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Nominal Group Grammar: System and Structure

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Abstract

This year, 2021, marks 60 years since Halliday published his seminal paper "Categories of the theory of grammar" in *Word*. This paper outlined many of the key categories, scales and principles for what has come to be known as Systemic Functional Linguistics (SFL). Since this time, SFL has continually evolved as it engaged with an ever-increasing number of languages, modalities of communication and practical applications. To celebrate this anniversary, three special issues have been planned that aim to push SFL once more, this time in relation to the grammar of nominal groups. In this introductory paper of the first issue, we review the development of nominal group description in SFL, through its syntagmatic and paradigmatic modelling, and step through a number of the principles that underpin SFL description more broadly. We then explore a number of issues that have arisen in relation to nominal groups as more languages have been described in SFL, such as how to deal with structural markers that have typically been left aside in explicit SFL modelling, and how to reconcile logical and experiential perspectives on the nominal group. As part of this, the paper proposes a series of solutions aimed at extending SFL again, in particular suggesting a clearer division of labor between the word rank and the group rank, and proposing a type of structure called 'subjacency' for non-iterative dependency structures. Through these proposals, this paper and the subsequent special issues aim to continue the theme of SFL evolving that has characterized its more than 60-year presence in linguistics, and to invite people to engage further in SFL description of languages around the world.

Keywords: Systemic Functional Linguistics; nominal groups; system; structure

1. 60th Anniversary

This year, 2021, marks the 60th anniversary of Halliday's seminal publication "Categories of the theory of grammar", published in *Word* (Halliday 1961). His paper is generally taken as marking the birth of what came to be known as Systemic Functional Linguistics (SFL) as it emerged out of work on system and structure by colleagues associated with Firth's London School. Since that time, SFL has continued to evolve – refining and expanding its theoretical architecture as it engages with an ever-increasing number of languages, modalities of communication and practical applications. The editors decided to celebrate this anniversary by pushing SFL once more, this time in relation to the grammar of nominal groups. In making this choice we had in mind the tendency of grammatical descriptions in SFL to start top down and concentrate on clause systems and structures (e.g. Caffarel 2006; Rose 2001; Teruya 2007), often at the expense of an equally detailed description of lower ranks in the grammar. This nicely complements the bottom-up morpheme and syntagm perspective of many approaches; but it leaves a gap in SFL language description. This special issue of *Word*, and the two following, are designed to fill this gap in the very journal that in effect gave birth to the field.

2. Evolving SFL

Halliday (1961) proposes a theoretical architecture for what came to be known as "scale and category" grammar. This original paper of his is very sparse as far as descriptive

exemplification is concerned, but it does make reference to the (Modifier) Head (Qualifier) structure of English nominal groups and includes the possibility of breaking down the Modifier element into what he refers to as D, O, E (realized in that order by deictic, numerative and adjective classes of word). These suggestions were further developed in work by Sinclair (1972) and in more detail by Gregory (1966-72).[1] As far as the complementarity of system and structure is concerned, these descriptions are fairly syntagmatic in character. Classes of Modifier, Head and Qualifier are recognized based primarily on the word classes realizing elements of structure. But SFL's distinctive foregrounding of paradigmatic relations over syntagmatic does not yet shape the descriptions.

Halliday's move from Edinburgh to London in 1963 precipitated significant changes to the 1961 architecture, which evolved as "systemic grammar", then "systemic functional grammar", then "systemic functional linguistics" and more recently as "systemic functional semiotics". As documented in the papers collected in Kress (1976), Halliday and Martin (1981) and Martin and Doran (2015a) these developments were by and large presented in relation to clause rank systems and structures (see also Matthiessen 2005a, b for an excellent detailing of the developments in SFL since the 1970s). Halliday's (1967a, b, 1968, 1970) papers on TRANSITIVITY, THEME and MOOD in English are the canonical texts in this regard. In this work the focus in a sense shifts from early scale and category concerns with "structures realized by classes" to a complementary concern for "classes realized by structure". For instance, classes of clause in the TRANSITIVITY system such as material clause or relational clause were made responsible for distinctive configurations of clause structure such as Actor•Process•Goal or Carrier•Process•Attribute, to use contemporary labels. Similarly, classes in the MOOD system were realized by another "tier" of structural configurations. For example, the order Subject^Finite^Predicator realized a declarative clause, while a Finite^Subject^Predicator structure realized a polar interrogative clause. However, in Halliday's own published work, very little of this initial re-orientation was illustrated through descriptions of nominal groups. For example the publication of Halliday's early networks (1976, 131-135; originally developed in 1964) includes only a general sketch of some key nominal group systems, with most of the distinctions based on the classes of word realizing what he called the Head, Determiner, Pre-Determiner, Post-Determiner and Quantifier functions. However these descriptions do show an early engagement with the nominal group in ways that clearly resonate with his later, more fulsome description. Indeed papers from the early 70s by other scholars, such as those working with Basil Bernstein (e.g. Hawkins 1973) make reference to unpublished work of Halliday's on the nominal group that involve a number of functions that closely resemble what is considered the 'standard' description of English today.

It was Halliday's 1985 *Introduction to Functional Grammar* (IFG) that presented the now canonical SFL description of English nominal groups. In this description, Halliday presented a rich array of functions to account for the variability in nominal groups, in ways that have proven immensely useful to this day. This book and subsequent editions were designed for text analysis and so concentrated primarily on presenting the structural output of the grammar – that is the functions of the nominal group such as Deictic, Post-Deictic, Numerative, Epithet, Classifier, Thing, Qualifier – rather than the system of choices that produce these functions. As flagged by the title of these two editions, these books present us with a functional grammar, but not a systemic functional one.

[1] This scale and category grammar of English was developed by Gregory in the mid-1960s and used in teaching and research in the English Department at Glendon College from that time.

The first full articulation of a systemic functional model of nominal groups, including both system and structure, appears in Matthiessen (1995). Drawing on his collaborative text generation work with Halliday at the Information Sciences Institute in California from 1980 to 1988, this volume brings together for the first time both the paradigmatic ("systemic") and syntagmatic ("structural"/ "functional") orientations of Systemic Functional Linguistics for nominal groups. Matthiessen's rich paradigmatically driven account in many respects supersedes the better-known accounts offered in the first and second editions of Halliday's *An Introduction to Functional Grammar* (1985, 1994), and so in the third and fourth editions of IFG that were reworked by Matthiessen, he included detailed clause systems comparable to those proposed in Matthiessen (1995). But little of this paradigmatic re-focus has been added to the description of nominal groups (the exception being a DEIXIS network focusing on classes of determiner; See Mwinlaaru 2021 in this first issue for a comparably in-depth description of DEIXIS in Dagaare). This has meant that as far as well-known publications are concerned, the systemic and structural reasoning (together known as *axis*) motivating SFL perspectives on nominal groups has by and large been left implicit. Making this reasoning explicit is a key concern of these special issues.

3. Axis

One of the key features of SFL is its privileging of paradigmatic relations (systems) over syntagmatic relations (structure). But what does it mean to foreground system over structure in grammatical description? In essence this means asking questions about how different types of clauses, groups/phrases, words and morphemes are related to one another, rather than simply what constitutes them. Gleason (1965) referred to relevant relations for understanding systems as involving what he called enation and agnation. For example, when any set of elements, such as a set of nominal groups, have the same structure but have different words, they are considered to be *enate* to each other. The following nominal groups, for instance, all have the same structure of Deictic (*some, our, those*), Epithet (*sneaky, tiresome, successful*) and Thing (*viruses, lock-downs, vaccines*), despite having different lexical items realizing those structural functions:

(1) *some* *sneaky* *viruses*
Deictic Epithet Thing

(2) *our* *tiresome* *lock-downs*
Deictic Epithet Thing

(3) *those* *successful* *vaccines*
Deictic Epithet Thing

On the other hand, when elements such as nominal groups involve the same words but different structures, they are considered *agnate*. This is illustrated in the following pair of nominal groups, where the Deictic in (4) (*ours*) is agnate to the Qualifier in (5) (*of ours*):

(4) *our* *tiresome* *lock-downs*
Deictic Epithet Thing

(5) *tiresome* *lockdowns* *of ours*
Epithet Thing Qualifier

Lexically speaking, the above two examples present similar notional "meanings", but importantly they do it with different structures: Deictic^Epithet^Thing in (4) and Epithet^Thing^Qualifier in (5).

As Whorf (1945) explains, distinctions between structures can be signaled in two main ways. They can be signaled *phenotypically* with explicit marking via morphology or syntax. Or they can be signaled *cryptotypically* as "covert" categories (or "cryptotypes"). Cryptotypes are characteristic patterns in language that are not marked explicitly but are recognizable through the distinctive behaviors of different elements – behaviors that he referred to as a *reactances* (cf. Quiroz 2020). To exemplify this distinction, Whorf in fact used English nominal group structure, noting the difference between the functions of *pretty* and *French* in *a pretty French girl*. At first glance, the two elements are similar by virtue of being adjectives that occur before the head noun in a nominal group. However, the difference between them can be seen once we try to reverse their sequence. Although we can say *A pretty French girl*, **a French pretty girl* is at best very marked. This distinction is also reflected in the fact that we can grade *pretty* with *very pretty* but we cannot grade *French* as **very French* in that syntagm – unless we are using the adjective *French* to refer to the girl's character rather than her provenance. In standard SFL description, this reflects a distinction between the Epithet in English nominal groups (here *pretty*), which can be graded, and the Classifier (*French*), which cannot, with the sequencing between them being Epithet followed by Classifier.

