical representation in semantic terms since it is generally accepted that different lexical classes of the same lexical form constitute separate (even if related) lexemes (e.g. conversions) and as such are stored as separate entries in the lexicon. The picture is somewhat complicated with P-items due to similar form (phonological and orthographical), including the lack of inflection. The question is whether the different uses of a given P-item mean they are viewed as homonyms or whether they are viewed as polysemes of a single lexeme.

Cognitive approaches to language generally favor polysemy in lexical representation. As Langacker explains (1986: 3–4) "most lexical items have a considerable array of interrelated senses, which define the range of their conventionally sanctioned usage … The conventional meaning of a lexical item must be equated with the entire network [of senses]". In reference to P-items in particular, Langacker's (1987: 243) position is that "particles are not distinct from the class of prepositions: they are simply prepositions employed in grammatical constructions where the landmark happens not to be elaborated, as it otherwise usually is". Lindner (1981) also takes a similar position and argues against treating what she calls verb particle constructions (VPCs) and verb–preposition phrase (VPP) as homophonous lexical items:

> [i]nstead we may attribute to OUT in both VPCs and VPPs the same intrinsic semantic structure and show that the real differences lie at the level of the construction, that is, in the way the substructures present in the predicates involved are "hooked up" to each other. (195)

In SFL, the position taken seems to be in stark contrast to the one taken by most cognitive linguists, which is surprising since Halliday (1961: 277) put forward the

ground-breaking idea that "the 'lexical item,' is unrestricted grammatically; grammatical categories do not apply to it, and the abstraction of the item itself from a number of occurrences … depends on the formal, lexical relations into which it enters". He went on to suggest that since working out large-scale frequencies of items in collocation is no longer difficult, "it should not be long before we find out much more about how language works at this level". In more recent work, this position which might suggest polysemy in one interpretation does not appear to have been developed. On the problem of the word class of a P-item, SFL seems to diverge from CL. This is evidenced notably in Halliday & Matthiessen (2004) (but also elsewhere) where we find the same lexical form (e.g. *in, for, off*) identified as adverbs, prepositions, and sometimes particles. Bloor & Bloor (2004: 27) suggest that:

> perhaps the easiest way to deal with this problem is to say that they are homonymous pairs … There is an adverb *in* and a preposition *in*, two different words belonging to different word classes but which happen to be pronounced and written in the same way.

One reason for this may be related to the SFL view of lexis as most delicate grammar. However, this may include a risk of treating lexis as taxonomically organized, at least in terms of systems, and this may be more likely to promote homophonous lexical relations than semantic ones. It should be noted that Mackenzie (e.g. 1992, 2001) seems to also promote separate lexical classes for these items within the functional grammar (FG) framework.

Tyler & Evans (2003) promote what they call the "principled polysemy model". Using *over* as an example to illustrate their position, they state (32):

> [W]e assume that these distinct senses did not just accidentally arise because, for instance, speakers could not think of another phonological string with which to label the distinct concept. Rather, speakers must have found something in the basic spatio-physical configuration of *over* which connected – in a way which was also discernible to the listener – to the concept of, say, "completion" (e.g. *the movie is over*). In other words, we assume that non-arbitrary, motivated connections exist between the primary sense and the distinct senses within a semantic polysemy network.

On the surface, it may seem feasible to adopt such a position with the SFL framework. Not taking this position suggests that lexical class should primarily be determined based on the function of the lexical item in a particular use in a particular environment and for example, it would mean referring to nouns that modify nouns as adjectives. This is a position that Halliday put forward in the early descriptions of the theory as we will see below. However, as Butler (2003) points out, it becomes very difficult to explain the fact that "any constituent in a structure in SFG (systemic functional grammar) is likely to have more than one function assigned to it" (166). This raises questions important to lexical representation; i.e. storage by form or function or combination of both.

We will return to this issue in Section 5 where status of P-items within SFL will be discussed. Before leaving this discussion of lexical representation, there is one final point to make concerning the use of P-items in phrasal verbs. A phrasal verb (e.g. *run up*) is a single lexeme or what is referred to as a type of morpheme equivalent unit (MEU) (Wray 2008) or multi-word expression (MWE) (see Moon 1997). The source status of the composite morphemes does not need to be maintained even if

individual components can retain, to some degree, their original lexical status (e.g. *understand*), such that they remain largely recognizable and retrievable. The degree to which the parts are decomposed by language users is debatable but this is not the point; the point is that it is possible to recover them if we try. In this sense then, it should be reasonable to treat a lexeme such as RUN UP[4] as an MWE which was originally composed, through a normal word formation process, of a verb and a P-item. Identifying MWEs is not straightforward however and this is a well-known problem. In the context of lexical representation, with respect to MWEs, we are no longer comparing formally identical lexical items. RUN UP is a lexeme which is distinct from the lexeme RUN and the lexeme UP.[5] The problem is whether every instance of the lexical item *up* is an instance of a single lexeme (i.e. UP) or more than one lexeme (i.e. UP_1, UP_2, etc.). The issue of a complement occurring within the phrasal verb boundaries is not necessarily problematic for this view. Neurolinguistic evidence by Cappelle and colleagues (2010: 200) supports the position "that language users store prefabricated chunks of lexical material which consist of more than one word and which can potentially be separated (e.g. heat the room up)". If this is how these MWEs are stored then grammatical description should reflect this.

