Chapter 7

Semantics

Miriam Taverniers

1 Introduction

Semantics can generally be described as 'the study of linguistic meaning,' and this goes for systemic functional linguistics (SFL) too. Beyond this safe but rather uninformative definition, there are many different types of interpretations of what (a) semantics can be, how big it is, what place it has in a more general model of language, and how it is related to other dimensions of the model. And this too, goes for SFL. Whereas in general, linguistic models can be distinguished in terms of how they view 'linguistic meaning,' within SFL different conceptions of 'semantics' exist side-by-side, and different views of semantics are seen as complementarities that make the theory rich, flexible and adaptable (to different purposes). In other words, it is not possible to give an overview of what 'semantics' means (no pun intended!) in SFL. What is possible, and much more interesting, is to explore how semantics can potentially be viewed in SFL, how those different views of semantics can be understood, and how semantics has been modelled in SFL.

The aim of this chapter is thus twofold: to survey different possible conceptions of semantics in SFL by elucidating how these conceptions are related to one another (i.e. by fleshing out what each conception highlights with respect to a certain architectural dimension of the theory), and to explore how specific semantic analyses and models which have been proposed in SFL can be understood against the background of these possible conceptions. Section 2 explores different views of semantics in SFL. These conceptions are put into a broader theoretical perspective in Sections 3 and 4. Section 5

then looks at some recent specific semantic models in SFL and places them against the background built up in Sections 2 to 4.

2 The basics of semantics in SFL: what, where, how and why?

In order to explain what 'semantics' can mean in SFL, we will consider the following questions:

(1) *What* can 'linguistic meaning' be in a systemic functional perspective? and *Where* is 'semantics' located in the overall architecture of the model?
(2) *How* can semantics be modelled?
(3) *Why* is semantics to be recognized as something in its own right? *Why* is it theorized and designed as it is?

2.1 The basis of *valeur*, stratification and meaning-making: WHAT and WHERE is semantics?

The basic equation of 'semantics' with 'meaning' can be extended in two directions. 'Meaning' does not occur as such: (i) it is expressed in a certain way, i.e. linguistic meaning is encoded or 'realized' in linguistic 'forms' which are further expressed in sound or in writing, and (ii) it is always 'meaning-in-a-context,' i.e. something (and this is not restricted to language) is meaningful in a specific 'context.' The conception of meaning between form and context is the view that is highlighted in the familiar image of stratification in SFL, with semantics as a stratum between context and lexicogrammar.

The two dimensions of 'meaning' pointed out above are also present in the tool of the system network. The concept of 'meaning' as 'that which is realized in form' underlies the relationship between a *valeur* in a network, i.e. a systemic option (or rather, a path of systemic choices) and its realization in a structure (specified in a realization statement, see e.g. Schulz and Fontaine, this volume). In the tool of the system network the other, contextual side of 'meaning' is present too, since systemic options that are grouped in one network are those that are available in a particular setting, i.e. in the context of a particular rank or unit, for example the options of PROCESS TYPE which are available at clause level. In this view 'meaning' is the value—

or *valeur*—of an option in relation to other options that are available in a context, a value that is realized in a structure, which thus is a token of that value.

Hence two basic conceptions of 'meaning' in SFL can be distinguished by looking at where the relation of 'realization' or encoding occurs in the model, and this is between strata on the one hand, and between systemic options and realization statements on the other. In Figure 7-1 these two conceptions of meaning/semantics are given in [1] and [2].[1]

A third conception of meaning (Figure 7-1:[3]) appears when a differentiation between an expression side and a content side of language is prioritized: in that case 'meaning' is the content that is expressed in sounds/writings. This idea underlies the basic structuralist split between 'content' and 'expression' in language, i.e. the two sides of a linguistic sign in Saussure's model, which Hjelmslev (1963) called content and expression 'planes.'

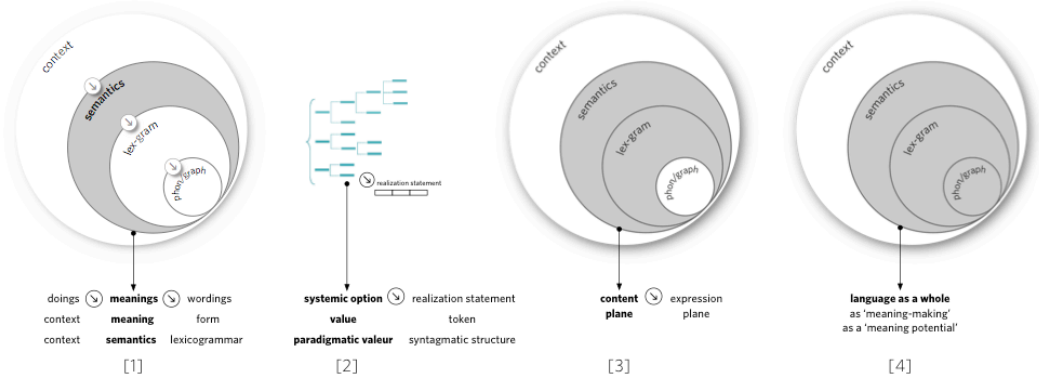

Figure 7-1: Four types of conceptions of 'meaning' in SFL

In addition to those three views of 'meaning,' there is a broader view (Figure 7-1:[4]) which is highlighted in typical characterizations of language from an SFL perspective: language as a whole is defined as a 'meaning potential,' and learning a language is learning 'to mean' (see the title of Halliday 1975). Halliday's adaptation of the familiar verb *to mean* to refer to this overall meaning of language highlights this fourth, more general conception of meaning: it is not just the semantic stratum that 'means,' nor the

[1] Note that the duality of the initial two conceptions of meaning that are pointed out here is widespread in linguistics: the former, as the type of meaning that is interfacing with context, has also been called 'contextual meaning,' or 'extra-linguistic meaning' (and more specific sub-types of this are 'reference,' 'ontological meaning,' 'speech act meaning,' etc.), whereas the latter has been called 'internal-linguistic' or 'formal meaning' (with 'sense' as a sub-type), or has been defined in relation to grammar as the 'semantics of grammar.'

content plane, but language as a whole makes it possible for us to 'mean' in the various contexts of our human lives.

Hence we arrive at four basic conceptions of meaning/semantics: [1] meaning as *valeur*, [2] meaning as one stratum in relation to other strata in a stratified view of language, [3] meaning as the content side of language and [4] meaning as what characterizes language in general as a meaning-making resource. These conceptions have been highlighted, focused on and combined in different stages in SFL but they also lie at the basis of a primary distinction between the Cardiff model of grammar and Halliday's model of grammar. In the Cardiff model the distinction between system and structure is seen as primary, and falling together with the dividing line between semantics and lexicogrammar. Semantics is seen as the stratum of the system networks, whose options are then realized one stratum below, in lexicogrammatical structures. In other words, in this model semantics is paradigmatic and lexicogrammar is syntagmatic (see Schulz and Fontaine, this volume).

In the traditional SFL model, which is focused on in this chapter, the ideas of meaning as *valeur*, meaning as an intermediate stratum, meaning as the content plane of language and meaning as what characterizes language as a whole are not incompatible at all, but are intrinsically intertwined, and are *all* useful and necessary, as we will see below. In this view the different conceptions of meaning pointed out above are all valid side-by-side. At the same time, it has been explored what a semantics as a stratum in its own right can be and how this can then be modelled, a topic we turn to in Section 2.2.

2.2 Three interrelated conceptions of HOW semantics can be modelled

In this subsection we focus on the conception of meaning as a stratum in its own right, i.e. that conception of meaning for which the nominal term 'semantics' is used in SFL. Afterwards (Section 3) we will return to how this semantics is related to other dimensions that are called 'meaning' or 'semantic' in the broader perspective sketched.

Asking the question of what a (separate) semantic stratum can be, more specifically, correlates with asking what this stratum can contain, or *how* this stratum can be modelled in relation to other—especially surrounding—strata. In the visual metaphor of stratification with the strata represented as cotangential circles (since Martin and Matthiessen 1991; see Figure 7-1), the higher levels of the language system are the more abstract ones, and the lower ones the more concrete realizations. In keeping with this orientation, semantics in general can be conceived of as 'higher order

valeur': a '*valeur*' which can be recognized above the lexicogrammar, as a more abstract meaning.

Three complementary ways of modelling this 'higher order *valeur*' can be distinguished. I will initially characterize them here, and we will then return to the different types of modelling in more detail when looking at specific semantic analyses (Section 3) after we have addressed the 'why' question (Section 2.3).

(a) *Semantics as topological meaning*: In one view, semantics is the stratum at which areas of the lexicogrammar are regrouped into semantic domains. This is the case when distinct lexicogrammatical phenomena (in different networks and/or at different ranks or units), realize a similar motif at a higher, semantic level. In a topological model (see Martin and Matthiessen 1991) meanings are not organized systemically (or 'typologically'), in networks of distinctive *valeurs*, but in terms of their likeness along one or more dimensions: phenomena that are similar in one or more respects are conceived of as areas that are closer to one another and as belonging to the same domain in a larger multidimensional space.[2] The method of (re)grouping lexicogrammatically distinct phenomena into more abstract domains or components has often been used in SFL in addition to modelling meanings in networks.[3] Two topological semantic concepts that are familiar in SFL are the metafunctions and the motif of logico-semantic relations. The metafunctions are first and foremost 'semantic components' of language (e.g. Halliday 1977), and they are groupings of phenomena which are dispersed over different networks at the lexicogrammatical stratum, for instance networks for different ranks (with, e.g., ideational meanings realized in clauses, in clause complexes, and in groups). Logico-semantic relations, i.e. expansions and projections and their subtypes, can also be realized by different lexicogrammatical means, in different units (see Halliday's [1985] synoptic table of 'expansion,' and Halliday and Matthiessen's [1999] more extended treatment of the various manifestations of 'expansion' and 'projection' across lexicogrammatical means).

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[2] In this respect the topological modelling of (higher-order) meanings is similar to the method of semantic maps which is used in functional typology (e.g. Haspelmath 2003).