Examples of this kind demonstrate that it is important to move beyond syntagms (sequences of classes such as determiner, adjective, noun) in language description. Rather, to understand how clauses, groups/phrases and words are related to one another, we have to consider structure as well – taking into account the role (or function) played by classes in a grammatical configuration of some kind. With reference to Whorf's example, this means that we distinguish between an analysis consisting purely of classes (i.e. a syntagm):

(6)	*a*	*pretty*	*French*	*girl*
	determiner	adjective	adjective	noun

and an analysis that involves both class and *function* (using initial upper-case letters for functions as elements of structure and lower case for classes):

(7)	*a*	*pretty*	*French*	*girl*
	Deictic	Epithet	Classifier	Thing
	determiner	adjective	adjective	noun

It is this deeper analysis of function structure, based on both phenotypes and cryptotypes, that forms the basis for modelling syntagmatic relations between units in SFL.

As far as nominal group description is concerned, distinguishing between function and class means taking into account that there is no one-to-one relation between them. A given function may be realized by more than one class and a given class may realize more than one function. The following nominal groups illustrate this by showing that, for example, a Classifier function can be realized by a noun (8), adjective (9), numeral (10), or verb (11) word class; and an adjective class can realize either an Epithet (8, 9, 10, 12) or a Classifier (9, 12). Similarly, the same lexical item can realize different functions – in this case *red* realizes a Classifier to indicate the type of wine in (9) and an Epithet to indicate the color of the blanket in (12):

(8)	*the*	*dense*	*psychology*	*book*
	Deictic determiner	Epithet adjective	Classifier noun	Thing noun

(9)	*that*	*dry*	*red*	*wine*
	Deictic determiner	Epithet adjective	Classifier adjective	Thing noun

(10)	*that*	*lovely*	*second*	*prize*
	Deictic determiner	Epithet adjective	Classifier numeral	Thing noun

(11)	*a*	*wooden*	*rocking*	*chair*
	Deictic determiner	Classifier adjective	Classifier verb	Thing noun

(12)	*the*	*red*	*woollen*	*blanket*
	Deictic determiner	Epithet adjective	Classifier adjective	Thing noun

To identify the function a class is realizing, we probe for reactances. Below, for example, we can note that the numeral, adjective and verb word classes in these examples are gradable when they realize a Numerative or Epithet function – but not when they realize a Classifier (note that *red* in (13) is specifying a type of wine, not describing its color; cf. *it's a pinkish red wine*):

(13)	*that*	**(*very*) *dry***	(* ***very*) *red***	*wine*
	Deictic determiner	Epithet adjective	Classifier adjective	Thing noun

(14)	*the*	**(*very*) *lovely***	***very second***	*prize*
	Deictic determiner	Epithet adjective	Classifier numeral	Thing noun

(15)	*the*	**(*very*) *last***	***very first***	*prize*	(*to be awarded as this event*)
	Deictic determiner	Numerative adjective	Classifier numeral	Thing noun	

(16)	*a*	**(*gently*) *rocking***	*wooden*	**(*quickly*) *rocking***	*chair*
	Deictic determiner	Epithet verb	Classifier adjective	Classifier verb	Thing noun

In addition to structural relations, key to SFL descriptions are relations between types of clause, group/phrase, word etc. These *systemic* relations are formalized as system networks. These networks account for both agnation relations among structures and their configuration. For nominal groups, for example, Matthiessen (1995, 650-659) proposes a system of INDIVIDUATION for distinguishing names from other nominal groups (exemplified as *Peter* vs *he*), as shown in Figure 1 below. Reading left-to-right, the general class of nominal group is the entry condition to the system, meaning that every choice (known as a *feature*) to the right specifies a sub-type of nominal group. The square bracket [along with the arrow leading into it, indicates that nominal groups can be either [name] or [other]. The name of the system is

written in small caps above this arrow (INDIVIDUATION). To Matthiessen's description we've added simplified realization statements specifying the structural consequences of this simple network, indicted by the downward arrow emanating from each of the choices. These specify that the nominal group should contain a Thing function (notated +Thing for all nominal groups), that for names, the Thing is a proper noun (Thing: proper noun) and that for other nominal groups, the Thing is a pronoun or noun (Thing: pro/noun). For more detail about these conventions see Matthiessen and Halliday (2009) and Martin, Wang, and Zhu (2013).

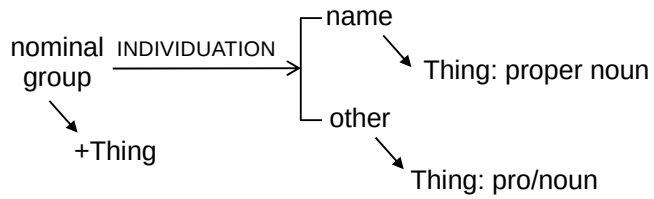

Figure 1: A simple nominal group system of English, adapted from Matthiessen (1995:650-659)

In order to account for a fuller range of nominal groups we can extend the network in Figure 1 by adding additional dependent systems. A system network of this kind is presented as Figure 2. This network outlines that there are two types of [other] nominal group – [pronominal] nominal groups, where the Thing is realized by a pronoun (e.g. *she*, *her*, *us two*) and [non-pronominal] nominal groups, where the Thing is realized by a noun (e.g. *dresses*, *blue dresses*, *a dozen dresses*).[2] For [non-pronominal] nominal groups, the network indicates the possibility of adding an Epithet to the nominal group structure, provided by the system EPITHESIS. If [described] is chosen within this system, then an Epithet is inserted (+Epithet) and is sequenced before the Thing (e.g. *red dresses*); in SFL descriptions a caret ^ is used to sequence functions. The dash – indicates the alternative choice where no Epithet is inserted.

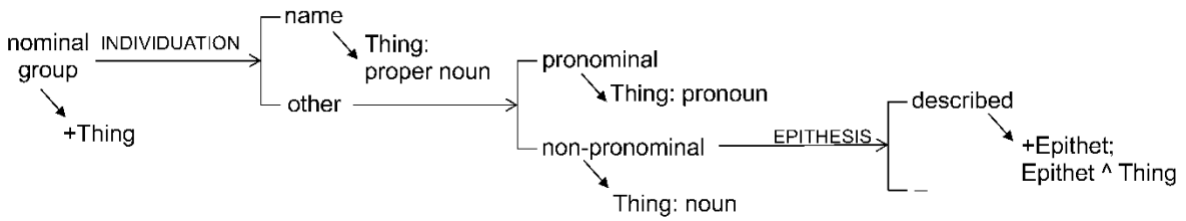

Figure 2: An expanded nominal group system network of English

To account for larger, more expanded nominal groups in English, we must add further systems to the network in Figure 2. For example, to include a Numerative such as *four* in *four large kitchens*, we can add a system called NUMERATION. This system also depends on having a [non-pronominal] nominal group but is independent of choices for EPITHESIS. That is, a nominal group may have an Epithet without a Numerative (*old traditions*), a Numerative without an Epithet (*two traditions*), both (*two old traditions*) or neither (*traditions*). This is shown in the system network in Figure 3 by a right-facing brace { indicating that the two systems, EPITHESIS and NUMERATION, are simultaneous (they cross-classify [non-pronominal] nominal groups). The additional system, NUMERATION, allows for the possibility of inserting a Numerative

[2] This is in fact a simplification. Non-pronominal groups can have a range of word classes as a Thing in addition to a noun, including a verb (*her excellent running*) and an adjective (*the deep blue*).

function and sequencing it before an Epithet if one is present (indicated by Numerative ^ (Epithet)).