The position taken here follows a more cognitive approach to lexical representation such that all P-items of the same form are considered as instances of a single lexeme. Following Hanks (2013), I would argue that the P-lexeme has meaning potential rather than a meaning and that the meaning it has in use comes from its context (i.e. collocations). This is a principle that in theory should be compatible with SFL.

In this section, the focus has been on considering the case for polysemy in the lexical representation of P-items but this is not entirely without complications. One potential consequence of a polysemous view of P-items is that some such items are transitive, requiring a complement and some are intransitive. In this latter case, some such items seem to allow the completive to be subverted or unexpressed. According to Cappelle (2004: 7), this variability in terms of transitivity makes prepositions (i.e. P-items with an optionally expressed completive) completely parallel to verbs. Halliday (e.g. 1985) has always held this view with respect to the parallel between prepositions and verbs, treating them as minor processes, although for different reasons. The idea of subverted complements is discussed in the next section.

4.   Transitivity and ellipsis

The implication of a polysemous approach to P-items is that they do not have to be transitive with a fully expressed nominal complement. Fillmore (1979) argued for complement ellipsis because of the strength of pragmatic inference between the speaker, addressee and context. His example is given here as example (2). For Fillmore (1979: 20), *in* is a "directional complement" since the verb *come* is one of the few verbs of motion which requires a complement ("a destination complement") and therefore the destination must be specified and if this is the case, the preposition *in* cannot be seen as adverbial.

(2) may we come <u>in</u>

Fillmore prefers to recognize that "'in' is a preposition that permits the omissibility of its complement if information about it is 'given' in the context" (1979: 20n). For

Fillmore, the isolated preposition, *in*, is due to ellipsis of a known referent rather than conversion from preposition to particle (1979: 20).

Keizer (2008) considers the ellipsis of the complement in terms of transitivity and suggests it has more to do with inferability. As she explains (2008: 243–244):

> In each case the argument is, to some extent, inferable: in (3) John is in the same building as the speaker; in (4) the shades are down in relation to the vertical dimension of the window/room; and in (5) the kitchen is below either in relation to the position of the speaker, or in relation to the vertical dimension of the building.

(3) John is in
(4) All the shades are down
(5) The kitchen is below

Clearly this is not a property of all P-items. As discussed in Section 2, very few of the P-items analyzed in O'Dowd's work were 100% of one type or the other. Although *to* seems rarely to allow ellipsis, it does occur in British English, although now only in colloquial use according to the Oxford English Dictionary (OED) as in example (6), taken from O'Dowd (1998: 153), where presumably the ellipted referent is something like *the door frame*. The OED labels it as an adverb with the meaning of "so as to come close against something" ("to" adv.).

(6) pull the door to

While the historical development of P-items plays a significant role in their use and understanding in Modern English, a full discussion of their development is beyond the scope of this paper but see O'Dowd (1998), notably for the items *to* and *about*.

Certainly ellipsis does not explain everything and it should be explored further in future research. For the current purposes, the way transitivity and ellipsis explain the uses of P-items supports a more unified approach to their lexical representation. Having explored generally the issues surrounding lexical classification, lexical representation and transitivity, the next section will examine how P-items are handled within SFL.

5.   P-items within SFL

Within SFL theory, Halliday's approach to lexis as given in his *Introduction to Functional Grammar* (IFG) (e.g. Halliday & Matthiessen 2004) differs from later developments by Fawcett (e.g. 2000) and for this reason, each will be presented separately beginning with Halliday's position.

5.1.   *P-items in IFG*

As stated above in Section 3, there has been a tendency in SFG to favor homonymy in relation to the lexical representation of P-items. Halliday & Matthiessen (2004: 355) list the following items as adverbs: *yesterday*, *today*, *tomorrow*, *home*, *upstairs*, *downstairs*, *inside*, *outside*, *out*, *up*, *down*, *behind*, *left*. Many of these items will also be labeled as prepositions by Halliday and Matthiessen, e.g. *up*, *down*, and *behind*. In

SFL there is a fundamental division between three main classes of word: nominal, verbal and adverbial. Prepositions belong to the class of verbals and adverbs to the class of adverbials. By definition "a prepositional phrase consists of a preposition plus a nominal group" (Halliday & Matthiessen 2004: 360) and they emphasize the similarity between prepositional phrases and clauses where the preposition is seen as a minor Process (361).