[3] Note that the 'regrouping' of distinct lexicogrammatical phenomena into topological 'domains' does not necessarily imply that those domains are conceived as pertaining to a different (i.e. usually 'higher') stratum. Martin and Matthiessen (1991) talked about regroupings within a stratum, with a focus on the lexicogrammar. This has been interpreted by Halliday (1996:15) as suggesting a view of lexicogrammar as typologically organized and semantics as topologically organized strata. This is also the view highlighted here, although it should be borne in mind that the topological/typological distinction does not correlate with semantics/lexicogrammar per se (indeed, it perturbates throughout the system as a fractal motif—see Section 4.2 below on fractality and 4.3 on the related concept of an extravagant theory of language).

(b) *Semantics as discourse-structural meaning*: In a second type of view, semantics is the stratum at which patternings at the level of discourse are modelled as patterns of unfolding text which are larger than the structures recognized at the level of lexicogrammar, where the maximal unit, in terms of size, is the clause complex. Thus in this sense, the SFL concept of cohesion is an intrinsically semantic concept (see Halliday and Hasan 1976:4), and by extension, since it is cohesive relations that create texture and hence make a text, a text is by definition a semantic unit. Note that 'discourse-structural' meaning is here intended as a type of structure which is different from lexicogrammatical structure, the latter being structure in the traditional, narrower sense. In this vein, too, cohesion is often characterized as a non-structural phenomenon.

(c) *Semantics as higher-level systemic meaning*: In a third conception of semantics, the semantic stratum itself is organized in terms of system networks that are superimposed upon lower lexicogrammatical networks. In this view, options in semantic networks are realized by options in lexicogrammatical networks. This conception underlies the model of speech functions in SFL (see Halliday 1984). SPEECH FUNCTION is a semantic system with options such as 'command' (asking goods-&-services) or 'question' (asking information). Those semantic options can be realized by (various) lexicogrammatical options from the system of MOOD: e.g. a 'command' can be realized as an imperative (*Open the window*), or as an interrogative (*Could you open the window for me*?).

Figure 7-2 summarizes those three design alternatives of a semantic stratum in the overall architecture of SFL. These alternatives are not mutually exclusive but complementary. In much recent work on semantics in SFL, the organization of the semantics in terms of system networks has been an important objective, but in many cases this systemic modelling went hand in hand with and/or was inspired by insights from topological and discourse-structural views of semantics, as we will see below (Section 4).

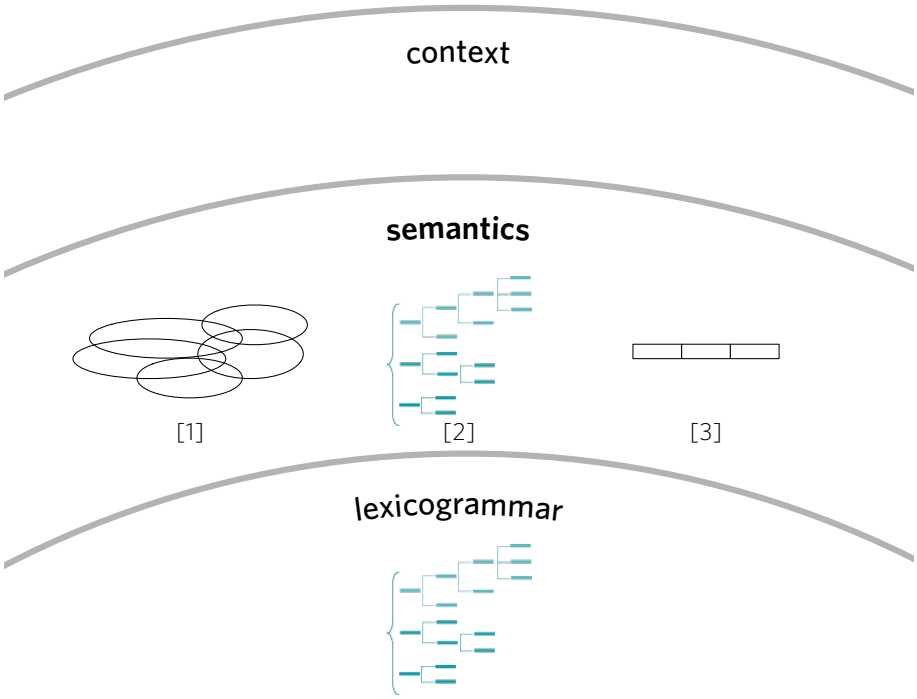


Figure 7-2: Three design alternatives in modelling a semantic stratum: topological (a), systemic/typological (b), and discourse-structural (c)

2.3 A closer look at stratification: the WHY of semantics

The answer to the first why question—why is it necessary to recognize a semantic stratum?—is that a semantic stratum is needed in order to account for 'variability' between expression and content functioning in different contexts. Recognizing a semantic stratum is necessary when there is no one-to-one relationship between expression and content, i.e. when a coupling between a form/structure on the one hand and a meaning on the other hand is not enough. For some systemicists or from one perspective, this is always the case, for others it is the case for specific contexts (as we will see below). In order to come to an understanding of how the recognition of a stratum of semantics is motivated in relation to this concept of variability, it is necessary to first clarify what exactly this variability is, and how different research purposes can put this variability into different types of perspectives.

2.3.1 Variability and the internal stratification of the content plane

Theoretically, if there is no one-to-one relation between content and expression, there are two types of situations which are possible, and these two can also occur in

combination. This is visualized in Figure 7-3. At the left (Situation [1]) is the type of situation that is familiar from the systemic model of the lexicogrammar, with systems in which each *valeur* (or end-point in a systemic path) is tied to a specific expression form, i.e. there is a one-to-one relation between meaning and form. In the centre are two complementary possibilities of variation: one-to-many, where one meaning is dispersed over different expression forms (Situation [2]), or many-to-one, where one form can be the expression of different types of meanings (Situation [3]). At the right is the combination of Situations [2] and [3].[4]

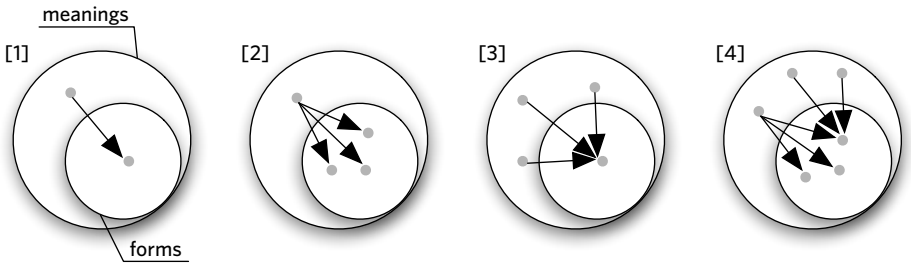


Figure 7-3: One-to-many [2], many-to-one [3], and many-to-many [4], conceptions of variability between meanings and forms in relation to the default view of one-to-one meaning-to-form couplings within lexicogrammar [1]

In research contexts where a semantic stratum comes into play (to be explored in Section 5), the analysis and description of the meaning of a linguistic sign as a content that is tied to an expression in a (lexicogrammatical) system (Situation [1] in Figure 7-3) is not sufficient or adequate. In those cases, it is useful to 'un-couple' content and expression, and to recognize an additional, higher level of content which is not covered in the content in the lexicogrammatical system.[5] In more general terms, one specification of a content linked to its expression is not enough: the content plane of language is split into two strata, i.e. lexicogrammar and semantics. This is referred to by Halliday as an 'internal stratification of the content plane' (Halliday 1976; 1998a; also see Taverniers 2011 for a further exploration). The additional interface in the content

[4] Lamb (1962) (whose stratificational theory has been a source of inspiration in SFL) refers to those different situations of variability between strata as 'composite realization' (=[2] here), 'portmanteau realization' (=[3]) and 'interlocking diversification' (=[4]).

[5] In Hjelmslev's (1963) terms, a 'connotative semiotic' is then recognized (i.e. a semiotic that has a higher order content plane) (see Taverniers 2008).

plane, i.e. between the strata of semantics and lexicogrammar, is set up in order to account for variability between contents and expressions.

2.3.2 Semantics as an interface and trinocular perspectives on variability

The description of the internal stratification of the content plane above focuses on the relation between lexicogrammar and semantics as two content strata of language. However, semantics is not only inserted above lexicogrammar, but also 'below context': it is a stratum that is wedged between lexicogrammar with its systemic model of linguistic forms and what lies outside language, i.e. the non-linguistic context. In this sense, the two content strata are interface strata, and semantics is an **interface** stratum through which language interacts with extra-linguistic context, i.e. with eco-social environment (see Halliday 2013). We saw above that the stratification of the content plane into semantics and lexicogrammar makes it possible to account for variability between contents and expressions. This variability is an inherent feature of language functioning in different contexts: it is in the interaction with different contexts, and in the actualization of language in specific instances, that variation arises. More specifically, stratification makes it possible to create 'meanings' that are adapted to specific contexts and that are beyond what is (fixed or 'codified') in the (lexicogrammatical) system of a language. Stratification makes it possible to use 'forms' in ways that go beyond their *valeurs* in lexicogrammatical systems, for instance to mean several things at the same time, i.e. to be creative in a myriad of ways with the finite means that are available in the formal units of the language.

Thus the concept of stratification is how SFL theorizes the way in which language interacts with non-linguistic context. Language appears in its material expression (i.e. in sounds and writing), but as a 'semiotic' system it does not interact with the eco-social environment 'directly' through sounds and writings: there are intermediate layers of content between linguistic expressions and the contexts in which language functions. First, there has to be a level of 'meaning' (there is a separation between 'content' and 'expression,' which is the principle of double articulation); and second, in order to account for variability, there have to be two content strata (this is the separation between 'semantics' and 'lexicogrammar' within the content plane); and this is a hypothesis about how language functions in 'context.'

In keeping with the visual metaphor of strata as organized with context at the top and the expression in sound or writing at the bottom, any type of phenomenon can be

viewed from three perspectives. Focusing on semantics, this stratum can thus be seen 'from above,' from context, 'from below,' from lexicogrammar, and 'from roundabout,' from its own position in the stratified model. The possibility of those complementary perspectives is referred to as 'trinocular' vision or perspective (Halliday 1977; 1996), or 'trinocularity' (Halliday 2009:79-80). Different types of questions arise about what a semantics can be, depending on the type of stratal perspective that is taken on semantics as an interface. This type of perspective, together with the type of variability between lexicogrammar and semantics that is focused on, determines the more specific reasons for setting up a semantics within the architecture of SFL, and also how this semantics can be conceived of.