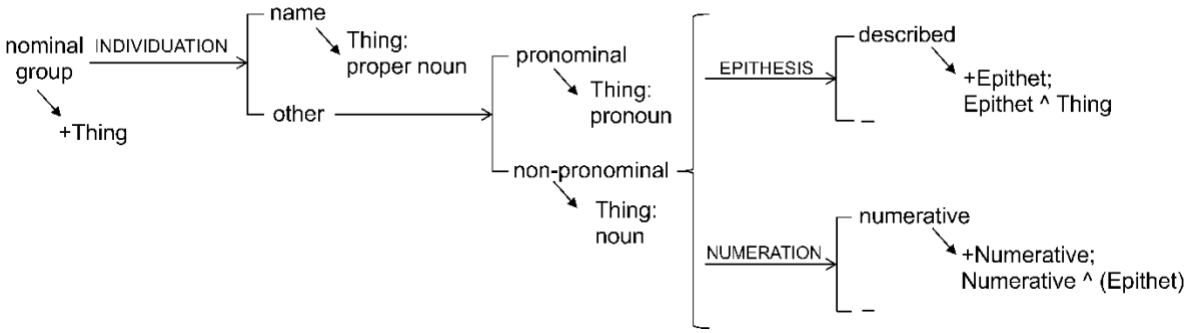

Figure 3: A further expanded nominal group system network of English

There is still of course work to be done including specifying the word classes realizing Epithet and Numerative functions and introducing a range of other functions that allow the English nominal group to be considerably further expanded. However, in order to move on to some key issues raised in this and the following two special issues, we won't take this step here (see Matthiessen [1995, 645-710] for the most developed systemic account of English nominal groups in SFL). As developed to this point, the description manages agnation relations among the following types of nominal group:

Alice	(Thing: proper noun)
she	(Thing: pronoun)
dresses	(Thing: noun)
red dresses	(Epithet ^ Thing)
three dresses	(Numerative ^ Thing)
three red dresses	(Numerative ^ Epithet ^ Thing)

4. Theoretical Cartography

To this point in our introduction we have focused on units, structures, classes and systems – what Halliday (1961) referred to as categories. In particular, we have focused on the unit nominal group and its function structure (e.g. Numerative, Epithet, Thing etc.), classes of nominal group (e.g. [name], [pronominal], [described]) organized into systems (e.g. EPITHESIS, NUMERATION) and classes of word realizing functions (e.g. noun, adjective, verb). We now turn our attention to the relations between these sets of categories – what Halliday (1961) referred to as scales. As with categories, there have been major theoretical developments in SFL to do with scales since Halliday's original paper (Matthiessen 2005a, b, 2021, in press; Martin 2014, 2016), which provides us with the global theoretical cartography we need to contextualize nominal group descriptions.

4.1 Rank

SFL models of language recognize three main dimensions that organize bundles of interdependent systems in relation to one another. One has to do with constituency, which in SFL is referred to as rank. This arranges units along a scale where, for example, clauses are made up of one or more groups/phrases, which are made up of one or more words, which are

made up of one or more morphemes. The rank scale for English and many other languages (though not all) is outlined in Figure 4.

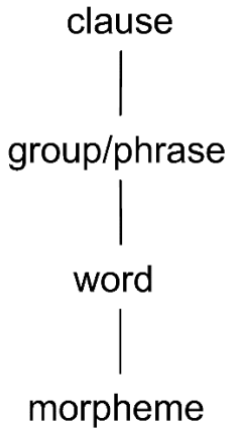

Figure 4: The rank scale of English

Rank scales in language view the organization of grammar in terms of constituency – as part-whole relations between categories. As such they provide a theoretical dimension for locating bundles of systems. For example, the English MOOD system is positioned at clause rank, while the PRIMARY TENSE system is positioned at group/phrase rank.

In addition to constituency, classes at any particular rank can be combined together to form *complexes*. This involves, for example, combining distinct clauses together to form clause complexes (in the following examples ‖…‖ indicates the boundaries of a unit, |||…||| indicates the boundaries of a complex of units):

(17) ||| *The first prize was a trip to Orange* ‖ *and the second prize was a trip to Mudgee.* |||

Or combining groups and phrases together to form a group/phrase complex:

(18) *The first prize was* ||| *a trip to Orange* ‖ *and a case of sparkling wine*. |||

Or combining words together to form a word complex:

(19) *The first prize was a mixed case of* ||| *red* ‖ *and white* ||| *wine*.

Or combining morphemes together to form a morpheme complex:

(20) *The first prize was drunk during the* ||| *pre-*‖ *and post-*||| *match celebrations*.

In principle, units can be complexed to any degree. That is, there may be any number of clauses, groups/phrases etc. combined into a single complex. In practice, the length of complexes varies depending on the grammatical environment and the register.

The complexes shown above are all examples of *parataxis*. Parataxis involves complexing multiple units such that they each have the same status and are independent of one another. In contrast, units may be complexed through *hypotaxis*, where one unit is dependent on the other.

In (21) for example, the clause *drinking the first prize too quickly*, is dependent on the second clause *she missed the bus to Orange*. One of the reasons for considering the first clause to be dependent on the second in this example is that it cannot occur on its own – it needs to be combined with another clause (i.e. we cannot simply say **drinking the prize too quickly*):

(21) ||| *Drinking the prize too quickly,*|| *she missed the bus to Orange.* |||

In contrast with complexing, units can also be combined where one unit is *embedded* in another unit of the same rank or lower (also known as rank shift). For example, a clause may be embedded within a group/phrase or a group/phrase may be embedded in another group/phrase, as shown by (22) and (23). By convention in SFL embedded clauses are enclosed in double square brackets while embedded groups/phrases are enclosed in single brackets:

(22) *[[drinking the wine too quickly]] led to a hangover*

(23) *[the winner's] prize was a trip [to Orange]*

The nominal group descriptions in this special issue are all focused on group/phrase rank. This means that the nominal groups considered will typically realize clause functions, while the nominal group functions will typically be realized by words. However, as the articles in these special issues show, it is relatively common across languages for nominal groups to be a site for a significant amount of embedding.

4.2 Metafunction

In addition to rank, a second dimension that organizes SFL's view of language is called *metafunction*. Metafunctions organize the types of meaning that occur in language. In SFL, three metafunctions are commonly recognized: ideational, interpersonal and textual. The ideational metafunction focuses on construing a representation of the world outside and inside our heads; the interpersonal metafunction focuses on how language enacts social relations; and the textual metafunction focuses on composing text as digestible waves of information flow. In addition, in work influenced by Halliday (1985) the ideational metafunction is viewed as comprising two sub-components – an experiential component that notionally organizes our experience and a logical component that focuses on recursive systems (underlying the complexing noted above).

Although metafunctions are described in terms of how they construe meaning, they in fact are founded on bundles of inter-dependent systems and the types of structure that tend to realize choices in these systems. Systems in each metafunction are relatively independent of systems in other metafunctions; but they tend to be interconnected among themselves within each metafunction. For example, at the clause rank in English, the interpersonal system of MOOD is relatively independent of the ideational system of TRANSITIVITY in that almost every choice in MOOD can be combined with each choice in TRANSITIVITY and vice versa. In contrast, within the interpersonal system, choices in MODALITY are dependent on choices in MOOD – MODALITY can only occur in indicative clauses (interrogatives and declaratives), but not imperatives – as shown in (24)-(26):

(24) *She <u>may</u> miss the bus* modality + declarative
(25) *<u>May</u> she miss the bus?* modality + interrogative
(26) **<u>May</u> miss the bus*. *modality + imperative

For nominal groups, a particularly important metafunctional distinction is between the experiential and logical components of the ideational metafunction. Experiential systems by nature tend to be realized by functions that typically only occur once and play a distinct role in a structure. These types of structures are known as *multivariate* structures. Logical systems on the other hand allow for choices in the same system to be made an indefinite number of times. This means that the resulting structure is open ended and each element plays essentially the same role as the others. Examples of this include the clause, group, word and morpheme complexes exemplified above (17-20). We return to discussion of logical systems and structures in Section 5 below. The complementarity of experiential and logical metafunctions underpins Halliday's distinction between groups and phrases. He suggests that groups such as the English nominal group or verbal group involve both experiential structures *and* logical structure deriving from recursive systems, while phrases such as the English prepositional phrase or Chinese co-verbal phrase involve only experiential structure.

In SFL, nominal groups have been described primarily in terms of the ideational metafunction, including both experiential and logical components. However, Matthiessen's (1995) description of English extends the metafunctional principle for nominal groups to address interpersonal and textual meaning. In particular he suggests that the organization of English nominal groups can be understood as a movement from left to right from textual specification of the entity being realized to its ideational specification. As Matthiessen argues:

> If we focus on the nominal group starting with the Deictic and ending with the Thing, we can interpret the group with reference to the distinction between the experiential potential – general classes of experience – and the instantiation in text as a textually constituted discourse referent relatable to the… here & now… [the nominal group] starts with the thematic element, the Deictic, where the group is concerned with an instance (of some general class) and moves from the type of specificity through other instantial properties – the status of the instance as representatives of some general class (*famous, usual, typical, alleged*, and so on) [Post-Deictic], the ordering of the instances [Ordinative], and their quantity [Numerative]… The other move [looking from right to left] starts with the primary class of experience construed by the group, the Thing. It then moves through subclassification and Epithets. This is a move from experiential complex classes towards the experientially simple properties construed as Epithets; these tend to be values on single dimensions (*small; big; light; heavy; brown; blue; red…;* and so on). This is also a move in time stability, from properties that are stable through time (construed as part of the Thing) to properties that are more transient, with the properties of the instances as the limiting case – quantity, specificity, etc.

This can be illustrated with an example of Matthiessen's:

(27)	*these*	*famous*	*first*	*two*	*marvellous*	*brick*	*houses*
	Deictic	Post-Deictic	Ordinative	Numerative	Epithet	Classifier	Thing

Matthiessen visualizes this metafunction division of labor in English nominal groups as in Figure 5.

