

INFORMATION PACKAGING IN FUNCTIONAL DISCOURSE GRAMMAR

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- **ABSTRACT:** The paper addresses the modelling of information packaging in Functional Discourse Grammar (FDG), in particular the treatment of Topic, Comment and Focus. Current FDG has inherited the traditional Functional Grammar (FG) representation of these categories as functions, which attach to Subacts of evocation. However, arguments of a formal, notional and descriptive nature can be advanced against pragmatic function assignment and in favour of an alternative analysis in which informational and evocational structures are dissociated so as to command their own primitives. In the context of a model of discourse knowledge organisation in which communicated contents are associated with packaging instructions that tell the Addressee how to treat the evoked knowledge, it is argued that focality can be modelled by means of a Focus operator that can attach to various constituents at the Interpersonal Level. Topicality, on the other hand, concerns binomial and monomial modes of presenting communicated contents. This can be rendered by means of the dedicated informational units Topic (Top) and Comment (Cm), that interact in frames.
- **KEYWORDS:** Information packaging; topic; comment; focus; Functional Discourse Grammar

1 Introduction

Besides the construal of semantic representations, informational structuring of the knowledge contained in these representations is a central task of the Formulator in Functional Discourse Grammar (FDG). Considerations regarding mental activation state, contrastiveness and information packaging play an important role in accounting for differential expression strategies that convey a single semantic structure.

The term information packaging was coined by Chafe (1976). According to Vallduví (1994, p.2), it

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indicates how information conveyed by linguistic means fits into a (hearer's mental model of the) context or discourse. When communicating a proposition, a speaker may realise it by means of different sentential structures according to his/her beliefs about the hearer's knowledge and attentional state with respect to that proposition.

As such, information packaging is a subdivision of information structure (HALLIDAY, 1967) and comprises notions like Topic, Focus, Comment, Background, Theme, Frame, Rheme, etc. It excludes other informational categories, in particular those pertaining to the activation status of mental extensions (GUNDEL et al., 1993), interpropositional coherence devices (KEHLER, 2002), and inferences related to contrastiveness (UMBACH, 2004).

This paper presents objections against the treatment of information packaging in terms of pragmatic function assignment as is currently advocated in FDG, and proposes an alternative model that dissociates the evocation of mental extensions from information packaging. In addition, it offers separate analyses of its two constituent dimensions, topicality and focality. The proposal furthermore fits the FDG objective to formulate combinatorial primitives (frames) at each level of Grammar that can be stored in the Fund.²

The paper is structured as follows. Section 2 discusses the current approach to Topic and Focus in FDG. Section 3 outlines a model of discourse knowledge management, and introduces the crucial distinction between extragrammatical informational relations and the grammatically relevant exponents of these relations. Section 4 gives a critical assessment of pragmatic function assignment in FDG, and argues that the approach has to be abandoned for the analysis of packaging categories. An alternative frame-based proposal is presented in section 5. Section 6 illustrates the working of the proposal on the basis of some examples, before a conclusion is reached in section 7.

2 Information packaging in FDG

The proposals regarding the analysis of information structure found in Dik's first version of Functional Grammar (DIK, 1978, p.129 ff) have exerted a profound influence on all subsequent accounts. Even though some of his specific ideas have been called into question by later authors (e.g. MACKENZIE; KEIZER, 1991

² Frames (GARCÍA-VELASO; HENGEVELD, 2002) are lexically stored primitives, consisting of empty slots (and, in the case of predicational frames, functions), into which designating units can be inserted. It is stipulated that the saturated frame has a single, compositional designation, which is 'richer than the sum of its parts' due to the interactions between those parts.

on the status of Topic in English), and notwithstanding more general concerns formulated in De Vries (1993) and Bolkestein (1998), two basic aspects of Dik's original view have been retained through thirty years of theory formation, and have recently been embraced by FDG as well (cf. HENGEVELD; MACKENZIE 2006; 2008, Forthcoming). The first is a strong inclination towards what Vallduví (1992, p.44) calls a "binomial informational division of the sentence". In Dik's view, Topic and Focus are considered mutually exclusive notions belonging to a single dimension of information packaging. Second, all subsequent accounts follow Dik's original decision that these categories are best represented formally as functions assigned to units in the underlying clause structure.

Within the predication as the core unit of analysis, Dik (1978, p.130) distinguishes Topic, which signals that the constituent to which it applies "presents the entity 'about' which the predication predicates something", and Focus, which signals "the relatively most important or salient information". Both are represented as functions, assigned to semantic units in the underlying clause structure. With respect to this particular notational decision, Dik (1978, p.29) observes that "they are functions inasmuch that they can be predicated of constituents only with respect to some wider setting in which they occur". In other words, Topic and Focus are relational notions assigned on the basis of context, and not inherent statuses of denotations.

In FDG, underlying clause structure is split into two orthogonal systems. The representational level (henceforth RL) is concerned with objective, context-independent denotation while the interpersonal level (henceforth IL) designates the evocation of denotations in the context of a communicative situation. Given this division of labour, Hengeveld and Mackenzie (2006) propose to move information packaging to IL, where Topic and Focus are retained as pragmatic functions. Consequently, Topic and Focus now attach to the Subjects that evoke what the communicated content is about and the most salient information it contains, respectively. Assuming 'happy discourse' (REINHART, 1982) in which interlocutors act according to the Cooperative Principle and observe all four conversational maxims (GRICE, 1975), consider the mini-discourse given in (1):³

- (1) A: (What about the *dóg*?) Who did it bite?
B: It bit the *póstman*

Responding cooperatively to A's question, B provides the identity of the Undergoer in an otherwise presupposed event of which 'the dog' is the referent that the statement 'is about'. In (1'), the pragmatic function assignment to the

³ In all English examples, acute accent (´) is used to indicate rising pitch, grave accent (˘) for falling pitch. Emphatic stress is indicated with SMALLCAPS.

interpersonal structure of B's answer reflects the respective statuses of the evocational Subacts concerned:⁴

(1') IL: A₁: [— (C₁: [^{f1}(+id T₁)^{x1}(+id R₁)_{Top} ^{x2}(+id R₂)_{Foc})]_Ø —]
 RL: pst e_i: [—(f₁: [—*bite*—]) (x₁)_A (x₂: [—*postman*—])_Ø—]

The packaging of entities evoked in a given Discourse Act should not be confused with the activation state of their extensions. While there is a strong correlation between Topical status and givenness, and between Focal status and newness, this is far from absolute. For instance, a felicitous Discourse Act may evoke only known entities, but in a combination that is informative for the Addressee. The distinction between packaging status and activation state is formally explicit in FDG, where the latter is captured by means of operators like [\pm identifiable] that attach to evocational Subacts.