In Halliday's earlier publications, he recognized two different ways of classifying items: syntactic and morphological. He explains this distinction as follows (1963/2002: 96):

> Groups in English such as *this morning* operate in clause structure both as Adjunct, as in "*I came this morning*", and as Subject (or Complement), as in "*this morning promises to be fine*" (or "*I've set this morning aside for it*"). The syntactic class defined by operation as Adjunct is the adverbial group; that defined by operation as Subject or Complement is the nominal group. Syntactically, therefore, *this morning* could be assigned to either or both of these classes. Morphologically, however, it clearly resembles other nominal groups (*the morning, this man*, etc.) rather than other adverbial groups (*quickly, on the floor,* etc.), and this can be allowed to determine its primary syntactic assignment.

Halliday states that the two classifications should coincide but he points out that "there are, however, clear instances where syntactically defined sets do not coincide with morphologically defined sets; and it would probably be generally agreed that, whatever the status accorded to the latter, the former cannot be ignored" (1963/2002: 96–97). The syntactic classification is called "class" and the morphological classification is called "type" (Halliday 1963/2002: 97). This may be a useful distinction to revisit in the theory. It lets us talk about the type of item as well as its functional class.

This distinction has not been held in more recent work in SFG and most linguists would find it problematic to regard *this morning* as a nominal group in one instance but as an adverbial group in another. Furthermore, in the citation above, Halliday refers to *on the floor* as an adverbial group but its type of unit is a prepositional phrase.

Butler (1985) criticized Halliday's early position on class and as he explains:

> if we are to account for the variety of structures available in a language, we shall have to elevate structural type (that is, "morphologically" defined class) to a more central position in the theory than Halliday suggests, for we shall have to show explicitly that a given syntactically defined class may contain members from more than one structurally defined class. (34)

Indeed, the position taken in this paper has been to approach the classification of lexical items (and indeed groups) as type, or in other words, the internal structure of the item (or group).

While the theory has since developed, the relative lack of attention to units and items below the clause has meant that there is work to do in this area. Halliday includes in his adverb category many items that could easily be considered as prepositions but there is no theoretical discussion about why. If there is, as Bloor & Bloor (2004) suggest, a preference for homonymy in lexical representation, it would support Butler's (1985) criticism to a certain extent; SFG needs to take a more critical view of type (structural or morphological classification). This is especially important

since many of the higher interpretations are based on implicit assumptions made at the lexical and unit level.

Very little has been written about P-items in SFL. In the discussions above, ellipsis was offered as an explanation for isolated P-items. Halliday & Matthiessen (2004) propose that in some cases the P-item itself is ellipted, resulting in what looks like a nominal group. This applies to Circumstances of Extent and Location where, as they explain, the preposition may be left out under certain conditions (Halliday & Matthiessen 2004: 264–265) as shown in the paired examples (7) and (8).

(7) They walked five miles
(8) Let's meet next Wednesday

The implications of leaving out the preposition are not explored so it is not clear whether in (7), *five miles* would be considered a prepositional phrase with an ellipted preposition or a nominal group.

It was difficult to find examples of an analyzed clause with an isolated P-item from an SFL perspective with the exception of Fawcett (forthcoming-a) which will be discussed separately in Section 5.2. It is reasonable to assume that all isolated P-items would be treated as adverbs as in Table 1. Some might be tempted to treat *pull to* as a phrasal verb but for the purposes of demonstrating the analysis, we will ignore this issue. The status of phrasal verbs will be considered briefly below in order to complete this section before considering Fawcett's approach.

As stated above, Bloor & Bloor (2004) propose two lexemes (TO_1 and TO_2), a preposition and an adverb. Halliday & Matthiessen (2004) seem to also support this position. However, the proposal here, adopting a more cognitive lexical representation, is to treat TO as a P-item (or preposition), as shown in Table 2, where the complement (or Range) is ellipted. Halliday and Matthiessen define ellipsis as a form of anaphoric cohesion "where we presuppose something by means of what is left out" (2004: 561) and this is very close to the positions of Fillmore (1979) and Keizer (2008) discussed above.

However as suggested above, many combinations of verb plus P-item are phrasal verbs. For the sake of completion, the treatment of phrasal verbs in SFG will be covered very briefly. Phrasal verbs are defined by Halliday & Matthiessen (2004: 351–352) as "lexical verbs which consist of more than just the verb word itself". They identified three types of phrasal verbs:

Table 1.   Possible SFL analysis of a clause with isolate P-item.