2.3.3 A specific motivation for setting up a semantics: grammatical metaphor

The need for a separate semantic stratum came into sight in various research perspectives in SFL in which (a type of) variability between content and expression came to be highlighted. One of those, which has been highly influential in the theory as a whole, is the area of grammatical metaphor.[6]

The concept of grammatical metaphor instrinsically has to do with the lack of a one-to-one relationship between meaning and form, and it is already present, in a pre-theoretical way, in earlier concepts such as markedness, foregrounding, congruent (typical) and incongruent (atypical) links between semantics and lexicogrammar.

Grammatical metaphor becomes the more general label for what had already been partly recognized in the interpersonal component on the one hand (where one speech function can be realized in different ways,), and similar types of variation in the ideational component on the other hand. Halliday (1984) calls the typical, default links between speech functions and their realizations in lexicogrammar (through the system of MOOD) 'congruent,' and the less typical 'alternative' realizations 'metaphorical.' In this sense a command can be realized congruently by an imperative (*Please, open the window for me*), or metaphorically by a modalized interrogative (*Could you open the window?*). In Halliday's (1984) first presentation of 'grammatical metaphor,' such incongruent realizations of speech functions are called 'metaphors of mood.' Later, in

[6] Other areas in relatively early SFL studies which point to a semantic stratum in addition to a lexicogrammatical one include: stylistics and socio-semantic variation (esp. with the notion of a de-automatization of a grammar à la Mukařovský, e.g. Halliday 1982), language development (ontogenesis) (with the view that the adult language system contains more strata [an extra content stratum?] than the proto-language of the child), and mood (with variability between mood choices and socio-semantic roles on the one hand; and between mood types and lexicogrammatical realizations on the other hand).

Halliday (1985), within the interpersonal component, a second type of metaphor is recognized, viz. 'metaphors of modality,' in which a modal meaning is realized, not by means of a modal element in the clause structure (i.e. a modal verb or a modal adjunct: *It will [probably] be a good season*)—which is regarded as the congruent realization of modal meanings, but rather by other means which are beyond the clause structure and which give a more 'explicit' wording of the modality intended (as in *I think it will be a good season*; *I suppose it will be good season*; *It is obvious that it will be a good season*; *Everyone says it will be a good season*). Figure 7-4 presents a visual presentation of interpersonal metaphors in terms of the variability between content and expression as sketched above.

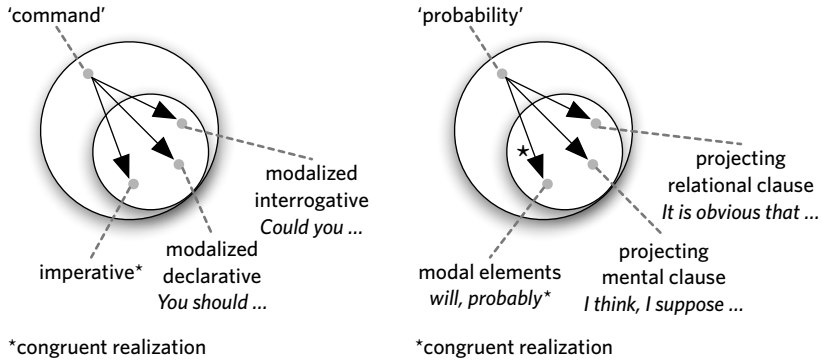


Figure 7-4: Interpersonal grammatical metaphors of mood left) and modality (right) theorized within a view of variation of one-to-many

In presenting the concept of grammatical metaphor, Halliday (1985) explicitly combines two complementary views of variability between forms and meanings. He describes the traditional concept of what is 'metaphorical' as highlighting a 'many-to-one' type of view of the relation between meaning and expression: there is one form, and this form has multiple meanings, among which at least one literal and at least one metaphorical interpretation. This is the conception that prevails in thinking about metaphor in general, and especially in traditional views of lexical metaphor (e.g. *legs* can be 'parts of animals,' i.e. have a literal meaning; or 'parts of furniture,' as in the lexical metaphor *tablelegs*). However, Halliday argues, the complementary view, i.e. of 'one-to-many,' is equally important in analyzing grammatical metaphor (see Figure 7-5, which shows the relation between those two views). Thus in introducing 'ideational grammatical

metaphor,' Halliday (1985) gives an example of a clause which realizes a process with its participants (i.e. a processual or 'event' meaning), and then shows that this processual meaning could be realized by a nominal group, which functions as a participant in another process configuration. The first example by Halliday is: the congruent wording *Mary saw something wonderful*, compared to the incongruent *A wonderful sight met Mary's eyes* or *Mary came upon a wonderful sight*, where the process of 'Mary seeing something wonderful' is construed as a nominal group, *a wonderful sight*.

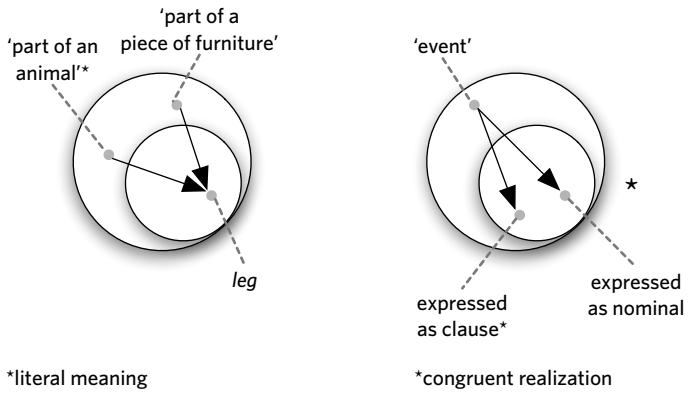


Figure 7-5: The traditional view of metaphor (left), and an alternative view which is equally inspiring in the study of grammatical metaphor (right)

In explaining grammatical metaphor as 'one-to-many' in addition to 'many-to-one' , Halliday both connects grammatical metaphor with the traditional concept of metaphoricity ('many-to-one') and brings the new concept of grammatical metaphor more in line with what had earlier been recognized in relation to typicality in the interpersonal metafunction (where the 'one-to-many' view was the initial source of inspiration: one speech function such as command can have several realizations such as imperative, interrogative, etc.). In terms of stratal type of perspective, the approach to grammatical metaphor that is initially taken is that from below: the starting point is a form and the question is what this form 'means,' and then this 'meaning' is analyzed as having other (alternative, metaphorical) ways of being realized. Section 5.1 explains how flipping the traditional conception of metaphor, starting from above and asking

how one meaning can be realized, has led to a more comprehensive investigation of grammatical metaphor.

3 Wider perspective I, flexibility: enter metaredundancy and probability

The overview of initial conceptions of 'semantics' in SFL has shown that there is no single explanation of what (a) semantics is, where it is to be found, how it can be modelled, if it is regarded as a separate stratum, and why it should be recognized as such. Even in those cases where the focus was on a (separate) semantic stratum, the description was couched in terms of 'certain contexts,' or 'certain research purposes' for which such a semantics comes into view. Indeed, even a cursory reading of the systemic functional literature will reveal that the familiar systems of the clause, viz. PROCESS TYPE, MOOD and MODALITY, and THEME and INFORMATION, are sometimes called 'lexicogrammatical systems,' and sometimes 'semantic systems.' This (seeming) 'indeterminacy' in the description has to do with the very conception of the interface between semantics and lexicogrammar as by definition inherently flexible. In order to understand this flexibility, it is necessary to put the notion of stratification in a wider perspective, and to take into account another relation that has hitherto not been mentioned, viz. the relation between the system and actual instantiations, or what is called 'instantiation' in SFL. This wider perspective is that of viewing language as a dynamic open system, and bringing in the concepts of 'metaredundancy' and 'probability.'

3.1 Metastability and metaredundancy

Since the mid-1980s, and under the influence of work by Lemke (1984), Halliday has come to view language as a 'dynamic open system,' or a 'metastable system.' Such a system persists in interacting with different contexts by being open, i.e. being maximally adaptable, and thus by constantly changing, while at the same time avoiding change (i.e. it remains stable at a meta-level). We saw above that the concept of stratification is how SFL interprets the way in which language interacts with context or its eco-social environment. The model of stratification also provides the ideal basis to talk about how language can be metastable but the concept of dynamic openness puts the idea of stratification into a wider perspective.

As a semiotic system, language is able to continue to function because of the combination of two features: the availability of "critical contrasts at every level," and "complex arrangements of articulation of these contrasts" (Lemke 1992), i.e. complex arrangements of the relations between those options in the different strata. Thus language achieves metastability through the particular type of relationship between its coding layers or strata. Those layers consist of things going together in a predictable way (to limit change and thus ensure stability), while at the same time they contain some 'gaps' and 'contradictions' which provide room for innovations, which originate as adaptations to changes (i.e. new requirements) in the context (Lemke 1995:153).

Focusing on the relation between semantics and lexicogrammar, the 'things going together in a predictable way' are stable meaning-form relations (such as one-to-one relations), while the 'gaps' can be meanings that do not have one default realization (meanings that are not [yet] codified) and the 'contradictions' meanings that (come to) have multiple different realizations, or the other way around. Thus the notion of complex arrangements between options in the different strata corresponds to the presence of various types of variability that we distinguished above. This type of relation between layers, based on such complex arrangements of variability, is what characterizes 'semiotic' dynamic open systems, of which language is the paramount example, and is called 'metaredundancy.' In a pair of layers with only one-to-one meaning-expression couplings, the layers are 'redundant' vis-à-vis each other (there is no need to differentiate them, since the one is always completely predicted by the other). When gaps and contradictions are present, the relationship is said to be 'metaredundant': in the system as a whole, there is redundancy to a certain/minimal extent, and there is room for new connections between layers, i.e. there is room for creativity or adaptations to new contexts. Innovations arise on top of and by virtue of the existing system, and it is also in this sense that the extra layer needed to model them is *meta*redundant with the existing system.