The interplay between packaging status, other informational considerations and semantic function (cf. JASINSKAJA et al, 2004) determines the expression of 'the dog' in (1B) as a weak pronoun, and 'the postman' as a lexical NP with pitch accent, both in their respective dedicated linear positions with respect to the inflected verb.

3 Information packaging and discourse knowledge management

Hengeveld and Mackenzie (2006, p.669) remark that FDG "is the grammatical component of a wider theory of verbal interaction". Since it is one of the central aims of verbal interaction to manipulate the discourse knowledge⁵ of one's interlocutor, this means that the question of how to treat information packaging in Grammar is inextricably linked to the interaction between Grammar and the Contextual Component where such knowledge is located.

Since the interlocutor's discourse knowledge P_A is not directly accessible, language users rely on recursive models, reflecting their own assumptions about

⁴ In most analyses, RL is included to disambiguate the designations of evocational Subacts. Superscript variables indicate correspondences between IL and RL: they do not have theoretical status, but are merely intended to enhance readability. Em dashes indicate omission of further complexity within layers. Alphanumeric indexation is only used in maximally abstract representations, while numeric indexation is used in concrete cases. Note furthermore that the representations in this paper follow Smit and Van Staden (this volume), who argue that restrictors take the shape of predications. The resulting differences are largely immaterial to the present proposal, however.

⁵ Discourse knowledge is subsumed under Dik's (1997, p.10) pragmatic information. It refers to the entire set of semantic presuppositions immediately available to the language user at any point in the interaction. The use of *immediately* in the previous sentence does not mean to indicate that there is a hard divide between 'discourse knowledge' and 'other knowledge', but rather a continuum, to be thought of in terms of spreading activation.

the other's knowledge ($P_{A,S}$), their assumptions about the other's assumptions about their knowledge ($(P_{S'})_A$), etc. When performing a DECLarative⁶ discourse Act, language users calibrate the information packaging of the message to their model of the interlocutor's knowledge. This model is organised in two orthogonal dimensions, addressation and updating.

Addressation (JACOBS, 2001, p.650) concerns the thematic organisation of presuppositions in discourse knowledge as entries under addresses (r_n) in a metaphorical 'file cabinet' (HEIM, 1983). An address collates entries relevant to a single discourse referent (KARTTUNEN, 1969), which together constitute an incremental domain of evaluation for incoming propositions. This facilitates swift retrieval of presupposed knowledge and efficient evaluation of asserted knowledge. In this process of assessment (REINHART, 1982), updating becomes relevant, because the Addressee must be instructed how the propositional content of the message contributes to his discourse knowledge. An asserted proposition can update an address in two ways: it may add an entire entry to the address, or instantiate empty slots in a pre-existing entry.⁷

Figure 1 illustrates how for an example like (1B), the interaction between communicative intention, Grammar and discourse knowledge determines the shape of the expression. In the case of the question-answer pair in (1), it can be inferred from the shape of B's answer that his own knowledge does not give cause to dispute the assertions implied in A's question, namely the presupposition that 'the dog bit __', and the construal of 'the dog' as the address where this presupposition is assessed and stored. B's communicative intention to update A's presupposition by instantiating the patient slot and his conformation to A's choice of address codetermine the shape of the answer. Also, having provided A with the desired information, B adapts his own model of A's knowledge, and will henceforth assume A to presuppose the full event 'the dog bit the postman'.

⁶ The scope of the present proposal is limited to information packaging in Acts with DECLarative illocution. Discourse Acts with other illocutions, notably INTERrogatives, are assumed to behave differently in terms of information packaging.

⁷ (Partial) substitution of one entry for another is excluded, since presuppositions can be cancelled, but not erased. Substitution hence is tantamount to the augmentation of knowledge because the cancelled presupposition remains accessible.

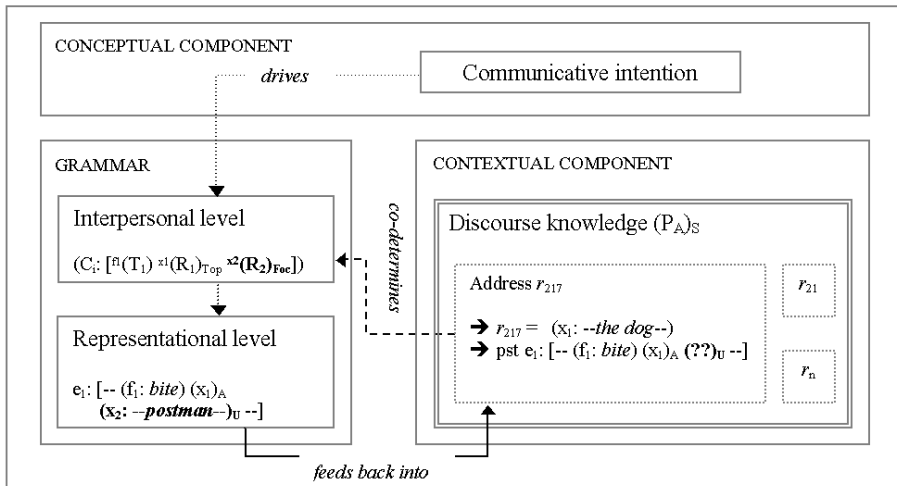


Figure 1 – The interaction of S's communicative intention, Grammar and assumptions about A's discourse knowledge