He	pulled	the door	to
Nominal group	Verbal group	Nominal group	Adverbial group

Table 2.   SFG analysis of a clause with P-item.

He	pulled	the door	to
Nominal group	Verbal group	Nominal group	Prepositional phrase

  (i) verb + adverb, e.g. *look out* (meaning retrieve)
  (ii) verb + preposition, e.g. *look for* (meaning seek)
  (iii) verb + adverb + preposition, e.g. *look out for* (meaning watch for the presence of)

For Halliday & Matthiessen (2004: 352), these expressions constitute a single lexical item, which expresses a single Process experientially. It can be difficult to know when an analyst identifies a lexical item that looks like a P-item whether or not it is indeed a lexeme or whether it is part of a multi-word lexeme (see discussion of MWEs above). As Halliday and Matthiessen explain (2004: 352) "expressions of this kind … are tending more and more to function as grammatical constituents; but this tendency is far from complete and grammatically they are rather unstable". There is no advantage to labeling the P-items in the three types of phrasal verb differently as adverb or preposition. It should follow that as part of an MWE (phrasal verb) it expresses the Event in the verbal group and has no role outside this group. Further exploration of this will have to be left to another paper.

5.2.   *P-items in the Cardiff Grammar*

Fawcett's description of SFL syntax is often referred to as the Cardiff Grammar (CG) since it was developed at Cardiff University. Like Halliday, Fawcett has not made word class a prominent part of the overall model. In this section, I will briefly outline how P-items are handled in CG and discuss some of the challenges that are of concern to the goals of this paper.

CG sees (lexical) items as sets and membership is determined by the item's potential to expound a particular element of a unit (e.g. *clause*, *nominal group*, *quality group*). As will be clear shortly, CG does allow P-items to expound various different elements in different units. In the following overview, we will first consider the element called "preposition", including the prepositional group (the unit of which the preposition is an element) and then we will examine the various ways in which this element is expressed. Following this we will look at the potential for ellipsis in the preposition group to see how this relates to the discussion of ellipsis in Section 4. Finally we will consider the case of "phrasal verbs" in the CG to the extent to which they relate to P-items.

It is important to note that the term "preposition" in the CG does not refer to a word class. It is the name of an element of the unit called "prepositional group" (see Fawcett 2000: 204–206). The most common structure for the prepositional group (pgp) is an obligatory element called "preposition" (p) and a "predicted (but occasionally covert) completive (cv)" (Fawcett forthcoming-a), where the completive element is most often filled by a nominal group (ngp). There is another optional element of the pgp which precedes the preposition element and it is called the prepositional temperer (pt), for example *up* in *up on the mountain* (Fawcett 2000: 306).

Fawcett (forthcoming-a) explains the function of the preposition element as follows: "to relate the referent of whatever fills the completive (almost always a ngp) to the referent of whatever unit the pgp is a part of". Most often the preposition element is expounded by a "prepositional item" (Fawcett forthcoming-a). However, it is not clear what a prepositional item is or how the boundaries of this set of items are determined. There are two important relations in CG: filling and exponence. Filling

describes the relationship between an element and a unit (e.g. the completive element in the pgp is typically filled by a nominal group), whereas exponence describes the relationship between an element and an item (the prepositional element in the pgp is typically expounded by an item such as *in* or *by*), see Fawcett (2000) for further detail. It should be noted that in the case of a multi-word lexical item such as *out of* or *in spite of*, it is treated as a single prepositional item and the preposition element is expounded by this item (Fawcett forthcoming-a).

There is one other unit that can fill the preposition element of the pgp. In order to account for examples such as *she is* <u>*very like*</u> *her mother* and *she lives* <u>*quite near me*</u>, Fawcett (forthcoming-a) analyzes this by having the quality group (qlgp) fill the preposition element. The quality group has an obligatory element called apex (a) and several other optional elements, of relevance here is the temperer (there are three types of temperer). The quality group expresses the quality of a "thing" or a "situation" as in *very kind* or *really fast*, where each case is an instance of a temperer element followed by an apex element (see Tucker 1998 for a full account of the quality group). Since as Fawcett states (2000: 206), the apex is either an adjective or an adverb, it could be assumed that items such as *like* and *near* are seen as adverbial items rather than prepositional items. This is perhaps one way of handling some prepositional items but this would require a more considered investigation.

For now, we will simply discuss Fawcett's view on the prepositional item as briefly as possible. In CG, the traditional prepositions "always and only occur at this (preposition) element" (Fawcett 2000: 230). He also explains that "some of the same items also occur as Binders, in which case their word class is 'subordinating conjunction', and/or as Main Verb Extensions, in which case they are sometimes termed 'particles'" (2000: 230n). This raises some confusion about the lexical status of these items since Fawcett states that the same item belongs to different word classes and serve to express different functions. This potential area of difficulty is not directly a problem for our discussion.