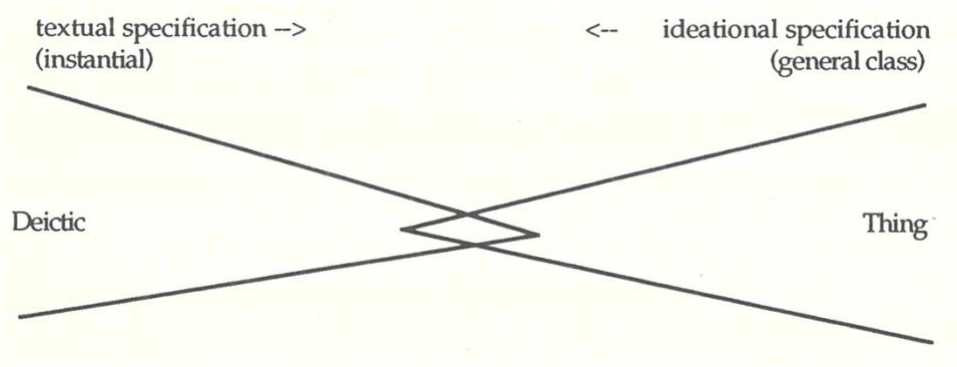

Figure 5: Textual and ideational specification in the English nominal group (Matthiessen 1995, 654)

This complementarity between textual and experiential functions in the nominal group is taken up by Martin and Shin (2021) in this special issue for their description of Korean.

Looking systemically, Matthiessen uses this metafunctional perspective on the nominal group to interpret a number of systems as textual and interpersonal. Depending on the particular theoretical modelling being used, these different textual or interpersonal systems can be read as being determined 'from above' – that is, from the discourse semantic features that they realize. For example, textually speaking, Matthiessen (along with Halliday and Hasan [1976] and Martin [1992]) illustrates the role that nominal groups play in systems associated with participant tracking (what Martin [1992] calls IDENTIFICATION). In particular, the choice of pronominal and naming nominal groups realizes presuming reference where it is assumed that the identity of the entity or person being referred to is recoverable (as exemplified in bold in (28)):

(28) ***I*** *saw* ***Kate*** *yesterday.*

Similarly, for non-pronominal nominal groups, the choice of whether or not to have a Deictic (and what realizes the Deictic) affects its recoverability. Without a Deictic, nominal groups often realize *generic* participants, where no individual entity is being referred to, but rather the whole class of these entities:

(29) ***Nucleii*** *are composed of* ***neutrons*** *and* ***positively charged protons.***

When there is a Deictic, the choice of what realizes the Deictic affects whether the entity being presented is being presumed (canonically marked through the determiner *the*) or presented as not yet known (canonically marked through *a/an*):

(30) ***The*** *dog has come home with me*

(31) ***A*** *dog has come home with me*

Complementing these features, the nominal group is also home to other textual resources such as those associated with substitution (the *one* in (32)), and ellipsis (where the full nominal group is not specified in (33)):

(32) *– I'm going outside to have a cigarette.*
– Can I have ***one****?*

(33) – *Which bag is yours?*
– ***The green*** *[bag]*

The choice of determiner is also a major resource for realizing interpersonal meaning. In particular, the choice of wh- elements as Deictics or as Things provides resources for dialogic exchanges:

(34) – ***What*** *are they?*
– *The two clauses in the enterprise agreement.*
– ***What*** *two clauses?*
– *The two governing casual conversion.*

Similarly, nominal groups are sites for the realizations of evaluative language (Martin and White 2005), as well as the designation of who is being referred to in terms of person. Attitude is particularly relevant for Epithets (*stupid* in (35)) and attitudinal words realizing the Thing (*arsehole* in (35)); Deictics and pronominal Things often do the work of interpersonal specification (*you* in (35)):

(35) *You stupid arsehole*

As noted above, each of these metafunctional interpretations of elements within the nominal group have arisen from interpretations of their meanings, rather than their relative independence with other systems. This brings us to a third "scale" that needs to be considered when describing nominal groups, associated with how more abstract meanings are realized grammatically.

4.3 Stratification

The third dimension we need to bring into the picture is stratification. Stratification is concerned with the levels of abstraction from which we can view language – from phonology and graphology to lexicogrammar to discourse semantics. As with other scales, stratification arises from the bundling of systems – for example the discourse semantic systems concerned with introducing entities and tracking them in discourse as opposed to their realization in the lexicogrammatical systems of the nominal group. The basic organizing principle here is metaredundancy, as phonological patterns *realize* lexicogrammatical choices and lexicogrammatical patterns realize discourse semantic choices. This is often visualized through co-tangential circles, as in Figure 6. The increasing size of circles reflects the shift in the relative size of key units at each stratum – i.e. syllable in phonology, clause in lexicogrammar and text in discourse semantics.

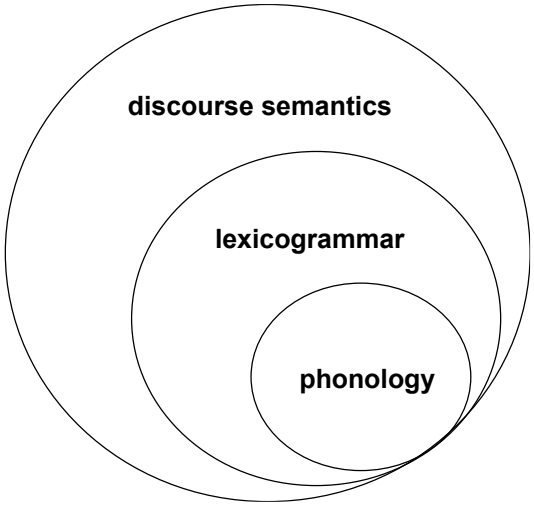

Figure 6: Language strata

4.4 Nominal groups in the theory of language

Based on these dimensions we can locate nominal groups within the SFL model of language as positioned on the stratum of lexicogrammar at the rank of group/phrase and largely within the ideational metafunction. That said, all categories and units are to be understood in relation to all others. That means, as Halliday (1961, 270) has pointed out, "...the theory itself embodies '**shunting**' ... as crucial to the interrelation of the categories". To understand nominal groups involves looking at them from above and below, in terms of both higher and lower ranks and strata, as well as reasoning from around – within or across metafunctions. How we weight criteria from above, from below or from around then becomes a key question for description. For these special issues we have encouraged authors to take all three perspectives into account in developing their descriptions. This leaves open the question of how exactly their descriptions are introduced – taking, for example, either discourse semantics or lexicogrammar as point of departure, viewing nominal groups metafunctionally, considering them in terms of their role in clause functions and/or exploring the role different word classes play in realizing nominal groups. The different perspectives taken on nominal groups inevitably influence the shape of the grammatical description.

For example, taking a perspective from above, and viewing nominal groups from discourse semantics, involves consideration of the kinds of meaning they have evolved to construe, enact and compose. Fortunately, SFL has a rich history of discourse analysis to draw on in this respect, beginning with Halliday and Hasan's (1976) canonical monograph *Cohesion in English*. Their discussion there of reference and nominal group substitution and ellipsis stands as an essential resource for interpreting the function of nominal groups in relation to co-text. This work is extended in Martin (1992), which includes a gesture towards the discussion of attitudinal meaning that is later consolidated in Martin and White's (2005) influential study of APPRAISAL. More recently, Halliday and Matthiessen (1999) and Hao (2020) clarify SFL's model of the discourse semantics of IDEATION, including important discussions of grammatical metaphor in relation to nominal groups. This last point is taken up in particular by Hao and Wang's contribution in this series of special issues, exploring the effect of grammatical metaphor on Mandarin Chinese nominal groups (Hao and Wang 2021).

Ideally reasoning from above reaches up to even higher ground, including analysis of register and genre (using the SFL model presented in Martin [1992] and Martin and Rose [2008]). This takes advantage of SFL's modelling of context as a more abstract level of meaning. At the level of register, this involves modelling context through a metafunctionally diversified lens – with ideational meaning by and large construing field (as relations between activities, items and properties), interpersonal meaning by and large enacting tenor (negotiating power and solidarity) and textual meaning by and large composing mode (as waves of information flow managing inter/modalities of communication). In Martin's stratified model of context (Figure 7 below) choices in field, tenor and mode are interpreted from the perspective of genre, treating text as unfolding stages and phases of discourse dedicated to achieving some social purpose (telling stories, outlining procedures, making arguments, describing phenomena, purchasing commodities, making invitations, celebrating birthdays, adjudicating criminal activity and so on).

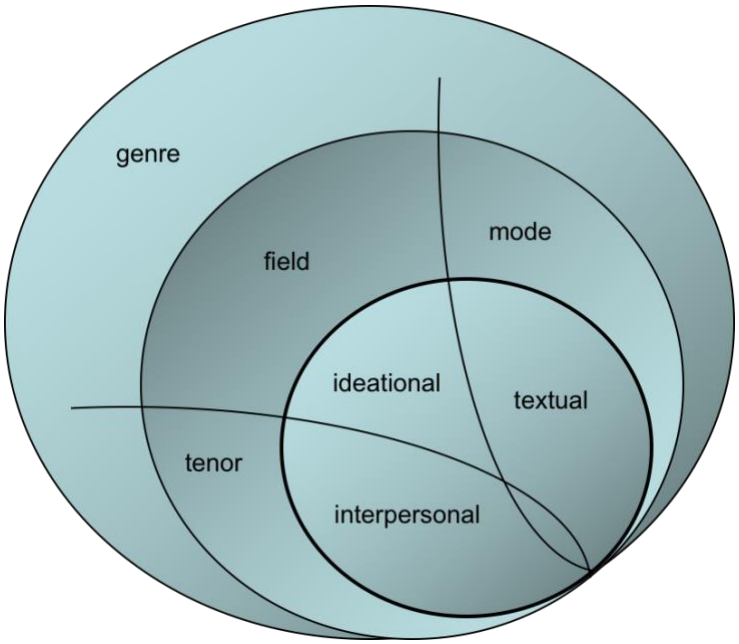

Figure 7: Language in relation to a stratified model of context

This is a lot of theory – what is often celebrated as an extravagant model of language and context. It is certainly too much theory to draw on in a single study. But understanding any aspect of language, including nominal groups, involves understanding it in relation to other aspects of language. This requires an elaborated theory such as that of SFL, so that there is a rich resource from which grammarians can pick and choose as they need when developing their descriptions across languages.