Within the perspective of language as a dynamic open system, the concept of metaredundancy provides a new interpretation of the relationship between strata, which is traditionally called 'realization' in SFL (see Halliday 1991; Lemke 1995). In this perspective, the verb *realize* too, is reinterpreted as 'redound.' What metaredundancy adds to realization, besides the notion that it is an explicitly dynamic concept, is the fact that it is a relationship of accumulative nesting, i.e. it is not sequential but rather, bidirectional. Thus lexicogrammar redounds with phonology/graphology; semantics

redounds with the relation between lexicogrammar and phonology/graphology; and context redounds with the relation between semantics which redounds with the relation between lexicogrammar and phonology/graphology. This is the view that is most relevant when focusing on the content side of language, i.e. 'meaning.' The visual image of the strata with the cotangential circles (which appeared around the time that the theory of dynamic open systems became influential in SFL) ranging from smaller (for the lower systems) to larger (for the higher systems) represents exactly this view. However, while realization imposes a direction on the relation (i.e. it forces us to choose one thing that realizes the other, as with the terms 'signifier' and 'signified'), metaredundancy is neutral in this respect. Accordingly, the opposite view with metaredundancy cycles starting from the lowest stratum becomes a complementary frame of interpretation. Here, phonology redounds with the metaredundancy between lexicogrammar and semantics, and if context is also taken into account, phonology redounds with the metaredundancy between lexicogrammar and the metaredundancy between semantics and context. This view, as Halliday (1992) argues, is the most relevant in research focusing on phonology. Figure 7-6 is an attempt to capture accumulative metaredundancy cycles in a three-dimensional way.

The conception of language as a dynamic open system puts the motivation for distinguishing between lexicogrammar and semantics into a wider perspective. It is because of the requirement of adaptability of the system to different contexts that the distinction between lexicogrammar and semantics is needed, because it is exactly through the flexible relation between lexicogrammar and semantics that language can be open, and that gaps and contradictions, as room for innovation, can be allowed. In other words, it is through variability between meanings and forms that language can continue to function. It is through the specific type of relationship of semantics, not just to lexicogrammar, but to the rest of the lower layers, that language has semogenic power, that it is a 'meaning potential.'

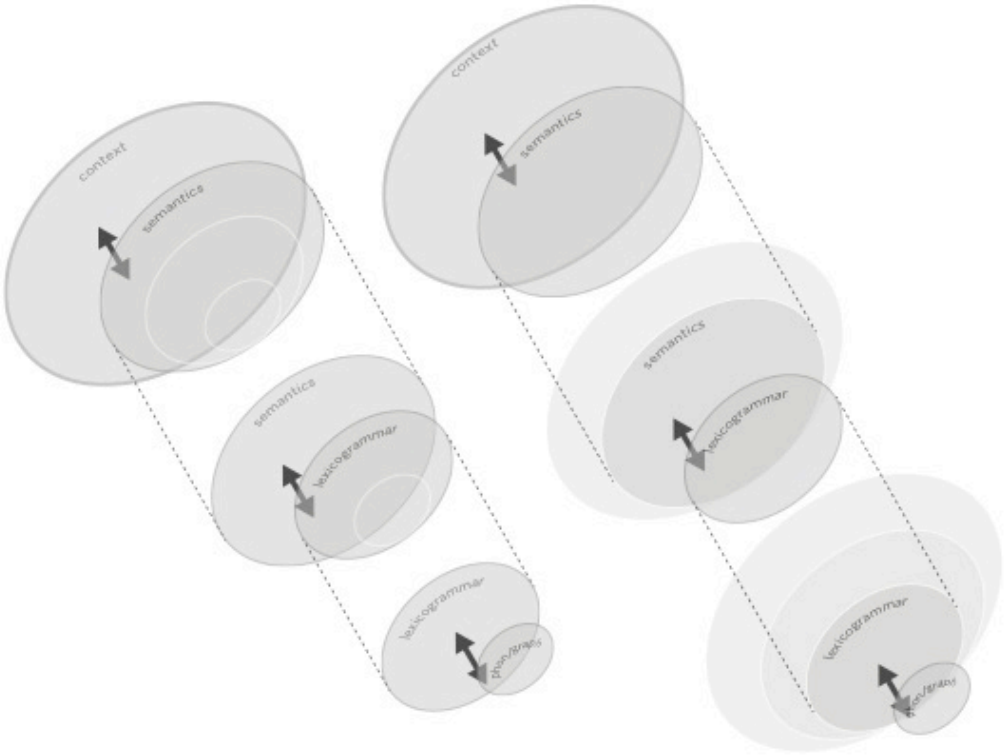


Figure 7-6: Metaredundancy relationships between strata, starting from the top focusing on the content side of language (left), and starting from the bottom focusing on the expression side of language (right)

In addition to the new perspective on the distinction between semantics and lexicogrammar, the conception of language as a dynamic open system also provides a wider frame of interpretation for the observation (see Section 2.1) that different conceptions of 'meaning' are possible and relevant at the same time in SFL. The four different conceptions of 'meaning' distinguished above have a place in the model of language as a dynamic open system:

- 'Meaning' as the stratum of semantics itself: this can now be viewed in various ways, at least two of which are relevant here. (i) Within the content plane of language, it is the stratum that redounds with lexicogrammar, and focusing on content, the interface with lexicogrammar is the place where variability between meanings and forms is made possible. (ii) In language (content + expression), semantics is the highest stratum, which metaredounds with the rest of the language system. This view of semantics is proposed in SFL in connection with Hjelmslev's notion of a connotative semiotic (e.g. Halliday 1991). Here, semantics is seen as a connotative layer which interacts with an existing semiotic (in Hjelmlsev's terminology, the latter is a denotative system and

functions as the expression of the connotative content). This is the idea of a new stratum coming into existence on top of and by virtue of the existing system.

- 'Meaning' as the content plane of language: this is what metaredounds with the expression side, with phonology.
- 'Meaning' as language as a whole: in this view language is interpreted as a meaning potential (a potential that allows us to function in different contexts): this is language metaredounding with context.
- 'Meaning' as the *valeurs* in system networks: this view is the least clear in the visualizations with layers. However, if the concept of language as a dynamic open system is carried through, this too, is to be seen as a level that redounds with the structures. For the *valeurs* are only an objectification of language by the researcher. The relationship between the *valeurs* and the structures is a relationship with much stability (one-to-one relations), but here too, there is room for innovation in order for language to persist as a metastable system.

These different conceptions of 'meaning' can be highlighted in the framework of language as a dynamic open system. The validity of all those views within SFL creates what can be seen as 'indeterminacy,' as in for example alternative characterizations of the familiar networks of MOOD, PROCESS TYPE and THEME as 'semantic' in some works, and as 'lexicogrammatical' in others. What counts is that both of these 'content' strata are meaning (as a verb, i.e. meaning-making). This is explicitly captured in the idea of metaredundancy: semantics metaredounds with the meaning that is already in the relationship between lexicogrammar and phonology. It is in this sense, too, that grammatical metaphor is theorized as 'stratal tension' (e.g. Martin 1992) (i.e. tension between a literal and a metaphorical meaning), because both the lexicogrammar and the semantics convey meaning.

3.2 Time, instantiation, and probabilities

In discussing meaning and semantics in the framework of language as a dynamic open system, so far in Section 3 the focus has been on the status of strata and the relations between them, prioritizing the relation of realization and its re-interpretation as metaredundancy. We have seen how the concept of metaredundancy places the views of 'meaning' distinguished above in a different theoretical perspective: both the types of 'meaning' that are distinguished and the idea of variability between meanings and forms

are elucidated through metaredundancy. As a next step in exploiting this theoretical frame of interpretation, a further dimension needs to be taken into account, viz. time and the concomitant notion that is called 'instantiation' in SFL. We will see that the same framework also provides a deeper understanding of the kinds of 'semantics' that first appeared at the horizon of SFL's ventures into semantic theory (see Section 2.3.3).

One dimension that plays a crucial role in the picture of language as a dynamic open system is that of 'time,' and it will be noted that the description above is inevitably couched in terms of temporal meanings (witness expressions such as *persist, constant, change, new, always, at the same time*). Metastability is an inherently dynamic concept: a system that is metastable is stable by 'constantly changing.' Hence metastability is in fact 'dynamic stability,' although this term may seem a contradiction. This apparent contradiction is due to the role of time, or rather, the way in which, as researchers, we observe and objectify language, which only occurs to us in its usage in unfolding time. What appears as a difference between two states of language that are objectified for the sake of research (i.e. two time slices across which language does not appear as 'stable'), may appear as actualizations of the same meaning potential if observed from a further perspective, from a greater time depth. Vice versa, what is objectified as a stable system (in research, and also for the purposes of learning a language as a technique), is just that: an objectification (abstraction) of a system that is constantly in flux in a myriad of actualizations in different situations. This is the paradox of dynamic stability.

As a meaning potential (which is virtually stable and thus learnable), language predicts what forms and meanings can be actualized in a certain context, and at the same time it is responsive to new requirements in those contexts, because it contains gaps and contradictions. Hence language is constantly open to allow and incorporate what appear as 'innovations' within its system, but what are in fact nothing more than actualizations of the system in interaction with different environments. In relation to the dimension of 'time,' those innovations—which may or may not become part of the stable system over time—can be conceived of in different ways, depending on whether or not they are incorporated in the system *and* depending on the research perspective that is taken. The research perspective refers to the time depth that is taken, i.e. what time frame of language is made the object of study: language as a codified system or language in vivo in one particular instantiation (a text) or a particular setting. Innovations can be conceived of as transformations of the system, as changes, as deviations, as metaphors, as 'complexifications' of the system (adding a further choice

in the existing system, i.e. a more fine-grained distinction). It will be noted that the different types of motivations for a separate semantics that we have considered exemplify some of those different conceptions of 'innovations.'

In relation to the notion of 'variability' (between meanings and forms), innovations can also be conceived of in different ways, which are complex to describe because the dimension of time (and the research focus in terms of time depth) also plays an intrinsic role. 'Change' can be based on diversification (from one-to-one to one-to-multiple or multiple-to-one), or it can be a change in the existing proportionalities between options, e.g. options may become more or less 'at risk' in certain environments, while other options die out and new options appear. In essence, all change has to do with changing probabilities in a system (see Halliday 1991). Any innovation in language can be purely 'accidental,' it can become part of a situation-specific system (e.g. a register), or it can become part of the overall system. In this sense, each instance potentially has an influence on the system. Halliday (e.g. 1985) often uses a comparison with the weather. Each weather situation is an instance of a climate, but also influences that climate: when there are more wet winter days, the winter climate will become wetter too. A change that becomes part of a system needs to be incorporated in existing networks. If the change is based on diversification, this leads to a complexification of the system, wherein more finegrained distinctions will have to be set up.