5.2.1. *Ellipsis*

As mentioned above, the CG states explicitly that when the completive is fully recoverable, the completive (complement) in the pgp is not realized. This has been discussed with respect to ellipsis in Section 4. Fawcett does not explicitly mention ellipsis and simply states (forthcoming-a) that the completive is covert, as in example (9), taken from Fawcett (forthcoming-a).

(9) He climbed out of the window and onto the roof <u>above</u>

In (9), the prepositional item *above* expounds the preposition element in the pgp but there is no realization of the completive. In this case, the prepositional item *above* is isolated and looks like the kind of intransitive preposition discussed in Section 4. One difference in this case is that the prepositional group in which this occurs is filling the qualifier element in the nominal group *the roof above*. The recoverable completive is likely *it* in reference to "the window", e.g. *onto the roof above it*. Example (10), taken from Fontaine (2008), shows a similar case of an unexpounded completive, where the pgp is filling the qualifier element of the nominal group. The

recoverable completive is likely *the nail*, as in *the skin <u>around the nail</u> got all dry and peeling*.

    (10) the skin <u>around</u> got all dry and peeling

    The CG seems to make a distinction between different kinds of non-realization (or non-lexicalization). Fawcett defines ellipsis as "recoverability at the level of form" (Fawcett 2000: 190n). However, when an unexpounded element is a Participant Role (e.g. Agent), Fawcett (forthcoming-b) refers to these as covert Subjects or Complements. One distinction is that covert Participant Roles may not be recoverable if the referent is not known. So the distinction between covert elements and ellipted elements is one of recoverability.

    So far there is nothing particularly challenging in the discussion of ellipsis and the prepositional group but we might ask about ellipsis in prepositional groups filling Participant or Circumstance roles in the clause. If we compare examples (11) and (12), in (11) the prepositional item *to* expounds the prepositional element of the pgp, which is filling the Complement element of the clause. In (12), that status of *in* is less clear (although in appearance very similar to Fillmore's *may we come in* example discussed above and which will be discussed again below). I was only able to find one such example of ellipsis (see example (20)). As we will see, Fawcett's analysis suggest that the CG does not explicitly consider completive ellipsis when the pgp is filling a Complement or Adjunct element in the clause. Any isolated P-items are seen as particle items which contribute to the expression of the process. In theory, however, there is nothing to prevent the ellipsis of the completive element of a pgp in any environment. In the next section, this will be considered in detail under the general heading of phrasal verbs.

    (11) Ivan has gone to Russia (Destination) (Fawcett forthcoming-b)
    (12) He went in (invented)

5.2.2. *Phrasal verbs*

The argument made above was that MWEs, including those which are verbs, constituted a single lexeme and as such should be seen as a verbal item (cf. Wray's 2008 MEU). As such, the lexeme is a verb and is no longer a P-item (even if it was originally formed from one) but since, at least from the analyst's perspective, it is difficult to know whether a given P-items is a lexeme or part of a lexeme, it is important to be clear on the distinction being made and the way these are handled in the theory.

    In the CG, there are four main ways in which the process can be realized in the clause. Not all of these involve multi-word lexical items as will be clear from the following list from Fawcett (forthcoming-b):

1. Simple verb: the process is realized by a verbal item, e.g. LOST as in *Ike <u>lost</u> [Pro] his knife*.
2. Phrasal verb: the process is realized by a multi-word verbal item, e.g. THROW AWAY, as in *Ike <u>threw</u> [Pro] his knife <u>away</u> [PrEx]*.

3. Prepositional verb: the process is realized by a verbal item and a prepositional element in a pgp filling the Complement element of the clause, e.g. DISPOSE + *of*, as in *Ike disposed [Pro] of his knife*.

4. Phrasal prepositional verb: combination of phrasal verb and prepositional verb, e.g. GET RID + *of*, as in *Ike got [Pro] rid [PrEx] of his knife*.

As Fawcett explains (forthcoming-b) these represent the four different forms that can realize a semantic Process. One distinction being made here is the difference between a phrasal verb, which is a verb and the prepositional verb which is not. The set of items found in the example *get rid of*, is not treated as a MWE but rather as the realization of a Process. So there is no claim being made here that *get rid of* is single lexeme. This is an important point: the process may be realized not only by more than one element but also by non coterminus elements; i.e. the Mex, an element of the clause and P, an element of the pgp filling the Complement element of the clause, where the elements Mex and C are coterminous elements, both direct elements of the clause but p is an element of the pgp. The question remaining is whether or not traditional phrasal verbs are seen as single lexical items in the CG as one might expect.