Such considerations are reflected in Grammar as packaging instructions in the sense of Vallduvi (1992, p.4), which tell the addressee how the contents of the message are to affect his discourse knowledge. In line with the two dimensions of information packaging introduced above, the speaker provides three such instructions: a GOTO instruction that specifies under which address the addressee is expected to file the proposition, an ASSESS instruction that tells him to assess the contents of the proposition, and an UPDATE instruction that identifies what part of the incoming proposition differs from what the speaker assumes is already presupposed, and hence constitutes information. Execution of the instructions results in the establishment of informational relations between pieces of knowledge in the contextual component. Between addresses and entries, a durable relation of relevance or aboutness is established, while a momentaneous relation of non-retrievability holds between pieces of knowledge in innovative combinations.⁸

4 Problems with pragmatic function assignment

While it may seem from the analysis in (1') that pragmatic function assignment is a suitable way to model information packaging, I believe that this yields several problems. In what follows, these will be discussed in detail.

⁸ The relation of non-retrievability holds between two pieces of knowledge, the combination of which cannot be predicted on the basis of the presuppositional structure of the Addressee at the time of utterance. It is momentaneous, in that the non-retrievability dissolves at the moment of utterance (cf. LAMBRECHT, 1994). Also, while one of the pieces involved is typically new or newly activated, this is not necessarily the case; consider cases like *has the lady kissed the postman? – No, hé kissed HER*, where the reply is highly informative even though no new referents are introduced.

4.1 Formal objections

Anstey (2006, p.72) criticises FDG for being a pseudo-formal framework in that its notation is “inconsistently interpreted as formal in some cases and non-formal elsewhere”. At least in part, this problem derives from the fact that the ontology (the available classes of primitives) and syntax (the combinatorics governing the members of these classes) of the formal algorithm are underspecified in several respects. In Hengeveld and Smit (Forthcoming) and Smit and Van Staden (this volume), attempts are made to remedy this lack of explicitness. Here, I want to single out the role of functions.

It will be assumed that functions (ϕ) in FDG operate in predicational configurations of the form $[(\alpha_r) (\alpha_r)_\phi]$ where they specify the quality of the interaction between a relator and its relatum. This follows what has been standing practice throughout Functional Grammar. The prototypical predication is the nuclear predication at RL, where qualified relations (Agent, Undergoer, etc.) obtain between one or more arguments and a predicate.

While the nuclear predication may be the best documented case, it has been argued that predicational configurations abound in Grammar. For instance, Hengeveld (2004, p.375) observes that the head of the Discourse Act in FDG constitutes a predication as well, while Harder (1996) in FG makes a similar argument for conditionals. But more importantly, Hengeveld and Mackenzie (2006, p.671) argue that a single formal algorithm governs the ‘general structure of layers’ at all levels of Grammar. Although the formalism they use does not cover the role of functions in the interaction between units, it seems a reasonable assumption that, if one part of the ontology and syntax of underlying structure is generally applicable, the same must go for the rest. Therefore I argue that, *mutatis mutandis*, exactly the same characterisation of functions applies at IL as at RL.

The formal syntax of function assignment in predicational configurations is as follows.⁹ There must be one and only one relator slot, while all other slots must be relata carrying a function that specifies the quality of their relation to the relator. Furthermore, the relation between relatum and relator can only be of a single quality, since multiple relations between relator and relatum (or a

⁹ An anonymous reviewer objects to my portrayal of the head of C as a predicational domain, arguing that it is more appropriate to characterise it as juxtapositional in the sense that all evocational Subacts are simply enumerated there. Although I am highly sympathetic towards this characterisation (see also p.101), it does not in my view resolve the formal inconsistencies related to function assignment. That is, the defining characteristic of a juxtapositional configuration is that all constituents involved in it are equal. They are contiguous, with the relationships between them left to the inferential capacities of the NLU. In my understanding of such a configuration, it is governed by a syntax similar to that in (2), only much simpler: in order to preserve the equipollence of its constituent units, either all units in a juxtaposition carry a function, or none at all. It is easy to see that none of the cases discussed in this section conform to this.

single relation with multiple qualities) lead to ambiguity (cf. FILLMORE, 2003, p.151). Third, a relator cannot enter into the same qualitative relationship with multiple relata, again because this would yield an uninterpretable complex designation (cf. Bohnemeyer's (2003) Argument Uniqueness Constraint). This is summarised in (2):

(2) In predicational configurations

- a. functions come with the slots of the frame in which they occur;
- b. there is one and only one relator slot, which carries no function;
- c. there are one or more relata, all of which carry one and only one function;
- d. the same function cannot be assigned to more than one relatum.

The above syntax has generally been adhered to in the context of semantic analysis at RL, in which all arguments traditionally carry one function and no function ever occurs twice. However, in the assignment of Topic and Focus it appears that virtually every conceivable situation other than the one discussed in (1') constitutes a violation of one or more of the above rules, which makes information packaging by means of function assignment highly problematic. I will now discuss four examples where the intended packaging structure is incompatible with the syntax of function assignment given in (2).

First to discuss are cases that can be loosely described as narrow predicate focus. An example is given in (3):

- (3) A: *Did the butcher chop the meat?*
 B: *Chóp? He shredded it*

In (3B), nothing but the denotation of the predicate 'shred' is informative: everything else is presupposed, including the representational frame in which the predicate is to be inserted. Nevertheless, three evocational Subacts are performed; two referential Subacts that re-evoke the accessible discourse referents 'the butcher' and 'the meat', and one ascriptive Subact that evokes the Focal denotation 'shred'. The interpersonal and representational structures of (3B) are given in (3'):

- (3') IL: $A_1: [— (C_1: [^{f1}(-id T_1)_{FOC} \ x1(+id R_1)_{TOP} \ x2(+R_2)])_{\emptyset} —]$
 RL: $pst e_i: [—[(f_1: —shred—) (x_1)_A (x_2)_U]—]$

As can be seen, (3') satisfies the syntax for function assignment, since the head of C_1 contains two units that have been assigned one unique function, and one (R_2) with no function at all. However, this would make R_2 'the meat' the relator in this configuration, which is difficult to reconcile conceptually, because

it seems that neither the non-retrievability of 'shred' nor the topicality of 'the butcher' are assigned by 'the meat'.