5. Some Issues Arising

Looking over the tradition of nominal group description in SFL, there are a number of specific issues that are dealt with across these special issues. In this section we will introduce some of these, raising questions about how SFL can extend its modelling of this area of the grammar. The four key issues to be focused on here are the interaction between a multivariate conception of the nominal group associated with the experiential component of the ideational metafunction and a univariate conception associated with the logical component, and how we might use this distinction to model tiers of structure in nominal groups; the place of structural markers such

as adpositions and linkers, often set aside from explicit modelling in SFL grammars, but playing a significant role in nominal groups across languages; the modelling of names as a distinct area of nominal group grammar; and the effect of grammatical metaphors on nominal group systems and structures. Together these issues provide a rich set of descriptive challenges that various papers in these special issues will take up to extend SFL's modelling of language, and our understanding of nominal groups across the languages of the world.

5.1 Multivariate and Univariate Structure; Non-recursive and Recursive Systems

As noted in our discussion of the logical metafunction above, a distinction is drawn in SFL between structures that are multivariate and those that are univariate (Halliday 1979, 1981). In idealized terms a multivariate structure consists of a finite number of elements each playing a different role (e.g. Numerative ^ Epithet ^ Thing), while a univariate structure consists of an indefinite number of elements, each playing the same role (e.g. the clause, group, word and morpheme complexes illustrated above). From a systemic perspective, multivariate structures are thus derived from non-recursive systems and univariate structure are derived from recursive ones.

This complementarity between multivariate and univariate structures is deployed regularly in nominal group grammars influenced by Halliday (1985). For example, Halliday (1985 and subsequent editions) proposes simultaneous ideational tiers of structure for English nominal groups – one experiential tier of multivariate structure and one logical tier of univariate structure. This kind of two-tier analysis is illustrated in (36) below, where α marks the "head", β is dependent on α and γ is dependent on β. This structure is based upon Halliday's view that a nominal group can be interpreted as a unit with structural elements playing distinct roles *and* as a complex of words.

(36)		*three*	*red*	*dresses*
	logical	γ	β	α
	experiential	Numerative	Epithet	Thing
	class	numeral	adjective	noun

Part of the argument for needing two tiers is that the Thing in a nominal group and its "head" (the α in SFL notation) do not always coincide. An example of this tension is presented in (37), where the Numerative *three* is modelled as "head" of the nominal group, but not as its Thing. The borders in this example are used to indicate that there is not a one-to-one relationship between the two structures – the logical β^α^β analysis is not co-terminus with the experiential Numerative^Thing analysis. Halliday (1985, 174) in fact alternatively labels this element a Pre-Numerative.

(37)		*the*	*three*	*of*	*them*
	logical	β	α	β	
	experiential	Pre-Numerative			Thing
		[nominal group]			pronoun

A similar analysis can be proposed for elements that indicate a *facet* (or in Hao's [2020] terms, a dimension) of the Thing (what Halliday describes in terms of a Deictic or Pre-Deictic):

(38)		*the*	*front*	*of*	*them*
	logical	β	α	β	

experiential	Pre-Deictic [nominal group]	Thing pronoun

As Halliday argues, this analysis brings out the fact that when looked in terms of dependency, the *three* in (37) is element on which everything else depends – the *the* is a pre-modifier from this perspective and the *of them* is a post-modifier. But from an experiential perspective, the *them* is the main entity (the Thing) being counted by the Numerative *the three of*. This dual logical and experiential analysis thus nicely brings together these two perspectives.

However one of the issues with this analysis is that, looking experientially, there is little structural difference at the highest level between the (Pre-)Deictic and the (Pre-)Numerative – as shown by the fact that they can go in either order (39) and (40) – as well as the difficulty in assigning a logical structure to these multiple Pre-element structures:

(39)

	the	*edge*	*of*	*all*	*three*	*of*	*them*	
logical	δ?	γ?	δ?	β	α	β		
experiential	(Pre-)Deictic			(Pre-)Numerative			Thing	
	[nominal group]			[nominal group]			pronoun	

(40)

	all	*three*	*of*	*the*	*edges*	*of*	*them*	
logical	δ?	γ?	δ?	β	α	β		
experiential	(Pre-)Numerative			(Pre-)Deictic			Thing	
	[nominal group]			[nominal group]			pronoun	

To account for the similarities between the Pre-Deictic and the Pre-Numerative, Matthiessen (1995) suggests an alternative analysis where they are grouped together as a single function called a Facet (renamed and elaborated in the Martin, Painter, and Matthiessen [2010] as Focus). Building upon this description, we can step around the issues to do with the logical structure by proposing a purely multivariate analysis of this type of nominal group. This is exemplified in (41) for *three sets of lawn tennis*. In this analysis a nominal group is embedded in the Focus function, culminating with a Focus Marker (*of*) signaling the embedding. The tension between head and Thing noted above is here reformulated as a tension arising from the presence of two Things. This tension is regularly reflected in writers' uncertainty about agreement between a nominal group of this kind realizing a clause rank Subject function and its Finite (e.g. in *three sets of tennis tire me out* there is agreement with the Thing *sets* and the verb *tire*, whereas in *three sets of tennis tires me out* there is agreement with the Thing *tennis* and the verb *tires*).[3]

(41)

three	*sets*	*of*		*lawn*	*tennis*
Focus				Classifier	Thing
[nominal group]					
Numerative	Thing	Focus Marker			
numeral	noun	clitic		noun	noun

In addition to this analysis associated with Focus structures, there is a larger issue about how to derive the logical structure of nominal groups from systems. This is crucial if we aim to

[3] The tension is also reflected in the uncertainty surrounding grammatical and ungrammatical possibilities for relativisation (e.g. ?*he was exhausted from* ***the tennis*** *he'd just played* ***five sets of***).

develop a grammar in which structure realizes system. One question has to do with where this system is located as far as rank is concerned. Halliday's comments on this logical tier imply that such a system would be located at word rank since its realization is characterized as a word complex. Under this interpretation, the α, β, γ structure in (42) below (replaying (36)) is in fact an analysis at word rank, not an analysis of the nominal group structure.

(42)	*three*	*red*	*dresses*
	Numerative	Epithet	Thing
	γ	β	α
	numeral	adjective	noun

This analysis makes sense if we divorce structure from systems; but considering that each optional element of structure in the nominal group – Deictic, Numerative, Epithet etc. – is chosen independently of all the others, it is difficult to see how a system can then produce a complexing organization (univariate structure) that cuts across all of these elements.

This is not to say, however, that there is not a role for a logical tier of structure. Word complexes can certainly realize elements of nominal group structure. For example, to account for possibilities in realization of Epithets, we need to propose a logical structure. As noted above, one of the key reactances for Epithets is that they can be graded, as shown by (43-46), and each of these gradations occur within the Epithet itself:

(43)	*a*	*difficult*	*match*
	Deictic	Epithet	Thing

(44)	*a*	*more difficult*	*match*
	Deictic	Epithet	Thing

(45)	*a*	*much more difficult*	*match*
	Deictic	Epithet	Thing

(46)	*a*	*very much more difficult*	*match*
	Deictic	Epithet	Thing

As the Epithet is graded further, more words are added that modify the one following. This illustrates a clear case of a word complex – more specifically a regressive hypotactic word complex. An analysis of this kind of structure is presented in (47):

(47)	*a*	*very*	*much*	*more*	*difficult*	*match*
	Deictic	Epithet				Thing
		word complex				
		δ	γ	β	α	
		adverb	adverb	adverb	adjective	

Univariate structures of this kind derive from recursive systems that allow for an indefinite number of choices of the same variable. One possible formalization of this system that we can call INTENSITY is shown in Figure 8. The loop emanating from [graded] allows for the system to be entered an indefinite number of times, enabling realization of the Epithet as a word complex.