When language changes (i.e. evolves), it is the couplings between layers that change, or more precisely the relations of variability between strata: relations are opened up and new relations appear, or, in other words, strata are uncoupled and recoupled again. Grammatical metaphor, which has been a key reason in SFL for distinguishing between the strata of semantics and lexicogrammar, is conceived of in exactly those terms: it is seen as "a cross-coupling (decoupling, and recoupling in a different alignment) between the semantics and the lexicogrammar)" (Halliday 2008:16). Note also how 'metaphor' in general is seen as the creation of new form-meaning couplings which come into being on top of and by virtue of existing couplings.

4 Wider perspective II, a design rationale based on multiperspectivism and fractality: enter extravagance

Throughout the step-by-step characterization of 'meaning' and 'semantics' in SFL in this chapter there has been a prevailing emphasis on 'different views,' 'different

possible conceptions' and 'perspectives.' This feature has been explicitly thematized in SFL, at a meta-level, i.e. at the level of how we think about how we can model language, or the level of our research practice as linguists. Because it plays such an important role in understanding how semantics is conceived of in SFL, it is useful to consider how this idea of different views is given shape at the meta-level. There are two interacting aspects to this feature, viz. 'multiperspectivism' (Section 4.1) and 'fractality' (Section 4.2). The combination of these leads to a specific type of theory that is called an 'extravagant' theory (Section 4.3).

4.1 Multiperspectivism

An inherent feature of SFL is that it is 'multiperspectival.' Its theory of language is based on a number of dimensions along which differentiations can be made (see Taverniers 2002 for a further exploration of 'differentiating dimensions'), the most important of which are: the distinction between metafunctions; between different strata (stratification, and the relationship of realization or metaredundancy); between ranks; between system and instance (instantiation); between syntagmatic and paradigmatic modelling (see Halliday and Webster 2009). Within each of those dimensions, a linguistic phenomenon can be looked upon in different ways: different perspectives are possible, depending on the viewpoint and the focal depth:

- Perspectives can differ in terms of directions, when views from different vantage points are possible. The stratal types of perspectives mentioned above are a case in point: any phenomenon viewed in terms of stratification can be looked upon from below or from above, or from roundabout. Hence trinocularity is just one instance of this feature of multiperspectivism.
- Perspectives can also differ in terms of focus. The investigator can single out one focus point in a set of complementary views (e.g. look at a phenomenon from one specific metafunction). Another example of differences in focus is that where focal length differs in terms of time depth, which is captured in the notion of 'instantiation' in SFL.

Any linguistic phenomenon can thus be looked at from different perspectives, within one dimension, and also in terms of different dimensions, and this leads to a theory that is explicitly based on complementarities. The combination of complementarities leads to a richer theory about a complex phenomenon, and it is through 'shunting'

perspectives (see Halliday 1961:254) that the analyst can come to a better understanding and a more detailed description of a phenomenon.

Grammatical metaphor can again be mentioned as a case in point. We saw above how Halliday called for a shift in the perspective that is taken on the variability between lexicogrammar and semantics that is inherent in metaphor: a shift from the traditional view of 'one expression has multiple meanings' (a metaphorical and a literal one), to a view in which one meaning can be expressed in various ways. By shunting the perspective in this way (see Figure 7-7 and compare Figure 7-5 above), and looking at metaphor from the semantics, SFL has been able to develop a more comprehensive theory of ideational metaphor. This development went in various steps, each further step adding more conceptual depth to the theory of grammatical metaphor—but all steps hinge on the flipped perspective compared to the more traditional view of 'metaphoricity.' First different types of realizations were conceived of in terms of degrees of congruence (i.e. one meaning, such as an event meaning, can be expressed in various ways, from more to less metaphorical). Concomitant with this, the view developed that an ideational metaphor can be 'unpacked' in different steps, from relatively incongruent to more congruent ways of wording the same meaning. Then the different realizations were put in a type of implicational hierarchy, from most 'relational' or 'processual' meanings to condensed meanings with the noun as the end point (see Halliday 1998a:211). This in turn laid bare different possible points in a general 'drift towards thinginess' that characterizes those registers which often make use of packaging meanings in a condensed form, such as scientific discourse.

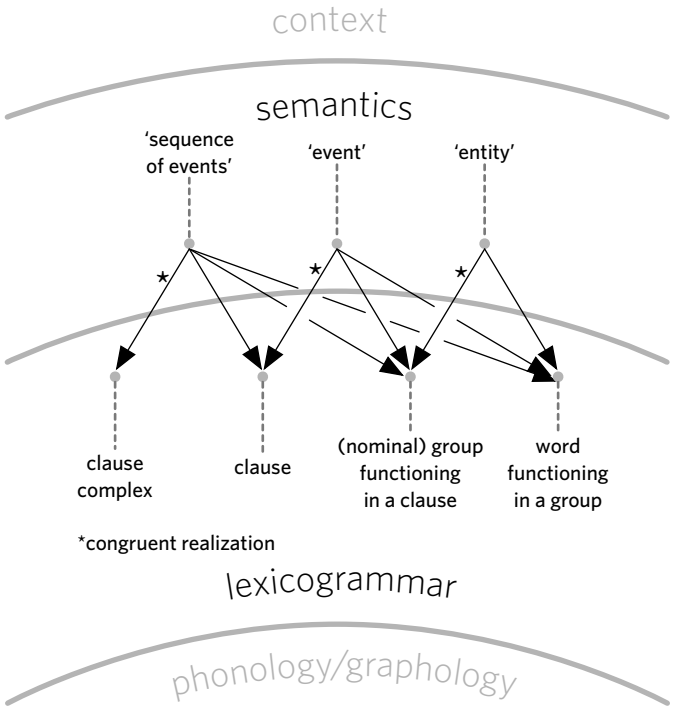


Figure 7-7: Shunting perspectives in theorizing grammatical metaphor as a tension between lexicogrammar and semantics

Another example of taking different perspectives is related to the concept of the metafunctions. The metafunctions can be viewed as semantic zones, which are realized in different lexicogrammatical areas. Alternatively, each syntagm, i.e. each structure at the level of lexicogrammar, has all three metafunctional meanings. This is a familiar SFL view of the multi-tiered syntagm as a concerted meaning, i.e. a fusion of layers of metafunctional meanings. Figure 7-8 shows how these two views on the metafunctions are complementary, and it is clear that both are needed in order to come to a deeper, richer understanding of the notion of the metafunctions as 'semantic components of the system' (while at the same time [i.e. metaredundancy at play!] depending critically on the bundling of systems at the lexicogrammatical stratum).

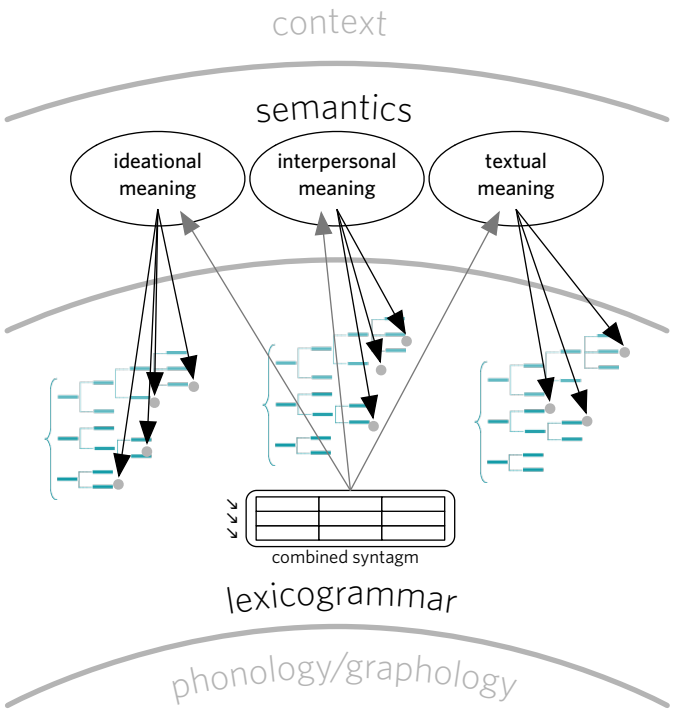


Figure 7-8: Shunting perspectives in theorizing the metafunctions as semantic components of the system of language

4.2 Fractality

By combining complementarities in order to come to a richer theory of the complex phenonemon that language is, sometimes recurrent patterns are discovered, and this feature is referred to in SFL as 'fractality' or 'fractal resonance' (Martin 1995). Thus fractality is an additional design feature which is exploited at the meta-level, the level of the linguistic practice itself. Put simply, a pattern that appears in one view, in one focus, at one level—i.e. a type of modelling that is useful in accounting for a phenomenon within that view, may also be recognized elsewhere, in another view that appears by shunting the perspective. The newly recognized pattern is then said to 'resonate' with the first one. Focusing on the meta-level, resonance means that a model, a type of distinction, which works well for one area, one view, one dimension, is used as an inspiration to explore a different area, view, or dimension of language.

The resonance may be between different ranks or units. This is the case with the semantic motifs of expansion and projection (see Section 2.2). A meaning such as

causality (as a subtype of expansion: enhancement) can be realized between clauses within a clause complex (*This happened because that happened*.), within clauses through relational processes (*This caused that.*) and within groups (*The cause of that was…*) (see Halliday and Matthiessen 1999:222-26 on this and related types of fractal resonance). Such resonating lexicogrammatical phenomena can be grouped together into a topological domain, or a '(transcategorical) semantic domain' (see the notion of semantic domain in Halliday and Matthiessen 2004:593-94).

The resonance may also be inter-stratal. This kind of parallelism is explored when the model of lexicogrammar, which is relatively familiar, is used as an inspiration to tackle the stratum of semantics. This type of inter-stratal fractality, which ties in well with the notion of metaredundancy between levels of the system, will become clearer in Section 5, which focuses on recent semantic models in SFL.

4.3 Extravagance

We have seen how different conceptions of semantics are not just possible alternative views (see Sections 2.1 and 2.2), but exist side-by-side and moreover, all appear, naturally, in a view of language as a dynamic open system based on metaredundancy relations between its layers (see Section 3.1). What has now been added, in Section 4, is the idea that this varied view of semantics, is 'fostered' in SFL. A theory which is based on complementarities and fractal patterns resonating across its components, is called an 'extravagant' theory by Halliday (e.g. 1998b), and it is argued that linguistic theory as a meta-semiotic can only be extravagant, because language itself is extravagant (see Halliday 2008). Language itself is extravagant by having order while at the same time constantly allowing disorder in its adaptation to different contexts. The linguistic theory that attempts to understand language in all its facets therefore cannot but be extravagant as well. Thus the meta-semiotic is itself a dynamic open system, with some things that have become conventionalized, but with gaps (evidently, and luckily!) and, importantly, contradictions (alternatives, complementarities). And note that drawing the parallel between language and linguistics (see Halliday 1998b), is pointing to a fractal resonance between the two.