While (3), however counterintuitive, still more or less obeys the syntax of function assignment, a real violation occurs in cases where we have multiple evocational Subacts that are unmarked for their packaging function. Consider (4), where both the ascriptive Subact evoking the main predicate, and the referential Subact evoking the Beneficiary referent 'the butcher' are not assigned an informational function.¹⁰

- (4) A: *What did the poulterer sell the butcher?*
 B: *He sold him some eggs*

In the example above, the referent 'some eggs' is the informative part of the assertion and is evoked by means of a Subact with Focus function; 'the poulterer' is the Topic, and is evoked by means of a Subact with that function. This leaves two Subacts with no informational marking; that evoking 'sell', and that evoking 'the butcher'. This violates (2b) because only one Subact (the one that serves as the relator) must be without a function, as (4') illustrates:

- (4') IL: $A_1: [-(C_1: [^{f1}(+id T_1) \ x^1(+id R_1)_{Top} \ x^2(-R_2)_{Foc} \ x^3(+id R_3)_{??}]_{\emptyset}) -]$
 RL: $pst \ e_1: [-(f_1: [-sell-]) (x_1)_A (x_2: [-some \ eggs-])_U (x_3)_B] -]$

Another class of problematic cases is formed by those in which Topic and Focus are assigned to the same evocational Subact. A case in point are new Topics which, according to Dik (1997, p.316) "combine properties from the dimensions of topicality and focality". Hengeveld and Mackenzie (2008, Forthcoming) propose to abandon NewTop as a separate function, and replace it by a conflation of Top and Foc functions on a single evocational Subact. However, such multiple function assignment to a single unit violates (2c) as it yields an ambiguous (and thereby uninterpretable) configuration. Consider (5):

- (5) *(Suddenly,) in came the butcher*
 IL: $A_1: [-(C_1: [^{f1}(-T_1) \ x^1(-id R_1)_{TopFoc}]_{\emptyset}) -]$
 RL: $pst \ e_1: [-(f_1: [-come.in-]) (x_1: [-the \ butcher-])_A] -]$

Next, there are cases whose interpretation requires that a single function is 'spread' over multiple evocational Subacts. Consider (6):

¹⁰ The violation discussed in this example is probably the most pervasive. Especially in conjunction with the idea that evocational Subacts evoking complex denotations are to be represented as a series of juxtaposed rather than layered elements, this problem occurs in virtually every Discourse Act.

- (6) A: *what about the butcher?*
 B: *he insulted the customer*

In the context of A's question, B's reply aims to instantiate an apparent gap in (P_A) by supplying a non-retrievable entry for the address identified by 'the butcher', i.e. the past event of him insulting the customer. In the example at hand, a single UPDATE instruction relates 'the butcher' and 'he insulted the customer'. However, the formal algorithm offers no possibility of 'spreading' a single function over multiple constituents, as (6') illustrates:

- (6') IL: $A_1: [-(C_1: [^{f1}(-id T_1)_{Foc} \ x1(+id R_1)_{Top} \ x2(+id R_2)_{Foc}])_{\emptyset} -]$
 RL: $pst \ e_1: [-(f_1: -insult-)(x_1)_A (x_2: -customer-)_{\cup}] -]$

In the interpersonal structure in (6'), Focus is assigned to T_1 and R_2 . As will be clear, this analysis violates the syntax of function assignment proposed in (2d). In conjunction with this case, consider now (7):

- (7) A: *What about the butcher's insulting anyone lately?*
 B: *He insulted a customer yesterday*

This example illustrates the well-documented issue of multiple Focus assignment. Many languages, notably those that rely on prosodic strategies to express Focus, allow for the evocation of multiple Focal elements in a single assertion. An expression like (7B) instantiates two open slots in the Addressee's presupposition; one concerning the identity of the insultee, the other the temporal specification of the event. Irrespective of additional inferences regarding contrastiveness, set membership, list-readings etc. that such statements may carry (cf. UMBACH, 2004), the fact that *the customer* and *yesterday* are also both focal is generally undisputed. However, since the two evocational Subacts in (7B), represented in (7') as R_2 and R_3 , mark two independent Focal relations, its interpersonal structure violates (2d).

- (7') IL: $A_1: [-(C_1: [^{f1}(+id T_1) \ x1(+id R_1)_{Top} \ x2(-id R_2)_{Foc} \ t1(-id R_3)_{Foc}])_{\emptyset} -]$
 RL: $pst \ e_1: [-(f_1: -insult-)(x_1)_A (x_2: -customer-)_{\cup}] -]$
 $[t_1: -yesterday-)(e_1)_{\emptyset}]$

But apart from this violation, if we compare (6') and (7') we see that the formalism cannot distinguish spreaded assignment of one Focus function to multiple evocational Subacts, from the assignment of multiple Focus functions in a single Communicated Content.

The formal problems discussed so far in my view provide sufficient reason to claim that function assignment is not a suitable way to deal with the modelling of Topic and Focus.

In addition to the formal objections against pragmatic function assignment as a way to model information packaging, there is a deeper problem with this approach. That is, since functions in FDG are not assigned randomly but enter the Formulator as part of frames instead, assigning packaging functions to evocational Subacts presupposes the existence of 'evocational frames', lexically predetermined configurational primitives that govern the possible combinations of evocational Subacts in a Communicated content.