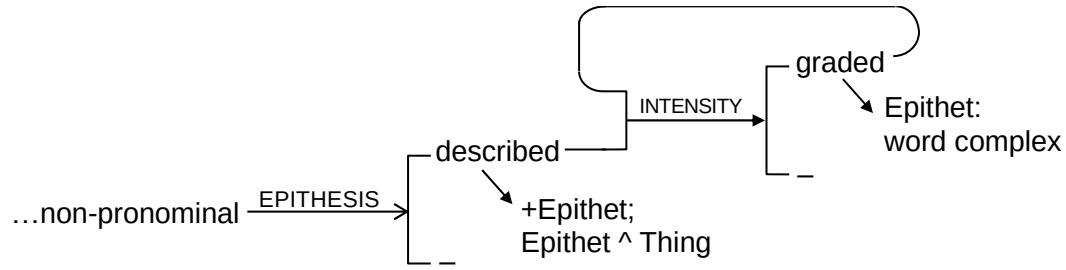

Figure 8: INTENSITY as a recursive system[4]

This system illustrates the way in which the same choice at nominal group rank can be chosen repeatedly. However, the realization statement for the feature [graded] (i.e. Epithet realized by a word complex) is relatively informal in that it does not fully generate the structure. For one thing, it doesn't specify the relations between words within the word complex – i.e. the regressive γ, β, α structure noted above. Second, it doesn't specify the particular types of words that may occur to realize the Epithet or any particular component of the word complex. For example, the α has a relatively wide range of possible realizations (Halliday and Matthiessen 2014), including a wide set of adjectives – such as the more interpersonally-oriented adjectives realizing attitude in *very much more difficult* above and more ideationally-oriented adjectives realizing qualities in *very much more sizeable* – as well as verbs (e.g. a *babbling* brook). In contrast, the intensifiers tend to have a different set of word classes realizing them, including grading and measure adverbs that realize what is called force in the appraisal framework (*very much more difficult*), adjectives that realize what is called focus (*blueish grey*), and negators such as *not*, amongst others. Each of these word classes have particular patterns of ordering – the negator tends to come first, measure and grading adverbs that realize force come second and adjectives realizing focus follow on next to α (e.g. *not very much more blueish grey paint than the others*; c.f. **blueish much more very not grey paint than the others*). To describe these in detail requires further steps in delicacy at nominal group rank, and a much more developed systemic and functional description of the word rank in English than has yet been made explicit in SFL. This is simply to say that there is still much more SFL work to be done on the grammar of English!

Turning back to our discussion of issues arising from the description of nominal groups in these special issues, the analysis of Epithets presented above calls attention to the possibility of also treating subclassification of the Thing function as a word complex, to account for examples like the following:

(48) *racquet*
(49) *tennis racquet*
(50) *graphite tennis racquet*
(51) *Wilson graphite tennis racquet*

[4] Note that the realisation of graded as Epithet: word complex, indicates that if graded is chosen the first time, the Epithet is realised by a word complex. It is not meant to indicate that every recursive choice of graded inserts a new Epithet or word complex. Rather, for every choice of graded, there is another choice of word complex at the rank below which would then insert an extra word into the complex. The specific relation of this word and its structural function is here left unformalized, pending a more developed systemic and functional description of both the English group/phrase and word rank.

Under Halliday's analysis, these would be treated as distinct Classifiers at the nominal group rank:

(52)	*Wilson*	*graphite*	*tennis*	*racquet*
	Classifier	Classifier	Classifier	Thing

However just like the grading of Epithets above, each additional Classifier modifies the set of elements following it. That is, *tennis* indicates a type of *racquet*, a *graphite* indicates a type of *tennis racquet* and *Wilson* indicates a type of *graphite tennis racquet*. This suggests that, like for the grading in Epithets above, the whole construction may be better analyzed as a word complex within the Thing:

(59)	*Wilson*	*graphite*	*tennis*	*racquets*
	Thing			
	word complex			
	δ	γ	β	α
	proper noun	noun	noun	noun

A possible recursive system accounting for such subclassification structures is suggested in Figure 9, along the lines of that for suggested for Epithets above. And as above, the particular relations between words and their possibilities for realization are left open and require a more fully developed and delicate group/phrase and word rank description. The basic analytical principle we are following here is that recursive systems realized by univariate structures should be modelled as such wherever they are found, rather than being modelled as strings of multivariate functions deriving from unspecified systems.

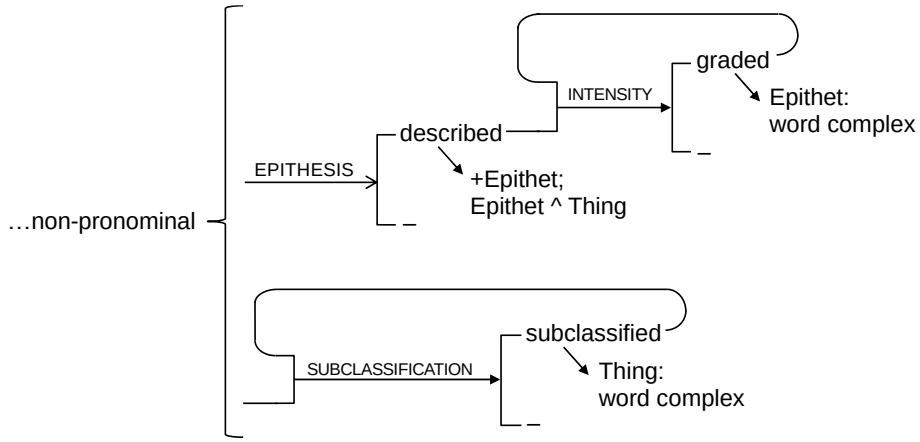

Figure 9: SUBCLASSIFICATION as a recursive system

All this is to say that, when proposing a logical structure, we need to be clear how it can be derived from systemic choices. This means that any logical structure arising from nominal group systems will in fact be realized by a complexing at word rank, unless what is being complexed is the entire nominal group itself (as in *Tom, my brother*).

Looking from the perspective of other metafunctions, to date SFL grammars have not proposed additional tiers of structure for interpersonal and textual meaning in nominal groups (comparable to those proposed for the clause). Interpersonally speaking, prosodically realized

splashes of attitude are acknowledged, often with reference to Poynton (1984, 1985). Martin (2004a, 2008), for instance, notes examples comparable to *you naughty little bugger* with feeling arguably distributed across Deictic (*you* vs *this*), Epithet (*naughty* vs *sweet*) and Thing functions (*bugger* vs *darling*). These have been followed up in work on APPRAISAL (e.g. Hood 2010). But an independent tier of structure has not been proposed; rather the relationship between attitude and its prosodic realization has been managed as an inter-stratal one between the discourse semantic system of APPRAISAL and its realization across a range of nominal group systems. One relevant factor in play here may have to do with the uncertainty surrounding the best way to represent grammatical prosodies and reconcile them with constituency-oriented tiers of structure such as those we have been developing in tables throughout this introduction.

From a textual perspective, as noted above, there is of course extensive commentary on the inter-stratal realization of IDENTIFICATION (i.e. entity tracking) in nominal groups, including suggestions that the Deictic functions in a nominal group like a Theme does in a clause (e.g. Matthiessen 1995: 254). Once again, proposals have not been forthcoming for an additional tier of structure reflecting the organization of nominal groups as a wave of information. As with grammatical prosodies, there is also uncertainty about the representation of periodicity in grammar analysis in SFL and about how to reconcile grammatical waves with constituency-oriented tiers of structure (cf. Matthiessen [1988] on representational issues in SFL and Martin 1995a, 1996 on types of structure).

5.2 Structure Markers

The analysis of nominal groups opening with a Focus function (examples (37-41) above) draws attention to the analysis of what are often termed "structure markers" in nominal group structure (e.g. the *of* in *three sets of lawn tennis*). These have often been left aside in SFL descriptions but as SFL engages with a wider range of languages, there is a growing need to account for them explicitly. For the purposes of this discussion of nominal groups these structure markers can be roughly divided into two groups – adpositions and linkers.

By adpositions we mean structure markers that contribute to signaling the role played by nominal groups in clause structure. These are typically found in initial and culminative position in nominal group structure. For example, Tagalog pre-positional structure markers include function marking clitics *ni* and *si* that cooperate with the verb inflection to distinguish Actor from Goal (for more detail on how this works see Martin [2004b] and Martin and Cruz [2021] in this special issues series). An example of these markers is given in (60). Here, the structure proposed for each nominal group is Function Marker (FM) ^ Thing, where the Function Marker is realized by the adpositions. The first FM is realized by *ni*, which in Tagalog marks named participants not functioning as clause Theme; and the second FM is realized by *si*, which marks named participants which are functioning as clause Themes.[5]

(60)	*inaantay ni Tonyo si Ningning*				
	in-a~antay	ni=	Tonyo	si=	Ningning
	GF[6].PFV-PROG~wait	ACC=	Tonyo	TOP=	Ningning
	Process	Actor		Goal	

[5] For non-English examples in this introduction a layer of Leipzig glossing has been provided for the benefit of readers familiar with such analysis. Leipzig glossing is not based on SFL and it is not part of the SFL description offered here (which is provided by the rows of analysis underneath the Leipzig glossing); however it serves as a useful lingua franca across theories.

[6] GF indicates Goal focus

	nominal group		nominal group	
	FM	Thing	FM	Thing
verb	ntp[7] clitic	proper noun	tp clitic	proper noun

'Tonyo was waiting for Ningning'

An example of post-positional structure markers is presented for Korean in (61). Here the function marking clitics *i, ege* and *eul* cooperate to distinguish among Actor, Recipient and Undergoer clause functions (for more detail on how this works see Kim et al. (2022) and Martin and Shin (2021) in this special issues series). The Function Markers in this example are realized by clitics referred to as p1, p2 and p3 clitics – corresponding roughly to nominative, benefactive and accusative labelling in the Leipzig glossing.