The idea of a lexeme being treated as a single item irrespective of its derivational morphological is acknowledged within the CG. Fawcett (2000: 229) explains that "*unhappiness* is regarded as a single 'fused' item on a par with *sadness* and *sorrow*" rather than the composition of more than one item (even if we can still identify individual morphological items). This suggests that in the CG in principle a lexeme (word level in SFL) is an item that can expound a functional element in a unit. When a compound noun is written orthographically as one word either without spaces (e.g. *ice-cream*) or with a hyphen (e.g. *ice-cream*), then there is no debate about its lexical status. However, when it is not (e.g. *ice cream*) then it is sometimes not easy to know whether each item represents a distinct lexeme or whether they combine to form a single lexeme. Fawcett (forthcoming-a) proposes several tests for determining the status of adjacent nouns in language but this will not be considered here. The main point of interest is that compound nouns are considered as single lexical items which can expound the head of the nominal group, for example *security officers* and *car park*. This distinction is also illustrated in examples (13) and (14). In (13), the head of the nominal group is expounded by *sunset*, whereas in (30) the head is expounded by *golden handshake* (Fawcett forthcoming a). Therefore we can assume that there are three lexemes in examples (13) and (14): GOLDEN, SUNSET and GOLDEN HANDSHAKE.

(13) golden sunset → modifier + head
(14) golden handshake → head

Whether a compound noun (a type of MWE) is analyzed as modifier + head or simply as head does not have much impact on the theory unless, for example a study wants to make claims about the amount of modification within a noun phrase but of course this is a problem for all theories.

The importance of this point to our discussion is that there is some provision for treating MWEs as an item expounding a functional element of a unit but it seems there is no clear consistent position since this approach does not seem to apply to

verbal items in the CG. The lexeme BACK UP will be considered here to challenge this view. It will be assumed that the lexical items *back up* and *backup* are instances of the single lexeme BACK(_)UP, meaning to make copies of data. BACK UP can be found orthographically with and without spaces as in examples (15) and (16) and hyphenated as in example (17).

  (15) Make sure you backup your work before you log out[6]
  (16) I left there wondering if that lawyer would lose his job just because he didn't back up his work[7]
  (17) the SDLP leadership would not back-up that position[8]

As discussed above, in the CG, phrasal verbs such as *back up* are analyzed as a single process which is realized by more than one element, the Main Verb (M) and the Main Verb Extension (MEx), each of which is expounded by one lexical item. The two elements are element and in each case the element is expounded by a different kind of item. In light of these examples, it is not clear why compound verbs are not treated in a similar way to compound nouns and allow for the Main Verb (M) element to be expounded directly by the multi-item verbal item (in this case *backup* or *back up*). The main reason normally given for maintaining the items as separate elements is due to the potential for an intervening Complement[9] as in example (18).

  (18) make sure you <u>back</u> your work <u>up</u> regularly

As for determining compound nouns, Fawcett (forthcoming-a) offers several tests for identifying phrasal verbs, which we will not discuss in any detail here. The "MEx Word Form Test" is perhaps the most significant one where the expression is tested to see whether a Complement can be inserted between the Main Verb and the Main Verb Extension. In other words, the test checks to see whether M MEx C could also be expressed as M C MEx. This only works if there is a Complement with which to run the test. In example (18), the test would show that *back up your work* and *back your work up* are possible and it would then conclude that *back* is expounding the M, *up* is expounding the MEx and *your work* is a ngp filling C.

However, it seems that the MEx element is still used to analyze a compound verb even when it is not possible to insert any element between the two parts of the item. If we consider FILL IN as in example (19), it is clear that no Complement could occur between the M and MEx. In fact, I am unable to think of any item that could occur in such a position. This would most likely be analyzed as a phrasal prepositional verb in the CG but it not clear why the Main Verb would not be expounded by *fill in* directly even if the preposition element *for* in the pgp (*for absentee workers*) filling the Complement element may contribute to the expression of the process.

  (19) assembly line employees are often expected to <u>fill in</u> for absentee workers[10]

The main discriminating point in these cases relies on Fawcett's Process Test (see Fontaine 2012) and the analyst's ability to determine what elements or parts of elements are combining to express the process.