5 Recent semantic endeavours in SFL

5.1 Mapping semantic models in SFL

The aim of this section is to give a brief but systematic overview of semantic models that have developed in SFL, most of them since the 1990s. The individual models will not be presented in detail since the focus will be on elucidating the nature of those models against the explanation of 'meaning' and 'semantics' that is sketched above, and in doing so, on highlighting the specific contribution and hence 'place' of each semantic model in relation to the theory as a whole. More specifically, this section will show how different semantic models in SFL each flesh out a specific dimension of a semantic stratum, i.e. a facet of semantics which comes into view by taking a specific perspective. The perspectives that are taken on semantics can be explained as originating from choices that are made in terms of the complementarities/options that have been disentangled in the preceding sections, viz.

- the way in which semantics is modelled in addition to the aim of networking (i.e. topologically or discourse-structurally, or both) (see Section 2.2);
- the role and the type of variability between semantics and lexicogrammar (see Section 2.3.1);
- the type of stratal perspective that is taken (see Section 2.3.2).

We will draw upon the various types of complementarities distinguished above in exploring how recent semantic models are designed in SFL. In doing so, we will come to a theoretically founded understanding of recent conceptions of semantics in SFL, of what a semantics can be and how it can be modelled. In doing so, further on, we will once more re-visit the crucial concept of stratification, and further flesh it out on the basis of the specific models of semantics that will be under focus.

In turning to recent approaches to semantics in SFL, there is one tendency that becomes clear: semantics has become ever more important in the theory as a whole (see Butler and Taverniers 2008). This is in vein with a key aim in SFL since its inception, viz. to make a theory that prioritizes meaning, to set up a system that is as semantic as possible (a 'semanticky' grammar, see Halliday and Matthiessen [2014:31]), or a grammar that is 'pushed' as far as possible towards the semantics (see Halliday 1985:xix), but the 'semanticisation' of the model lies more specifically in the fact that the modelling of the 'semantic stratum' has become an important research aim across different areas and metafunctions.

In the later, more full-fledged semantic endeavours in SFL, there is continuity and also a major new research focus. There is continuity from the initial motivations for separating semantics and lexicogrammar in that central themes have remained important to the present day: grammatical metaphor, and the semantics of speech function (as seen in Hasan's model of message semantics, see Section 5.3). Socio-semantic variation and a focus on text also remain important. At the same time, it is possible to recognize an oscillation to a specific approach to semantics, which is inherently in accordance with the overall architecture of SFL, viz. the modelling of (separate) semantic 'networks' which then interact with the lower networks in the lexicogrammar. This had already started in earlier work on the interpersonal metafunction focusing on the relation between speech function and mood. In more recent models this approach is generalized to other interpersonal domains (e.g. stance and sourcing of stances), to the ideational metafunction and to the analysis of discourse. Hence, what we see in the design of the stratum of semantics is fractality, with the method of system networks being fractally extended from the lexicogrammar to the semantics (see Matthiessen 2009:14-15).

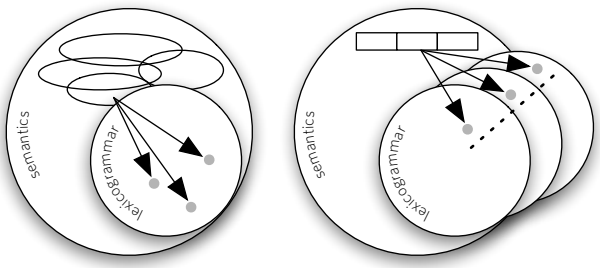
Beyond this strong 'systemic' motif the other two types of modelling are also important sources of inspiration, viz. 'topological' and 'discourse-structural' designs. As indicated above, those three types of designs are complementary, and although the ultimate aim may be a systemic model (as in recent semantic models in SFL), the topological and discourse-structural views of semantics may be used as a primary source of inspiration to disentangle 'meanings' which can then be 'networked' in a more full-blown, systemic semantic model. It turns out that these different types of designs, topological and discourse-structural, can be seen as very primary lines of thought for conceptualizing 'semantics' (in addition to a third one that will be introduced below). In other words, they are not only alternative types of design, they are two complementary pre-systemic approaches to 'semantics,' and each of them is based in a specific vision of what a semantics can be.

In all approaches to semantics, the question is what 'higher' meaning can be recognized, above the lexicogrammatical networks, that forms an interface between lexicogrammar and context? In a 'topological' approach, this question is explored in terms of different levels of 'abstraction.' The 'higher meaning' is of a different level of coding in two ways: it is not exactly what is already encoded in the lexicogrammar (otherwise no further stratum of semantics is necessary), rather it goes beyond the lexicogrammatical meaning; and it is closer to non-linguistic context, with which it

interacts (see semantics as an interface stratum). For example, in the interpersonal metafunction, 'command' is a higher-level, more abstract meaning compared to a lexicogrammatical category such as 'imperative.' The link with the topological design is this: as soon as a higher-order meaning such as 'command' is recognized, the further question can be asked how this can be linked back to the lexicogrammar. It then becomes clear that there are different facets to realizing 'commands,' i.e. 'command' at the stratum of semantics is not just a semantic rendering of 'imperative' at the stratum of lexicogrammar. More specifically, commands can also be realized by other lexicogrammatical means than the imperative (such as different types of modal verbs and/or adjuncts, see Figure 7-4). And hence in drawing this connection between topological conception and differentiating semantics on the basis of level of abstraction, we come full circle with the idea of variability between two content strata (or between meanings and forms).

In a 'discourse-structural' approach, the question of what higher meaning can be recognized is explored in terms of different levels of 'patterning.' The 'higher meaning' is of a different level of patterning in two ways: it does not just 'consist of' the structures and building blocks that are available in the lexicogrammar, rather it goes beyond this lexicogrammatical patterning; and it interacts with context. In this perspective, the text or discourse becomes crucial at the level of semantics, since it is through texts that humans interact with context (not through clauses). In modelling semantics as how we interact with context through texts, one important question therefore will be how discourse is organized, how it is built and what the basic discourse units are. In relation to the method of the system network, this question translates more specifically into a quest for the unit that is the entry condition for semantic systems. Seen from below, i.e. in terms of how semantics is beyond lexicogrammar, the crucial question becomes what type of patterning takes place above and beyond the highest lexicogrammatical unit, i.e. beyond the clause or clause complex. Importantly, again, the discourse units do not 'consist of' lexicogrammatical units such as clause and clause complex, but rather, they are realized by different lexicogrammatical means (see Halliday and Matthiessen 2004:587). In discourse, these lexicogrammatical means occur sequentially, in unfolding text. Hence what will be important in the discourse-structural conception of semantics is how a discourse pattern emerges from a sequence of lexicogrammatical patterns unfolding in text. And this is how the link with variability can be made here: a discourse pattern does not have a one-

to-one relation with one lexicogrammatical unit or pattern, but rather is realized through a sequence of (recurring) lexicogrammatical forms in unfolding text.



	abstraction-approach to semantics	**pattern**-approach to semantics
DESIGN	topological	discourse-structural
HIGHER-ORDER MEANING	higher-order abstraction: closer to context	larger-order patterning: structures bigger than lexicogrammatical structures
SEMANTICS AS INTERFACE	what we can mean in between what we can do & what we can say	larger structures not composed of lexgram building blocks, but realized by lexgram resources

Figure 7-9: Abstraction-based and pattern-based approaches to semantics, highlighting a topological and discourse-structural design, respectively

The abstraction-based and pattern-based approaches to semantics which are taken in recent semantic models are summarized and presented visually in Figure 7-9. This figure shows how the approaches can be understood as interpretations of the variability relation between a higher meaning and a dispersed realization in the lexicogrammar.

As indicated above, the abstraction-based and pattern-based approaches have been complementary sources of inspiration in modelling a semantic stratum, and in setting up networks for this stratum. This has been the case across the metafunctions, but there are differences in the roles and relations between these two approaches for the different metafunctions. We will now turn to specific semantic models in SFL. We will first look at each metafunction, paying attention to what exactly the abstraction and patterning approaches have resulted in, for those metafunctions, i.e. in setting up semantic models that flesh out the specific nature of each metafunction. After that we will turn to a third approach to theorizing a semantics, complementary to the abstraction-based and pattern-

based conceptions, viz. a register/probability-approach, which has been applied more globally across the metafunctions.

5.2 Semantics from a textual perspective

At the level of lexicogrammar the textual metafunction comprises the systems of THEME and INFORMATION, which are realized in the clause, and COHESION, which is a label for a number of sub-systems (such as REFERENCE, CONJUNCTION) which are realized non-structurally. The textual metafunction can be characterized by the following distinctive features. It

(i) is concerned with the creation of texture.
(ii) is regarded as a second-order metafunction, because it allows meanings from the other two metafunctions, interpersonal and ideational, to be brought together in syntagms and in larger, coherent wholes.
(iii) does not only comprise structural resources (THEME and INFORMATION) like the other metafunctions do, but also non-structural ones.

Now these defining features of the textual metafunction will help us understand how this metafunction is conceived of at the semantic level.

The textual metafunction is intrinsically concerned with texture, and so the 'patterning approach' is a natural route for approaching textual semantics. In fact, the system of COHESION, with its 'non-structural' realization across clauses (e.g. lexical cohesion realized by lexemes spread across the text) is already a recognition of a higher-order pattern (beyond the 'structural' resources), and this conception ties in with the idea of the textual metafunction as a second-order metafunction. In his model of discourse semantics, Martin (1992) re-interprets three sub-systems of COHESION at the semantic level (which for him is the level of discourse, of higher-order patterning). In this framework, cohesion is not seen as part of a second-order (textual) metafunction, but as occurring at a higher stratum, that of discourse semantics. In discourse semantics, cohesive resources are seen as belonging to different metafunctions: there are ideational, interpersonal and textual discourse-semantic systems. Each of those higher-order semantic systems is a pattern-based re-interpretation of a component of the earlier system of COHESION, which was already regarded as 'different' from other lexicogrammatical systems, because cohesive resources are non-structural. In addition to thus recognizing the 'pattern'-dimension of cohesion, the overall re-conception of the

notion of 'cohesion' as a higher stratum (rather than a 'second-order' metafunction) can be seen as a re-modelling of cohesion in terms of degree of 'abstraction.' In this sense, the pattern-based and abstraction-based conceptions of semantics are both integral aspects of the model of discourse semantics.