(61)

나무꾼	이	선녀	에게	옷	을	주었다.
namukkun	*=i*	*seonnyeo*	*=ege*	*os*	*=eul*	*ju-eot-da*
woodcutter	=NOM	nymph	=BEN	dress	=ACC	give-PST-DECL
Actor		Recipient		Undergoer		Process
nominal group		nominal group		nominal group		verbal group
Thing	FM	Thing	FM	Thing	FM	Event
c. noun	p1 clitic	c. noun	p3 clitic	c. noun	p2 clitic	verb

'(the) woodcutter gave (the) nymph (a) dress'

To illustrate the use of these adpositions, simple nominal groups have been used so far. But these adpositions initiate (Tagalog) or culminate (Korean) nominal groups of any size and in both languages they also mark embedded clauses. A Tagalog example of this is presented (62) below. This nominal group is the Value in an identifying relational clause (Martin and Cruz 2019) and is marked as a thematic participant by its Function Marker *ang*.

(62)

ang=	*dahan-dahang*	*l-um-apit*	*sa=*	*kanya*
TOP=	slow-LINK[8]	approach<PERF>	OBL=	3PL
nominal group				
FM	Thing			
	[[clause]]			
	Manner	Process	Direction	
			nominal group	
			FM	Thing
tp clitic	adverb	verb	ntobl[9] clitic	ntobl pronoun

'slow approach to him'

The embedded clause in this example has been analyzed as being embedded within the Thing function in the nominal group. This accommodates an analysis of the *ang* pre-position as part of nominal group structure. But an issue with this analysis is that the clause shows no signs of transcategorization – that is, there is no nominalization. This means it could function perfectly well as a ranking clause that makes a negotiable move in discourse with the meaning "(elided Actor) very slowly approached him". The function marker *ang* aside, it doesn't look like a

[7] In this and subsequent examples 'ntp' labels the non-thematic participant and 'tp' labels the topic marking clitic.
[8] Tagalog's -ng linker is here assimilated to the final /n/ of *dahan-dahan* 'slowly'; its hyphen is part of Tagalog graphology.
[9] "ntobl" labels the non-topic marking oblique clitic or pronoun.

nominal group. An alternative analysis is presented as (63) which better respects the absence of explicit transcategorization.

(63)

ang=	*dahan-dahang*	*l-um-apit*	*sa=*	*kanya*
TOP=	slow-LINK	approached<PERF>	OBL=	3PL
[[clause]]				
FM	Manner	Process	Direction nominal group	
			FM	Thing
tp clitic	adverb	verb	ntobl	ntobl pronoun

'slow approach to him'

This analysis does show the similarity between this embedded clause and non-embedded clauses (differing only by the use of the Function Marker *ang*); but it would involve expanding the grammar to allow for function markers as part of embedded clause structure *as well as* nominal group structure – a complication for the description overall.

A third approach to examples such as this is to treat the function markers not as elements within the embedded clause but as dependent functions of the kind we analyzed in hypotactic word complexes in the previous section. This would mean treating the clitic that was previously analyzed as a Function Marker as a β that is dependent on the embedded clause (α), as in (64). Note here that the embedded clause no longer needs to be positioned within a nominal group. It is simply directly embedded within the function at clause rank.

(64)

ang=	*dahan-dahang*	*l-um-apit*	*sa=*	*kanya*
TOP=	slow-LINK	approach<PERF>	OBL=	3PL
#β	α			
	[[clause]]			
	Manner	Process	Direction nominal group	
			FM	Thing
tp clitic	adverb	verb	ntobl clitic	ntobl pronoun

'slow approach to him'

As illustrated in (64) this would involve adding a tier of dependency structure to the analysis of nominal groups (notated β α to reflect the dependency relationship involved). This more clearly captures the way adpositions relate the whole constituent they occur with to the rest of a clause – regardless of the type of constituent they depend on. This is illustrated for nominal groups realizing the Actor and Goal in (65).

(65) *inaantay ni Tonyo ang tawag niya*

in-a~antay	ni=	Tonyo	ang=	tawag	=niya
GF.PFV-PROG~wait	ACC=		TOP=		=GEN.3SG
Process	Actor		Goal		
	#β	α	#β	α	
		nominal group		nominal group	
		Thing		Thing	Deictic
	ntp clitic	proper noun	tp clitic	proper noun	ntp pronoun

'Tonyo was waiting for her call'

In (64) and (65) we've added hash mark "#" to the β function, to indicate that this dependency structure is not iterative; it culminates with the β function and does not regress further because it does not derive from a recursive system. We might refer to dependency structures of this kind as *subjacent* – a third type of particulate structure alongside multivariate and univariate. These structures could be formalized by using the type of realization statement known as expand (e.g. drawing on the Mood (Subject^Finite) example from Matthiessen and Halliday [2009, 98]). This would break down the relevant clause level element/s of structure (Actor and Goal above) into realization statements of something like +Actor; Actor (#β ^ α).

Subjacency structures of this kind could help solve issues in the analysis of English nominal groups as well – for example dealing with the structure markers in Focus structures (in this case we use β# to indicate that the complex does not progress further).

(66)	*three*	*sets*	*of*	*lawn*	*tennis*
	nominal group				
	Focus			Classifier	Thing
	α		β#		
	[nominal group]				
	Numerative	Thing			
	numeral	noun	linker	c. noun	c. noun

More broadly, subjacency structures can be used to help describe constructions that involve elements variously classified as particles, clitics, adpositions and linkers more generally. For example, they could also be applied to Spanish Classifier functions realized by a structure marker and noun (Quiroz and Martin in press).

(67)	*silla*	*de=*	*rueda-s*
	chair	GEN	wheel-PL
	nominal group		
	Thing	Classifier	
		#β	α
	noun	linker	noun
	'wheelchair'		

Prepositional phrases and co-verbal phrases are also candidates for subjacency analysis. The kind of analysis proposed in Halliday (1985) for a nominal group with an embedded prepositional phrase Qualifier is illustrated (20), including his Classifier ^ Thing interpretation of syntagms like *examination question*. As exemplified, prepositional phrases are treated as realized through a P ^ C multivariate structure, with a nominal group embedded in C.

(68)	*an*	*examination*	*question*	*about*	*democracy*
	nominal group				
	Deictic	Classifier	Thing	Qualifier	
				[prepositional phrase]	
				P	C
					[nominal group]
					Thing
	determiner	c. noun	c. noun	preposition	c. noun

The alternative we are suggesting here is outlined in (69), including our preferred alternative analysis of *examination question* as a word complex realizing the Thing function. Instead of Halliday's multivariate P ^ C structure we propose a subjacency complex (#β ^ α) expanding the Qualifier. The main difference here is the shift from a multivariate analysis that requires an embedded prepositional phrase and an embedded nominal group within the C to a subjacency analysis where the embedded nominal group is directly realizing the Qualifier with a preposition, and so a prepositional phrase is not needed. Note that whether or not the functions are called #β ^ α or P ^ C is simply a matter of labelling. We could alternatively just interpret the P and C as subjacency functions (but without the need for an embedded prepositional phrase). Alternatively, if more explicitness is preferred, then a superscript could be added to the #β function to specify the meaning comparable to the superscripts used in clause complex and tense analysis in descriptions influenced by Halliday 1985 – for example #β^{matter} ^ α here (see Matthiessen [1995, 630-636] for the set of meanings organized through prepositions).

(69)	*an*	*examination*	*question*	*about*	*democracy*
	nominal group				
	Deictic	Thing		Qualifier	
				#β^{matter}	α
		word complex			[nominal group]
		β	α		Thing
	determiner	c. noun	c. noun	preposition	c. noun

Co-verbal phrases can be parsed along similar lines. An example from Korean is presented as (70), with the "co-verbal phrase" constituting the Qualifier expanded as α ^ β#. In Korean the α in this subjacency structure needs itself to be expanded to accommodate the circumstance marking adposition *e* relating *minjujuui* 'democracy' to its bound verb *deahan* 'concern'. Further specification can be provided as ^{matter}β# for the top layer of subjacency and ^{locative}β# for the one below.

(70)	민주주의	에	대한	시험	문제
	minjujuui	*=e*	*daeha-n*	*siheom*	*munje*
	democracy	=LOC	concern-LINK	examination	question
	nominal group				
	Qualifier			Thing	
	α		^{matter}β#		
	α	^{locative}β#			
	[nominal group]			word complex	
	Thing			β	α
	c. noun	clitic	bound verb	c. noun	c. noun

'exam question about democracy'

The same kind of subjacency structure could additionally be generalized to linkers found in nominal groups across languages. Unlike adpositions which specify the role played by nominal groups in clause structure, linkers connect elements of nominal group structure. Tagalog's linker *na* (Martin 1995b) can be managed in this way for links between nominal group functions as in (71) and those realized by embedded clauses as in (72).