To illustrate this point, I would like to return to the example given by Fillmore (1979) above. Recall that Fillmore considers that the verb *come* requires a directional

complement, which could be realized by any number of expressions such as *may we come in the house* or *may we come through the door*. If the same approach were taken in the CG, then the process would be being expressed by the verb *come*. Once the process is identified, then the Process Test is applied to determine the number of Participant Roles expected by the process. In this case, the Process Test would apply either as "in a process of coming, I expect someone to be coming" (one participant process) or as "in a process of coming, I expect someone to be coming somewhere" (two-participant process). Clearly Fillmore considers *come* to follow the latter case, where *come* would be treated as a two-participant process. Fawcett (forthcoming-a) treats *come in* as a phrasal verb and consequently the analysis for *come in* and *come in the house* would be treated differently. In the first case, the process would be expressed by *come in* through the M and MEx elements (a single participant process, i.e. "I expect someone to be <u>coming in</u>"). In the second case, the process would either be *come* (a two-participant process, i.e. "I expect someone to be <u>coming</u> somewhere") or *come in* as a prepositional verb (a two-participant process, i.e. "I expect someone to be <u>coming in</u> somewhere").

Fawcett does accept that there are instances where there can be ellipsis as shown in example (20). Fawcett (forthcoming-a) explains that there could be an ellipted completive in this example but for him, it depends on whether or not the speaker is in fact saying *she has gone out to the shops* and that if this is not the case then *to the shops* is not a recoverable element and therefore it cannot be a case of ellipsis. However, this is an invented example and what Fawcett's explanation shows is that it is the presumed intentions of the speaker that are important in determining ellipsis rather than whether or not the Participant Role is recoverable. This is not unlike the distinction Fawcett makes between covert Participant Roles and element ellipsis.

(20)   Fred: Where's Ivy? Has she gone out to the shops with Ike?
       Fiona: Yes, she has gone out.

Fillmore's (1979) discussion of the *may we come in* example goes into great detail about the pragmatic inferences created by *may we come in* and the knowledge that must be shared about the context by the speaker and addressee for this expression to be understood. In Fillmore's view then, it is completely reasonable to assume that the speaker does indeed infer that the completive is recoverable. Somewhat like Fillmore, there is a Direction Participant Role in the CG. In addition to being associated to a verb of motion, the test for a Direction Participant Role is whether or not the element expressing this role can be replaced by *there*. Given the directional nature of the verb *come*, it may sound odd to say *may I come there* and it may be desirable to use the complementary verb *go* instead (i.e. *may I go there*). However, there are attested occurrences of *can I/we come there*, although relatively infrequent (see the enTenTen13 corpus with SketchEngine; Kilgarriff et al. 2014). In either case, the test works and this should allow *in* to be analyzed as a Direction Participant Role. Therefore, it is possible for the analysis to follow the more cognitive approach outlined in previous sections, i.e. that the P-item, *in*, infers a complement (or completive in CG terminology). Note though that depending on how the various process tests are done, if *in* has already been determined to expound the MEx element in a phrasal verb, there would be no second participant on which to assign the role of Direction.

Given that it seems there is no way to effectively model multi-word lexical items (in the sense of a single lexeme), it may be more reliable to first test for the possibility of a

recoverable (ellipted) and/or inferred (covert) completive for every P-item in a clause, before attempting to apply any of the process tests for establishing element boundaries in the clause. A "recoverability test" could be used such that if a completive can be recovered or inferred, then the P-item and completive should be treated as prepositional group, where the completive is ellipted or covert (unexpounded). It would still need to be determined ultimately whether the process would then be analyzed as expressed by a "single verb", "phrasal verb", "prepositional verb", or "phrasal prepositional verb", where the p is expounded in a pgp filling the Complement (or possibly the Adjunct) and may contribute to the realization of the process.

We can tentatively test this proposal with example (21) with the use of *bring in*.

(21) he <u>brought</u> the dog <u>in</u> but won't clean up after it AT ALL![11]

This example looks like a likely case for a phrasal verb. This example would pass the MEx test which would suggest that *bring in* is a phrasal verb. If the Process Test were then applied, it could be misleading in examples such as this because intuitively a process of *bringing in* may seem acceptable (i.e. in a process of *bringing in*, I expect someone to be *bringing in* something). However one important contrast between phrasal verbs and simple verbs is whether or not the semantics changes and here I would argue that the meaning of *bring* is not altered by *in* and that the directional or trajectory meaning of *in* is present independent from the meaning of *bring*. If this is the case, then *bring in* would not constitute a MWE (phrasal verb). If we now try to apply the proposed recoverability test, we would try to see if *in* could have a completive. As discussed in Sections 3 and 4, there is an inference involved here; the speaker is confident that the addressee knows where *in* is (e.g. the house) and also he or she is confident that the addressee will know where to bring the dog. It would also be possible to argue that this is a type of metonymy. If this is the case then it should be possible to replace it with an explicit expression, for example as shown in example (22). The fact that **he brought in the house the dog* is ungrammatical will not be discussed here because it is not directly significant to the analysis being discussed, although it does point to a three-participant process type. The point being made here is that in this example, *in*, seems to be expounding the preposition element of a pgp (with completive ellipted) which is filling a Direction Participant Role in the clause rather than an item expounding the Main Verb Extension element of the clause.