5.3 Semantics from an interpersonal perspective

With regard to the interpersonal metafunction, a system of SPEECH FUNCTION is set up above the lexicogrammatical ones of MOOD and MODALITY, in order to deal with how speech functions are realized by dispersed lexicogrammatical resources, and above (see Section 2.2) this was given as a good example of the abstraction-based approach to semantics. An elaborate model of speech functions which is context-specific (the context being interactions between mothers and their children) is Hasan's (1996) message semantics. However, a general speech functional model has been part of the theory for a long time (see an early overview in Halliday 1984) and has been incorporated in text books and presentations of the theory.[7] In analyzing the mapping between speech functions and their realizations in lexicogrammar, some meaning-form couplings can be seen as the 'default' ones and this leads to the concept of interpersonal grammatical metaphors of mood (see Section 2.3.3). However, in another view, such 'typicality' is not relevant or is at least problematic (in relation to mood as well as modality) (see Hasan 2010:287).

Speech functions also feature in a pattern-approach to semantics, which highlights relations between them in sequences, such as pairs consisting of an initating and responding move (as in the traditional concept of adjacency pairs) and in larger stretches of discourse, especially dialogue. This interpersonal dimension which focuses on the scaffolding of interaction is usually referred to as NEGOTIATION or EXCHANGE as in the framework of discourse semantics (Martin 1992; Eggins and Slade 2005/1997; Martin and Rose 2003).

In addition to speech function and exchange structure, a further interpersonal area for which a conception of a semantic stratum is essential, is the expression of evaluation, which is modelled in the sub-theory of APPRAISAL. Appraisal deals with how attitudes and values are conveyed, how those values are sourced and how interactants are aligned in relation to those values (White 2015). One source of inspiration (see

[7] For overviews in text books, see for instance Thompson (1996:Chapter 4), Martin et al. (1997:Chapter 3), Halliday and Matthiessen (2014:Section 4.1), and Matthiessen (1993:Section 5.1.2).

White 1999) for settting up appraisal theory was the concept of interpersonal grammatical metaphors of modality, which revealed that one interpersonal meaning such as a modal value of 'probability' (see examples in Section 2.3.3) can be realized in various ways in the lexicogrammar (see Figure 7-4). In appraisal theory, this conception is extended to a range of other types of interpersonal values in addition to modality, for instance affective meanings and value judgements, which are realized in dispersed ways, through interpersonal resources such as forms of modality, through experiential resources—explicitly or through connotation, and/or through logical resources (e.g. a conjunction *but* signalling a concessive meaning of counterexpectation). Hence appraisal theory is a good example of an abstraction-based approach to semantics which (re-)organizes various types of lexicogrammatical means at a higher level in topological areas.

Appraisal meanings can also be looked at from a pattern-approach to semantics, which then focuses on how attitudes are negotiated in a text and how different alignments are set up across the text (e.g. Martin and Rose 2003; Martin and White 2005). A specific patterning, i.e. sequential, aspect of appraisal that is useful to mention is that of 'semantic prosody.' The combination of various appraisal resources in a text can form a pattern which sets a tone or an attitudinal mood which is spread across a stretch of discourse, and which unfolds with varying degrees of strength, just like musical prosody (see Martin and White 2005:59). For instance certain words can trigger positive or negative connotations in other words that occur in their neighbourhood (see Louw 1993). Note, too that the featuring of 'connotation,' both as a dimension of appraisal (the evocation, rather than explicit construal, of evaluative meanings) and in the concept of semantic prosodies, as an intrinsic aspect of interpersonal semantics, resonates with a general conception of the stratum of semantics as a 'connotative' layer added to the 'denotative' system of language (i.e. semantics interpreted in terms of Hjelmslev's model of a connotative semiotic, see Section 3.1 above).

5.4 Semantics from an ideational perspective

At the level of lexicogrammar, the ideational metafunction deals with the building blocks of representational content through which experience is construed, especially PROCESS TYPES at the level of the clause, and with relations between experiences, especially clause combining dealt with in the systems of TAXIS and LOGICO-SEMANTIC

RELATIONS. Within the ideational component, the former is called the experiential metafunction, the latter the logical metafunction.

At the level of semantics, the ideational metafunction with both sub-components is re-interpreted in Halliday and Matthiessen's (1999) model of the ideation base of language, which contains basic building blocks of experience ('experiential'), and combinations of them ('logical'). In this sense, the model of the ideation base is in effect a semantic model of the rank scale, the primary options ranging from 'elements' (which can be processes, participants or circumstances) through 'figures' (by default realized by clauses in the lexicogrammar) to 'sequences' (by default realized by clause complexes). In linking the semantic system to the lexicogrammar, the notion of typicality plays a crucial role, as indicated in the expression 'by default' in the previous sentence. Hence the ideation base incorporates a model of ideational grammatical metaphor, which crucially hinges on the notion of a rank scale (nominal groups are more condensed than clausal realizations, and a clause is more condensed than a clause complex). Thus the ideation base is an ontological or phenomenological semantics, i.e. a semantics of what types of entities, qualities and relations between entities there 'are'; or what types of 'phenomena' humans conceptualize (significantly, the entry point for Halliday and Matthiessen's semantic network of the ideation base is called 'phenomenon'). It is clear that this is an abstraction-based approach to semantics, the semantics here being an interface between language and cognition or conceptualization, and again what is modelled in the semantics are topological zones (types of 'phenomena') which can be realized in dispersed ways in lexicogrammatical resources. One specific component of their model, viz. the relations of expansion and projection, which are seen as 'transcategorical semantic domains,' has been referred to above (Section 2.2) as an example of a topological approach to semantics, and the dispersion of realizations across the lexicogrammar as an example of fractality (see Section 4.2). Expansion was already regarded as dispersed through the lexicogrammar in IFG[1] (see especially Halliday 1985:306-7).

The components of expansion and projection (grouped as 'sequence' in the ideation base) lends itself to a pattern-approach to semantics, precisely because it includes a concept of sequencing (projecting and projected element; expanded and expanding element), and thus are also useful in a discourse perspective. There are at least two discourse-patterning dimensions that are relevant: the unfolding of sequential occurrences of projections and expansions through a text; and the fractal 'replication' of

such relations as also holding between larger units of text, such as between clause complexes and between paragraphs (in the same sense as hyper- and macro-Themes referred to above). This sequencing through relations of expansion and projection at text level is incorporated as CONJUNCTION in Martin's discourse semantics (see Martin 1992; Martin and Rose 2003). It is a focus of earlier studies in the framework of Rhetorical Structure Theory (see Matthiessen and Thompson 1988; Mann et al. 1992; Matthiessen 2002).

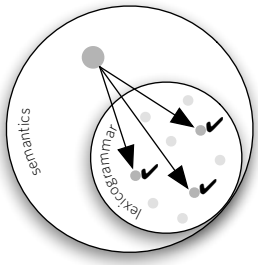
5.5 Semantics and register

This section focuses on the relation between semantics and context. Here the question is what semantics realizes from a higher stratum, and how the relation between semantics and context can be modelled. Semantics, in this view, is the stratum of registers as 'semantic strategies' (Matthiessen 2009:219), strategies being selections of options that are available in a particular (institutional) setting and that, together, form a 'procedure' or 'technique' for functioning in that setting. The higher-level meaning that is modelled at the semantic stratum in this case is thus a technique as a combination of strategies, i.e. a grouping of meanings which can be made in that context, and which are realized through different lexicogrammatical resources that are 'at risk' in a particular setting. Resources that are 'at risk' in a context are those that are more likely to be selected because they redound with certain aspects of the context. Because registers are defined through the combination of options that are 'at risk' in a setting, they are ways of setting the probabilities in the lexicogrammar stratum (see Halliday and Matthiessen 2014:29), or, put differently, it is the specific combination of those options at risk which are grouped at the semantic stratum as sets of strategies, forming a 'technique' that works in a particular setting.[8]

This view of semantics, which I will refer to as an 'actualization-approach,' can be seen as a third conception of semantics, complementary to the pattern and abstraction approaches. It is visualized in Figure 7-10. This approach is shown as a probabilistic

[8] It will be noted that in this way, semantics as register bears a fundamental similarity to that component of interpersonal semantics which models 'speech functional' meanings through which social-semiotic 'roles' are enacted. This similarity is not surprising, since a register is a procedure for 'functioning' in a specific context, i.e. taking a specific 'role' in an institutional setting. The similarity has been noted before in SFL, but it has not been studied systematically (but rather has been seen as an 'inconsistency' or an unresolved issue). See Butler (2003), who also refers to Gregory's (1967) theory of register in which both dimensions pointed out are seen as two different aspects of the interpersonal component, viz. one which relates to speech functions through which the relation between the interactants are enacted ('personal tenor'), and another which deals more broadly with the purpose of the text ('functional tenor'). In later work, the 'purpose of the text' is not tied to the interpersonal metafunction, but is realized across the different metafunctions.

interpretation, where at the semantics there is a conglomerate of strategies, which together form a procedure for functioning in certain contexts, and which activate certain, but not other, lexicogrammatical options which are thus 'at risk' in this context (shown by the check marks). Options that are not activated are indicated in a lighter shade of grey and are thus backgrounded. Here semantics can be seen as as a gateway between context and lexicogrammar, and each register as a gatekeeper. More specifically, semantics is a gateway between the language as potential, as a general code, and a specific context, and a register is what is relevant, what is 'activated' in a context. As complementary to abstraction and patterning-approaches to semantics, this approach can be called an actualization view, because it focuses on how language as a potential is actualized in specific techniques that 'work' in specific settings. Note that register is also conceived of as a connotative semiotic (see Butler 2003:383-90), a conception which again resonates with the view of semantics as a connotative semiotic mentioned previously (see Sections 3.1.1 and 4.3).



actualization-approach to semantics

DESIGN	probabilistic
HIGHER-ORDER MEANING	higher-order grouping of strategies that 'work' in a context
SEMANTICS AS INTERFACE	registers as gatekeepers: pre-selection of lexgram resources 'at risk' in a context

Figure 7-10: An actualization-approach of semantics, highlighting registers as gatekeepers between context and lexicogrammar

A final point to consider, in relation to semantics and register, is the question of how exactly this gatekeeping function of registers between lexicogrammar and context can

be modelled. In SFL the relation of language with context is interpreted in terms of the metafunctions. What exactly, in the context, activates particular choices in a text is conceived of as belonging to three metafunctional dimensions: (1) the content of what is being talked about or the type of activity that is taking place (field – ideational); (2) the relationship between the interactants (tenor – interpersonal); and (3) the role that language itself is playing as a medium (mode – textual). In this way the complementarity between three metafunctions resonates fractally through the different strata (see Hasan 2009:174), also including context. This functional interpretation of language in relation to context is referred to as the context-metafunctions hook-up in SFL, and remains controversial to the present day (e.g. Hasan 2009; 2014).[9]

5.6 Mapping semantic models in SFL: overview and conclusion

The various specific conceptions of semantics that have come into view in relatively recent semantic models in SFL are visually summarized in Figure 7-11.