While I will argue in section 5 that we certainly need frames to deal with variation in information packaging, I believe that the concept of **evocational** frames is problematic, because the Fund cannot feasibly be argued to contain an exhaustive list of all possible combinations of evocational Subacts that users of a language may need at some point in time to attain a communicative intention. This inventory would be practically infinite, since the required amount of evocation varies strongly, and depends on a multitude of extralinguistic factors (communicative intention, interlocutors involved, personal communication styles, physical and discourse context, etc.). Also, invoking evocational frames would essentially mean that the Fund, i.e. the Grammar, places constraints on the communicative potential of a language, an assumption that goes against essential functionalist principles such as non-aprioricity (HASPELMATH, 2007).

Therefore, rather than postulating evocational frames, the type and number of Subacts needed must be considered a consequence of contextual and representational choices, and should not be constrained by the availability of a *priori* defined combinatorial primitives. As is also pointed out in Hengeveld and Smit (Forthcoming) and Butler (Forthcoming), the performance of evocational Subacts constitutes the final stage of formulation, and is 'consequential' in the sense that the head of C simply accommodates whatever Subacts of evocation the Speaker requires. Because the performance of evocational Subacts is not a matter of substantiating pre-existing slots in a frame, the option of qualifying relations between them in my view does not apply at all.

4.2 Notional objections

Another set of problems concerns the notional implications of modelling information packaging in terms of function assignment. These problems are twofold, and pertain to the status of topicality and focality as relations within Grammar on the one hand, and the mutual independence of information packaging and evocational structure on the other.

To start with the former, Lambrecht (1994) presents a comprehensive theory for the analysis of sentential information structure, in which Topic and Focus are captured as relations. In Lambrecht's view, Topic conveys a pragmatic relation of relevance holding between a referent and an assertion, while Focus conveys a relation of non-retrievability between what is asserted and what is presupposed. The relational definition of these informational categories enables Lambrecht to make a clear distinction between Topic and Focus as informational relations on the one hand, and non-relational activation state that predictably interacts with it on the other.

However, the relations identified by Lambrecht are not part of Grammar: as was pointed out in section 2, they are relations holding between propositions in discourse knowledge, i.e. in the contextual component. What is part of Grammar are the exponents between which they are established in the course of verbal interaction. Through the successful identification of these exponents in the interpersonal structure of the message, a pragmatically competent language user is able to infer the intended relations that the speaker wants him to construe in his discourse knowledge. In order to avoid terminological confusion, I will use the terms topicality and focality when referring to the 'Lambrechtian' informational relations obtaining in discourse knowledge: for the marking of their exponents in Grammar, I use Topic (identifying the address), Comment (identifying the entry) and Focus (identifying the update).¹¹

There are at least two types of statements which indicate that Topic and Focus do not mark relations in Grammar, but non-relational exponents of contextual relations instead. These are all-Focus Acts and elliptical Acts. Regarding the former, consider expressions like (8) in which the entire communicated content of an Act is non-retrievable in the context of presupposed knowledge, and thereby informational. The representation in (8') shows the current FDG treatment of such Acts:

(8) *(Have you heard?) The butcher died!*

(8') IL: $A_1: [(F_1) (P_1)_S (P_2)_A (C_1: [^{f1}(-T_1) x1(-id R_1)])_{Foc}]$
 RL: $pst e_1: [-(f_1: -die-) (x_1: -butcher-)_U]-]$

The assignment of Foc to C_1 in (8') must be taken to establish a focality relation between C_1 and F_1 , seen that functions qualify the interaction between equipollent units. But this makes no sense, because the domain of focality is

¹¹ I will not consider the possible linguistic relevance of Background (the logical complement of Focus) in this article. The reason for this is, that a functional rationale to convey presupposed knowledge appears to be missing. It is more attractive in my view to account for Background marking as an epiphenomenon, deriving from requirements at the Structural level.

that of communicated knowledge to which the units outside C_1 do not belong at all. Moreover, (8') does not capture the informational structure that intuitively underlies (8). What an utterance like (8) aims at is the construal of a previously irretrievable relation between the communicated content of A_1 in its entirety, and other discourse knowledge. Since this other discourse knowledge is not part of A_1 but is located in the contextual component, it follows that focality cannot obtain within A_1 , but must be construed in the contextual component. Modelling focality as a relation in the discourse Act is not viable.¹²

The relevance of focality as a relation in the communicative content is challenged furthermore by the existence of elliptic single-constituent answers, as exemplified in (9B).

(9) A: *Who did the butcher insult?*

B: *A customer*

(9') IL: $A_1: [-(C_1: [^{x2}(-id R_{1Foc})]_{\emptyset} -)]$

RL: $pst e_i: [-(f_1) (x_1)_A (x_2: -customer-)_U]-]$

In (9B), only the referent that enriches A's presupposition 'the butcher insulted ___' is evoked. But as can be seen in (9'), Focus assignment again would result in the marking of a relation that does not obtain in Grammar: in fact, since the contents of C_1 consist of a single Subact only, a relation cannot be modelled at all. The relation of irretrievability between the referent 'a customer' and A's presupposition obtains in the contextual component and not at IL in Grammar.

Turning now to the relationship between information structuring and evocation, it should be noted that by modelling information packaging by means of functions assigned to evocational Subact, FDG makes the former dependent on the latter. I believe that this is misguided, since evocations are merely instrumental in carrying out the desired manipulation of the addressee's presuppositional state (see also BUTLER, Forthcoming). Hence, information packaging should be dissociated from evocation and be modelled in its own right instead.

Especially for Topical referents, the dependence of information packaging on evocation is problematic. Topical status has a strong correlation with givenness of the corresponding denotatum (CHAFE, 1976; GUNDEL et al., 1993) and is typically governed by special pragmatic presupposition of consciousness (LAMBRECHT, 2001, p.475); as a result, Topical referents are prime candidates

¹² Dik's characterisation of functions merely states that functions operate 'in some wider setting' (DIK, 1978, p.129), and does not specify what that setting should be. However, FDG's formalist aspirations in my view necessitate a more stringent definition of its domain of application, namely the equipollent configuration.

for suppression in many languages. But, how can packaging status be assigned to a non-evoked participant, if it is dependent on evocation? The point is that a statement with a non-evoked Topic may behave differently syntactically from one with no Topic at all. Consider the examples from Kinyarwanda in (10)-(11):

(10) (what about the guests?)