(22) he brought the dog in the house but won't clean up after it AT ALL!

6.   Concluding remarks

With increasing understanding of the lexicon and cognitive processes due to advances in CL, psycholinguistics, corpus linguistics and neurolinguistics, it is becoming increasingly difficult to ignore claims about the division of labor between composite expressions and multi-word single expressions (see, e.g. Tucker 1998). Language descriptions gain a more robust accountability if MWEs such as phrasal verbs are represented as lexical items since if this is addressed, it simplifies the lexical issues related to P-items. If this is the case then they can be represented

like other composed word forms (e.g. *understand*) and it follows that there is no need to account for the "morphological" composition of these MWEs other than as the item that realizes a particular function or meaning. It may be worth considering MWEs and other types of items such as certain nominalizations as complex lexemes but this is something to explore in future work as determining what constitutes a complex lexeme is surely not trivial.

The place and method of lexical representation in a model is significant; it is, in many cases, the foundation on which the grammar is built (e.g. notions of groups). The classification of lexis within SFL has primarily been approached from the top-down and the social-semiotic drive of the theory has been prioritized. But as Butler states (2013: 196), "[c]ategorization is not simply sociosemiotic in nature, but indisputably also involves cognitive processes". Lexical representation is one area that provides a useful bridge between these two very important aspects of language description. Pursuing the grammarian's dream should, according to Hasan, lead to a better understanding of not only lexical relations but also on the distinction between "grammatical item" and "lexical item" (1996: 101–102). Clearly there is work to be done.

In this paper I have suggested that SFL adopt a more cognitively oriented approach to lexical representation. This would lead naturally to re-evaluate its position on lexical items generally including their relationship to related classes and units (see, for example, Fontaine & Schönthal in press, for a critical review of the distinction between group and phrase in SFL). Contradictory positions concerning the treatment of P-items must be clarified to eliminate and also to build common ground with other related theories (e.g. Langacker 2008). The approach to lexical representation outlined here offers an exploration of the functional-cognitive space as a position from which to discuss lexical representation in SFL. Specifically, a polysemy model does not seem to be inconsistent with an SFL framework but such a move requires more a detailed account of MWEs.

As stated in the introduction, a comprehensive account of P-items would need to draw on the historical development of individual items, as well as a more developed account of grammaticalization and lexicalization (see Taverniers 2015 on grammaticalization). Further, due to limits of space, many relevant issues could not be explored, including for example, related items such as *home*, *back*, *away*, *here*, *there*, *near*, *like*, *upstairs*, and so on (see Hanks' 2005 work on *like*, for example or Mackenzie 1992 for *near*). In early work, Halliday (1961: 277n) questioned the nature of the lexical item and suggests that "[c]ollocation provides a formal criterion for the identification of the lexical item". This has yet to be fully explored within SFL. A significant contribution to this area could be made potentially by taking up the approach to lexical analysis developed by Hanks (2013), which, as he states, should be entirely compatible with SFL. We do not get a full description of the grammar without considering lexis and we can only begin to develop such positions by basing them on a firm understanding of the representation of lexis within the theory.

Disclosure statement

Notes

1. "Item" as a term is preferred to "word" to avoid the problems associated with "word", especially the prevalence of the orthographic word as the primary reference, see Wray (2014) for an excellent discussion of the problems with "word".
2. Note while this is true for English, prepositions in Welsh for example do take inflections.
3. The debate concerning the status of prepositions as either content or function words is not reviewed here not because it is not relevant but because space does not permit this exploration.
4. The standard notation for lexeme is full caps and this is used throughout the paper to distinguish a reference to a lexeme from an instance of a lexeme as a lexical item (indicated by italics).
5. I am not suggesting that these lexemes are not related in the lexicon, simply that they have different lexical entries.
6. http://www.staffs.ac.uk/uniservices/infoservices/infozone/gettingstarted/
7. http://www.macobserver.com/columns/firstmac/2006/20060131.shtml
8. SDLP stands for the social democratic and labour party. SketchEngine, ukWaC, #14243638, http://ca.sketchengine.co.uk
9. Perhaps a more convincing argument is the fact that when a Complement intervenes, the P-item can be modified by *right*, as in *she cleaned the mess right up*, but it cannot when the Complement does not intervene, e.g. *she cleaned right up the mess*.
10. SketchEngine, ukWaC, #35845962, http://ca.sketchengine.co.uk
11. http://www.socialanxietysupport.com/forum/f35/husband-brought-in-a-dog-40148/

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