[9] One problem, pointed out by Hasan (2009), is that when linguists determine what it is, in the context, that activates particular choices in a text, they are already reasoning from the text (or with an imaginary text in mind), i.e. they always reason from language. Hence context thus perceived is what Hasan calls 'relevant context,' and this is different from the more general non-linguistic 'eco-social context' which features in other interpretations of semantics. It will be noted that this conception of 'relevant context' is itself a consequence and an inherent feature of language as a semiotic dynamic open system with relations of metaredundancy between its strata, hence also between semantics and context-as-seen-from-semantics.

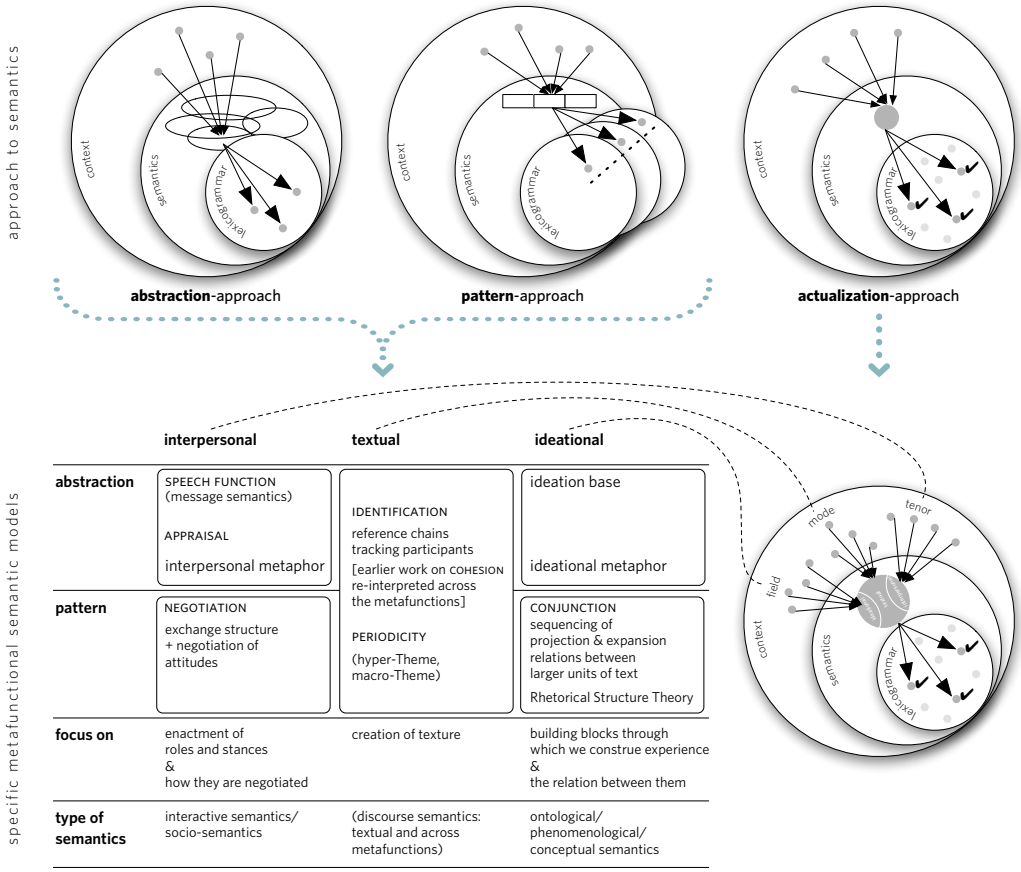


Figure 7-11: Overiew of semantic models in SFL in terms of differentiating dimensions in the overall architecture (stratification, instantiation, metafunctional complementarity); different design principles (systemic, topological and discourse-structural); and the role of variability between meanings and forms

Three complementary approaches to semantics were distinguished which each bear a particular relation to the design tool of the system network (and the conception of language as a meaning potential, a network of options). The abstraction and patterning approaches were both called 'pre-systemic': they lead to topological areas of higher-order meanings or larger-sized patterning in the semantics, which have dispersed realizations in the lexicogrammar. Making internal distinctions within those zones and patterns forms a first step into setting up networks at the level of the semantics, i.e. above the lexicogrammar, and this is how the different semantic models pointed out above developed. For each of the metafunctions, the abstraction and patterning approaches led to specific systems, which are summarized below the stratal images in Figure 7-11. The actualization approach to semantics has a different relation to the systemic dimension of language. Semantics is here conceived of as a gateway between

the overall code of language and specific contexts. A register as a grouping of semantic strategies thus sets the probabilities in the system—pre-selecting options across the different networks, and it links upward, to ideational, interpersonal, and textual aspects of the context that are relevant and that redound with what is activated from language. At the bottom right, the figure contains an attempt to visualize the role of register as a semantic gatekeeper.

It is useful, as promised, to return once more to the crucial concepts of stratification and metaredundancy, and briefly re-visit them in relation to the types of 'semantics' that were explored in this section. It has become clear above that the abstraction, patterning and actualization approaches to semantics are complementary. What I would like to highlight here is that this complementarity also has a theoretical significance in relation to how we understand stratification/metaredundancy. Metaredundancy relations (see Figure 7-6 above) can be conceived of as 'contextualization relations' (see Thibault 2004, who makes the same connection): each layer in a semiotic system puts another (set of) layer(s) into context. Stratification too, and in a more concrete sense, is a model for theorizing how language (and its various coding layers) is 'contextualized.' What the analysis of 'meaning' and 'semantics' in this chapter shows, is that the contextualization which semantics provides as a stratum that is of a higher-order nature compared to lexicogrammar, can mean at least three things: it can be higher-order abstraction ('meanings' that are closer to eco-social context, analyzed in topological areas), it can be higher-order patterning ('meanings' that are larger in size, analyzed in sequential patterns), or it can be actualization ('meanings' that are relevant, analyzed in registers). We have now disentangled the dimensions of abstraction, patterning and actualizaton, for the sake of analysis, and for the mere sake of attempting to understand 'language,' and, more specifically, in this chapter, what 'semantics' can be. In language itself, all those contextualizations occur holistically and simultaneously in each instance of meaning-making.

As a final point, let us make the circle full and return to language as a dynamic open system which is metastable, i.e. which continues to function by changing. Each of the dimensions of semantics, viz. abstraction, patterning and actualization, vastly enhance the openness of language and thus the overall meaning potential: they are ways of organization (contextualizations!) that are not predicted by the lexicogrammar. At the same time, they have a constraining function. This is clearest in the case of the actualization approach, which highlights the role of registers as gatekeepers, but it is

also true for the abstraction and patterning dimensions, by definition, because semantics interfaces between lexicogrammar and context. There is bottom-up constraining of semantics towards context, because only those 'meanings' are available that can be realized in lexicogrammar with its internal organization (such as the 'amalgamation' of different metafunctions in each syntagm), and there is top-down restraining of semantics towards lexicogrammar, because only those 'meanings' appear (topologically or as patterns) in semantics which the eco-social environment allows (e.g. the types of speech functions are restrained by the types of social roles in which we interact; the types of 'phenomena' that are distinguished are restrained by the entities we find in our environment—this is why this dimension of semantics is called 'ontological'). In Figure 7-11, multiple-to-one lines of variability between context and semantics have not just been added to the register approach, but also to the other two approaches. And thus the function of semantics as enhancing and constraining at the same time finally brings us back to the concept of variability, with which we started our exploration of the 'why' of semantics.

6 Summary

This chapter focused on 'semantics' and the related concept of 'meaning' in SFL. It set out to explain *what* semantics is, *how* it is organized, *where* it is found, and *why* it is regarded as something in its own right which is worth looking at. Those questions were explored through a two-pronged approach, which determines the two-fold aim of this chapter: (1) on the one hand, by distinguishing different conceptions of 'semantics' and by disentangling the various theoretical distinctions and perspectives which play a role in thinking about semantics in SFL, and, (2) on the other hand, by looking at various specific proposals for recognizing a semantics in SFL, and placing them against the theoretical background of possible conceptions of semantics.

We started off in Section 2 by looking at where 'meaning' is situated in the model of the system network and stratification in SFL, and by distinguishing three related ways in which semantics is designed in SFL. The 'why' question led us to the notion of variability relations between semantics and lexicogrammar, and we saw how grammatical metaphor was an important initial motivation for recognizing a (separate) stratum of semantics in SFL.

In Section 3, conceptions of meaning and semantics in SFL were placed against a wider theoretical background, in two steps. First the concept of variability was reconsidered against the background of viewing language as a semiotic dynamic open system which is characterized by metastability and by metaredundancy relations between its coding levels. In a second step, the apparent indeterminate or multi-faceted view of meaning and semantics in SFL was explained in relation to a design rationale that is based on multiperspectivism and fractality.

In Section 4 we turned to specific semantic models in SFL. In connecting how exactly semantics is fleshed out in those models to the different conceptions of semantics which had been disentangled in the previous sections, three basic approaches to semantics were distinguished, viz. abstraction, patterning and actualization. Those were linked to the ways in which a semantics can be designed (topological; systemic/typological; and discourse-structural), to the role of variability, and to stratification and metaredundancy.

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