<i>(aba-shyitsi)</i>	<i>ba-ra-ririimbir-a</i>	<i>mu</i>	<i>gisagára</i>
CL2-guest	CL2-prs-sing-impf	in	village

'they are singing in the village'

(11) (what's that sound?)

<i>ba-ra-ririimbir-a</i>	<i>aba-shyitsi</i>	<i>mu</i>	<i>gisagára</i>
CL16-prs-sing-impf	CL2-guest	in	village

'there are guests singing in the village'

(Kinyarwanda, Bantu. Cited in LAMBRECHT, 2000, p.643)

In (10), where the Topic is omitted, the Subject is cross-referenced on the verb *ririimbir* 'sing' by means of a [+human] classifier. In (11), where there is no relation of aboutness between 'the guests' and the event of singing in the village, a [-human] classifier is used. If we make the Topical status of *shyitsi* 'guests' in (10) dependent on evocation, there is no way that we can account for the different choice of prefix in (10) and (11).

4.3 Descriptive problems: VP

The last objection against information packaging by means of pragmatic function assignment that I want to discuss is descriptive in nature. That is, it seems that many languages make use of syntactic and prosodic constituents for which representational nor interpersonal motivation can be given in the current architecture of FDG. In particular, the Verb Phrase (VP) is relevant here. As is well-documented for a large number of languages, VP figures in a considerable number of syntactic phenomena, illustrated for English in (12):

(12) *The butcher [insulted a customer]_i,*

- a. ... and [*so did*]_i *the poulturer*
- b. ... and *the poulturer* [*Ø*]_i, *too*
- c. [*insult a customer*]_i,
the butcher would never do that_i

- d. [*insult a customer*]_i *he did in the past*;
 [*insult a customer*]_i *he will do again*
- e. *what the butcher did was* [*insult a customer*]_i
- f. (what did the butcher do?) [*insult a customer*]_i

As these examples show, *insult the customer* may be anaphorically referred to (12a) and constitutes a gap bound by *too* (12b), both of which clearly show that there must be a corresponding unit at one of the underlying levels of representation. Furthermore, it figures as a constituent in word order permutations (12c-d) and clefting strategies like the one in (12e). Finally, as shown in (12f), the constituent in isolation is a well-formed reply to certain kinds of questions.

Notwithstanding the phenomena in (12), FG has persistently treated VP as an epiphenomenon with no corresponding unit in underlying clause structure. A prime example of this is found in Mackenzie (1983) where it is shown convincingly that FG, unlike some other frameworks, does not need VP as an underlying notion to account for certain Subject-Object asymmetries, but can relate those to other semantic factors instead. The main reason for this reluctance appears to be that an underlying unit corresponding to VP would lack an obvious motivation in the semantics on which FG is founded.¹³ Nevertheless, it seems rather dissatisfying to do away with the order permutations and other constructions illustrated in (12) as mere ‘side-effects’. Two cases, (12a-b), are particularly salient in this respect because they show unequivocally that the combination of predicate and undergoer argument can license a gap and serve as an antecedent for anaphora.

In my view, this must be taken to mean that the elements in VP constitute a single unit at some underlying level in Grammar. Since the semantics of FDG are similar to those used by FG, RL is not a likely candidate to accommodate such a layer because the combination of predicate and undergoer argument does not constitute a clear semantic type.¹⁴ But what if the unit motivating VP is not semantic in nature, but interpersonal? In that case, the fact that IL and RL are orthogonal in FDG enables us to invoke a functional correlate of VP at IL. I

¹³ FG semantics is extensional, in that it deals with the construal of entities that correspond to some extralinguistic ‘reality’ and have ontological properties. VP escapes extensional definition in that it does not correspond to a known entity type, and cannot be defined in ontological terms equivalent to those used to define other entity types. By contrast, intensional semantic theories, notably Type Theory (GAMUT, 1991), do have the means to define the semantic analogue of VP.

¹⁴ An anonymous reviewer suggests that VP can be given a semantic motivation in FG, namely that of ‘extended predicate’. However, this notion is not part of the inventory of semantic types suggested in Dik (1997), nor does it occur elsewhere in the FG literature.

will return to this idea below, and argue that VP corresponds to a new informational unit at that level.

5 Frame-based information packaging

In this section, I will propose an alternative account of information packaging in FDG. But first, let's sum up the requirements that such a model has to meet.

As has been argued extensively in the previous section, information packaging cannot rely on functions as its formal primitives, and the new model should offer satisfactory solutions to the formal, notional and descriptive problems noted there. In view of the apparent cross-linguistic relevance of certain oppositions in information packaging, in particular that between categorical and non-categorical Acts, it is furthermore desirable that the new approach can account for these in a principled fashion, thus enhancing FDG's typological adequacy. Related to this, the new model should be able to account for apparent constraints on information packaging straightforwardly, such as the cross-linguistically well-attested prohibition on multiple Topics in a single Act.

In what follows, I will first consider the best place in FDG to accommodate information packaging. Then, I will turn to the question of how it can be modelled. Besides functions, the inventory of formal primitives in FDG offers layers and operators as means to do this. I will introduce the idea that the categories belonging to the packaging dimension of addressation are best modelled by means of layers. Focus, on the contrary, is more suitably modelled as an operator. The possible combinations of addressation layers and focus positions can be captured in an elegant fashion by a limited number of packaging frames, reflecting informational articulations (VALLDUVÍ, 1992) or modes of message management (HANNAY, 1991).

5.1 The locus of information packaging

Information packaging seems to be a somewhat hybrid concept in relation to the architecture of FDG. On the one hand, it is unmistakably interpersonal in the sense that language users calibrate their Acts to their assumptions about the interlocutor's state of discourse knowledge. On the other, it is representational in the sense that information packaging targets the denotation rather than the evocation of the Act. This can be seen in cases like (9), where a non-evoked Topic exerts an influence on the structure of the expression.