(71)	*um-alis*	*ang*	*apat*	*=na*	*ma-talik*	*=na*	*kaibigan*
	PRF-leave	TOP	four	=LINK	ADJ-close	=LINK	friend

Process	Actor					
	#β	α				
		nominal group				
		Numerative		Epithet		Thing
		α	β#	α	β#	
verb	tp clitic	numeral	linker	adjective	linker	c. noun

'four close friends'

(72)

ma-ganda	*ang*	*bahay*	*=na*	*b<in>ile*	*niya*
ADJ-beauty	TOP	house	=LINK	buy<PRF>	she
Attribute	Carrier				
	#β	α			
		nominal group			
		Thing	Qualifier		
			#β	α	
				[[clause]]	
				Process	Actor
adjective	tp clitic	noun	linker	…	…

'the house she bought was beautiful'

Linkers involved in paratactic complexes can be treated along the same lines – as illustrated below for the nominal group complex for English in (73) and the adjective complex realizing the Tagalog Epithet in (74). Note that we are focusing here on analysis of the paratactic linker's role in this structure (*and* in the English, *at* in Tagalog – notated #β ^ α below), not on the relation between the two nominal groups or adjectives (notated 1 +2 below).

(72)

guns	*and*	*sharp*	*swords*
nominal group complex			
1	+2		
	#β	α	
nominal group		nominal group	
Thing		Epithet	Thing
c. noun	conj.	adjective	c. noun

(74)

sa	*ma-liit*	*at*	*ma-laki-ng*	*paraan*
in	ADJ-small	and	ADJ-big-LINK	way
nominal group				
#β^{manner}	α			
	Epithet			Thing
	adjective complex			
	1	+2		
		#β	α	
ntobl clitic	adjective	linker	adjective	c. noun

'in small and big ways'

In short, what we have been exploring in this section is the possibility of using non-iterative dependency structures to analyze the role of adpositions and linkers of various kinds in nominal groups. These "structure markers" differ from some or most elements of nominal group structure in a number of ways: i) they are realized by very small classes of word and are thus

traditionally considered grammatical rather lexical items (function words rather than content words); ii) they are dependent on other words and so cannot play a role in nominal group structure on their own; iii) they often cannot be themselves combine into complexes (English prepositions provide a notable exception here; Matthiesssen [1995, 631]); and iv) they generally cannot be submodified. Our goal has been to explicitly address the analysis of words whose function is not always explicitly addressed in SFL, yet which are crucial to the organization of nominal groups – proposing non-iterative subjacency structures (annotated as α β# or #β α) to provide the "structure marker" orphans with a home (Rose 2021 in the second special issue of this series makes extensive use of such subjacency structures to understand the proliferation of what he calls duplexes in Pitjantjatjara).

5.3 Names and Metaphors

Before closing we should acknowledge the need for further work on the grammar of nominal groups built up around proper names. Poynton's (1984, 1985) early work aside, this is noticeably absent in the SFL literature, as well as from this series of special issues (though see Zhang 2021 in this special issue who makes a nod toward more elaborated structure for naming groups in Khorchin Mongolian). An SFL grammar taking into account terms of endearment, nicknames, titles, one or two family names, one or more additional names, honors and so on has yet to be proposed. Following Halliday (1985) all of the following nominal groups are analyzed as simply consisting of one element of structure – Thing. But there is obviously much more structure involved.

mate
Mick, Mike
Michael
Michael Halliday
Michael Alexander Kirkwood Halliday
Professor Michael Alexander Kirkwood Halliday
Professor Emeritus Michael Alexander Kirkwood Halliday
Professor Emeritus Michael Alexander Kirkwood Halliday FAHA

Another gap we should acknowledge is the lack of work on nominal groups realizing discourse semantic figures (Halliday and Matthiessen 1999, Hao 2020) – involved in what SFL terms grammatical metaphor. These encode discourse semantic entities and occurrences as elements of nominal group structure. A conservative analysis of these would simply apply the categories developed for congruent nominal groups – as exemplified below for the realization of the figure "the government delivered the vaccine to the nursing home" as a nominal group in (75), (76) and (77) below.

(75)	*the government's*	*delivery*	*of the vaccine*	*to the nursing home*
	Deictic	Thing	Qualifier	Qualifier
	[nominal group]	c. noun	[prepositional phrase]	[prepositional phrase]

(76)	*the*	*delivery*	*of the vaccine*	*to the nursing home*	*by the government*
	Deictic	Thing	Qualifier	Qualifier	Qualifier
	determiner	c. noun	[prepositional phrase]	[prepositional phrase]	[prepositional phrase]

(77)	*the vaccine's*	*delivery*	*to the nursing home*	*by the government*
	Deictic	Thing	Qualifier	Qualifier
	[nominal group]	c. noun	[prepositional phrase]	[prepositional phrase]

Compared to the analysis of congruent nominal groups, the multivariate structure analyses of these examples tell us very little about the meanings involved and so are not much use for text analysis. In (75) the agency delivering the vaccine is realized as a possessive Deictic, the process of delivering the vaccine as a Thing and both the vaccine and its beneficiary as Qualifiers. In (76) the agency, the vaccine and the beneficiary are all realized as Qualifiers. And in (77) the vaccine is realized by a possessive Deictic and both the beneficiary and the agency involved are Qualifiers. The nominal group structure in other words reflects very little of the semantics of the figure in play; and the Deictic and Qualifier functions play quite different roles compared to their function in congruent nominal groups. Indeed as anyone who has done text analysis of highly metaphorical texts knows, many of the otherwise clear-cut distinctions between functions can become a little blurred when dealing with grammatical metaphors.

This suggests that it might be useful to explore developing a specialized analysis for metaphorical nominal groups (just as a specialized description of proper names seems to be required). Hao and Wang's paper in this series (in press) explores precisely this issue for Chinese.

6. Instantiation

Our final comment has to do with the dimension of instantiation – a scale of generalization that relates system to text in SFL. It is this dimension that brings co-textual relations into the picture as nominal groups are related to their linguistic environment in unfolding discourse. And it is this dimension that manages the scope of the generalizations afforded by SFL descriptions depending on the nature and size of the corpus on which they are based. The nature and size of this corpus of course depend on a number of practical considerations. Minimally one expects co-textualization and contextualization from a phase of discourse; ideally one hopes for a large reservoir of texts drawn from a range of registers and genres. The bigger the pool the more secure the generalizations made, but the more time-consuming the analysis required – since so much of the analysis still has to be done manually if we are to move beyond the syntagms generated by automatic parsers and on to the function structures required for SFL description. In SFL native speaker intuitions are the least favored source of data in this regard. But there is often no avoiding them when one is exploring reactances associated with covert categories or when one is simplifying examples for presentational or pedagogic purposes (as we have done shamelessly in this introduction). Fortunately the papers in this series of special issues all adopt a more responsible practice in this regard, with Cumming's (2021) paper in the second special issue in this series in particular taking up the mantle of explicitness in relation to the corpus upon which the description is based.

7. Further reading

As the discussion in this paper suggests, there is much to be done. Despite 60 years of SFL development from Halliday's seminar paper in this journal to now, there is still so much more we have not modeled and so much left uncovered. But to focus on this is to miss what has been done. SFL has proven an immensely useful framework for an increasingly wide range of scholars and practitioners concerned with a huge array of theoretical, descriptive and applied concerns. This has only been possible due to the rich and ongoing development of the theory and descriptions as it faces new challenges. So, to illustrate this, we will close with some suggestions for further reading with respect to grammatical description in SFL.

For a basic introduction to SFL theory and description see Matthiessen and Halliday (2009) and Martin et al. (2013, 2021a). Foundational papers are collected in Martin and Doran (2015a, b, c, d, e). For a glossary of key terms see Matthiessen, Teruya, and Lam (2010). There are two major SFL handbooks – Bartlett and O'Grady (2017) and Thompson et al. (2019) – these include useful discussions of the wide array of SFL concerns and approaches (including Cardiff Grammar perspectives, which have not been introduced here). Martin (2016) and Matthiessen (2005a, b) present brief histories of SFL.

For language description more specifically, Mwinlaaru and Xuan (2016) provides a survey of SFL descriptions across languages. For collections of SFL papers on different languages see Caffarel, Martin, and Matthiessen (2004), Martin and Doran (2015b), Martin (2018), Martin, Doran, and Figueredo (2020) and Martin, Quiroz, and Figueredo (2021b), along with several chapters in Bartlett and O'Grady (2017). Martin et al. (2021a) provides a hands-on introduction to SFL language description, focusing on English, Spanish and Chinese (this is a bilingual book, published in English and Chinese).

For SFL perspectives on functional language typology, see Arús-Hita et al. (2018), Halliday (1992), Martin and Quiroz (2020, in press), Matthiessen (2004), Mwinlaaru, Matthiessen, and Akerejola (2018), Teruya et al. (2007), Teruya and Matthiessen (2015) and Xuan and Chen (2020).

Finally, for related work on nominal groups see Fontaine (2017), Fontaine and Schönthal (2019), Quiroz and Martin (in press) on Spanish and Wang (2020) on Chinese; and for an introduction to SFL perspectives on morphology, see Matthiessen (2015).

As SFL grows and is used to explore a wider range of languages and a growing breadth of applications, we encourage those reading this paper and special issues to engage with what has been done and join us in refining and expanding the framework, our understanding of languages in particular and language in general.

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