So, what should be the locus of information packaging in Grammar? Arguably the most principled way to deal with its hybrid nature would be to create an

entirely new level of analysis for information packaging. However, since that would result in massive system redundancy, and seen that the primary motivation of information packaging still is interpersonal, my alternative analysis retains C as its locus in Grammar. In the characterisation by Hengeveld and Mackenzie (2006, p.672), C “contains everything the Speaker wishes to evoke in his or her communication with the Addressee”. This should be made somewhat more precise, since language users do not just evoke things, but perform evocations with the purpose of manipulating the interlocutor’s discourse knowledge. In other words, C contains an **informationally structured representation** of everything the Speaker wishes to evoke in his or her communication with the Addressee,¹⁵ as is reflected in (13):

(13) A_i: [(F_i) (P_i)_S (P_i)_A (C_i: [informationally structured evocation])]₀

To apply a packaging structure to the communicated content of a DECLarative Act in my view is not an **option** available to the speaker, but a necessary **choice**. Because a DECLarative Act conveys a representational structure, packaging necessarily has to be applied to its communicated content so that it can be processed in the addressee’s discourse knowledge. From this it follows that there can be no such thing as a ‘pragmatically neutral’ statement, a term which frequently occurs in the literature. Rather, as is also pointed out by Lambrecht (1994, p. 15 ff), languages use expression strategies that are specialised to a greater or lesser extent for the expression of a particular mode of packaging. However, absence of specific structural markedness does not entail absence of information packaging; instead, I take it to mean that a number of distinct packaging structures is neutralised in the expression. In terms of the ‘etic/emic’ distinction discussed by De Vries (1993), the model of information packaging that I propose is therefore ‘emic’, and reflects notional categories that do not necessarily have an ‘etic’ correlate in surface structure (although they can obviously be identified on the basis of context).

5.2 Layers for addressation

I argued in 4.2. that the packaging dimension of addressation cannot not be made dependent on evocational Subacts because it targets the representational structure of the message as a whole and not just the part that is evoked. Therefore, we need to capture it by means of dedicated primitives, and it appears that layers are a better candidate for this than operators for two reasons.

¹⁵ Incidentally, limiting the domain of information packaging to the head of C also yields correct predictions regarding the impossibility of marking units outside this slot as either Topic or Focus. For instance, neither Topic nor Focus can be assigned to Discourse Act modifiers like *frankly*, or C-modifiers like German *bekanntermassen*, which are outside the scope of C.

First, Hengeveld and Mackenzie (Forthcoming) point to the actional rather than symbolic nature of various units at IL: Moves, Acts and Subacts all designate actions performed by the Speaker. The model of discourse knowledge management outlined in section 2 perceives the packaging instructions involved in addressation, GOTO and ASSESS, in the same fashion. They are actional, in that they instruct the addressee to perform particular manipulations on his discourse knowledge. Hence, it stands to reason to portray the interpersonal correlates of these instructions in a similar fashion, and postulate information packaging layers corresponding to them in the head of C.

Second, a wide array of publications has observed systematic differences in encoding between categorical Acts that provide information about an address in discourse knowledge and non-categorical Acts that do not, but instead just posit new information without construing a topicality relation.¹⁶ Interestingly, the classical terminology used to describe this distinction draws on the concept of predication (cf. CORNISH, 2004). A categorical Act constitutes a 'psychological predication' in which the information is predicated over the 'psychological Subject' (the address), while in a non-categorical Act such predication is absent. I find this a very appealing way to capture what appears a fundamental dichotomy in declarative utterances, and in the formal inventory of FDG layers seem an excellent way to model this. Therefore, I propose a system of layers in the head of C, which may occur in predicational and non-predicational configurations. One of these layers must correspond to the GOTO-instruction, for which I will invoke a Topic layer (Top). The head of Top will typically be either empty if there is no need to re-evoke the discourse referent that instantiates the address, or it will contain a referential Subact.

Turning now to the complement of Top, Lambrecht (1994) presents a slightly different take on the categorical/non-categorical distinction, arguing that it can be captured more elegantly in terms of the size of the Focus domain. That is, rather than speaking of psychological predication he contends that a non-categorical Act is characterised by the fact that its Focus domain encompasses the entire contents of the statement, including the referent that would otherwise have been the preferred Topic. This reasoning entails that the complement of Topic in categorical statements should be Focus, and this is what we find in Van Valin (2005, p.81) who argues that "VPs, to the extent that they exist in languages, are the grammaticalisation of Focus structure".¹⁷

¹⁶ Cf. Lambrecht (2000); Lambrecht and Polinsky (1997); Matras and Sasse (1995); Sasse (1987) for extensive discussion of the thematic-categorical opposition in a large number of genetically unrelated languages, including all Romance languages and English.

¹⁷ In a canonical English sentence, Topic and Subject (or psychological and syntactic Subject) coincide. By consequence, so do their complements.

Although it is doubtlessly the case that the complement of Topic is typically focal, I believe that there are three reasons why postulating a Focus layer as the complement of Topic is an oversimplification of the facts. First, such an account rules out the possibility that Topic and Focus coincide on a single referent. But in many languages such conflation is perfectly possible, as (14) shows:

(14) (he [turtle] knew that he had not called them)

<i>itó</i>	<i>nĩ</i>	<i>ādrúpi</i>	<i>Ø-ūngwē</i>	<i>nĩ</i>
hare	3sg.spec	brother	3(II)-call	foc

'hare his brother called (them)'

(Ma'di, Sudanic. BLACKINGS; FABB, 2003, p.676)

In this example, the clause-final *nĩ* is a pronominal Focus marker bound to the adjoined Subject NP 'hare his brother', which is the Topic of this and the subsequent clause. If Focus is the complement of Topic, they would be mutually exclusive and examples like this one could not be satisfactorily accounted for.¹⁸ Second, it must be noted that the Focus domain may also be smaller than the entire complement of Topic, as is the case in Narrow Focus constructions. An example of this we have seen in (4), where 'some eggs' constitutes the update of A's presupposition 'the poulterer sold the butcher ___'. However, having Focus as the complement of Topic would mean in this case that part of the communicated content would not be packaged at all, and would hence be uninterpretable. Third, if Focus were the complement of Topic, all non-categorical statements would become informationally identical; namely, they would all consist of a Focus layer only. Yet, there seem to be two broad classes of non-categorical statements that are identical in some, but distinct in other respects. I will return to this observation in section 5.4.

For the three reasons mentioned so far, I postulate Comment (Cm) as the complement of Topic. Whereas Top is an actional layer giving the addressee a GOTO instruction, Cm provides the instruction to ASSESS a piece of information. Both layers conform to Hengeveld and Mackenzie's generalised layered structure and command an operator position, needed to accommodate Focality.

5.3 Focus as an operator

The previous section gave three arguments why Focus is not a suitable complement for Top. However, a fourth argument can be advanced, namely that Focus simply cannot have layer status at all. Instead, I will argue in this

¹⁸ Note that Focal Topics, although attested in various languages, are generally considered to violate cognitive principles of information pressure (cf. 5.4). For that reason, many languages eschew or disallow them.

section that Focus should be modelled as an operator that can be attached at various units in the informationally structured communicated content.

The reason that Focus cannot be modelled as a layer has to do with the nature of the packaging relation in which it is involved. I argued in section 3 that UPDATE is momentaneous in that the non-retrievability that characterises the relation dissolves the moment it is established. This is different for the relevance relation between an address and its entries which is stable, and extends over the entire duration of the communicative exchange. Now, if Focus is an actional notion that reflects the instruction to establish a particular non-retrievable relationship between pieces of knowledge, it will be clear that this can be done only once. Although the knowledge involved can be referred back to afterwards, the formerly irretrievable relation cannot be 're-established'. To illustrate this, consider (15).¹⁹

(15) *hé [insulted the customer]_i, and the poulturer [Ø]_i toò*

(15') IL¹: C₁: [(Top₁: [^{butcher}(+id R₁)]) (Foc₁: [^{insult}(-id T₁) ^{customer}(+id R₂)])]
 IL²: C₂: [(Top₂: [^{poulturer}(+id R₃)]) (~~Foc₂~~)]

While the gap is indeed bound by the knowledge evoked through T₁ and R₂, in IL² this is no longer Focus, and can therefore not be referred to by means of this actional constituent. By contrast, the ASSESS instruction reflected by Cm can be re-issued. consider the following:

(16) *The butcher sells veal chops. He does so every monday*

(16') IL¹: C₁: [(Top₁: [^{butcher}(+id R₁)]) (Cm₁: [^{sell}(-id T₁) ^{veal chops}(R₂)])]
 IL²: C₂: [(Top₁: [^{butcher}(+id R₃)]) (Cm₁: [^{every monday}R₄])]

By uttering the second part of (16), the speaker invites the addressee to re-assess the information supplied in the first part, and augment it with the habitual temporal specification 'every Monday'. In other words, the same packaging instruction Cm₁ is issued twice.

Another point concerns the objection raised in section 4 that information packaging should not be made dependent on evocational structure. While this is certainly true for addressation, one exponent of which may be left unevoked on account of the accompanying presupposition of consciousness that Topics typically involves (cf. LAMBRECHT, 2001, p.475), this is different for Focus. Focus, which marks a pragmatic relation of non-retrievability, is crucially dependent

¹⁹ The alternative reading of (15), which can be paraphrased as 'he insulted the customer, and he insulted the poulturer as well', is ruled out by the bracketing.

on the expression of its exponent: how else can the non-retrievable relation be construed successfully?

For these reasons, I propose to model Focus as an operator that applies either to individual evocational Subacts, or to one of the layers involved in addressation that I defined in the preceding section. This way, we can distinguish between constructions with a new Topic (Focus on the Topic layer), wide Focus (Focus on the Comment layer), and narrow Focus (Focus on an evocational Subact within the Comment). Whether a Focus operator can be assigned only once per communicated content, or to multiple units, is still considered a matter of typological preference.

5.4 Packaging frames

To sum up the previous sections, I argued that we need dedicated layers in the head of C_i to capture both exponents of the addressation dimension: a Top-layer to capture the GOTO instruction, and a Cm-layer to capture the ASSESS instruction. In addition to that, a Focus operator (Foc) is needed that can attach to whatever constitutes the UPDATE of the Act, be it one of the addressation layers or, in the case of narrow Focus constructions, an evocational Subact. Furthermore, different combinations of Top and Cm are needed to capture the basic distinction between categorical and non-categorical statements. Consider the formalised summary in (17):

- (17) a. $C_i: [(\pi \text{ Top}_i)_\Phi (\pi \text{ Cm}_i)]$ categorical
 b. $C_i: [(\pi \text{ Top}_i)]$ presentational
 c. $C_i: [(\pi \text{ Cm}_i)]$ thetic

The operator position on the layers Top and Cm is indicated by π , and can be occupied by a Focus operator. In a categorical Act (17a), Top and Cm interact in a predicational configuration where the latter is predicated over the former.²⁰ It instructs the Addressee to open the discourse address designated by the Topical referent, and assess there the relevant information designated by the Comment. For both non-categorical Acts, such a relation is absent because they contain only one of the addressation layers. Incidentally, note how this representation does justice to the similarities between presentational and thetic statements that are observed in the literature (the absence of ‘psychological predication’ and the fact that they are all-focus), without obscuring their

²⁰ An anonymous reviewer suggests that Top and its complement may be in a juxtapositional rather than a predicational relationship. It is in fact conceivable that the type of configuration is a parameter for cross-linguistic variation, but this will have to be investigated further.

differences. Namely, while a thetic Act posits information in discourse knowledge without instructing the addressee what to relate it to, a presentational Act construes an address without supplying information to assess there. This may explain why thetics and presentationals exhibit similar morphosyntactic properties in some languages, and are expressed differently in others (SASSE, 1987). In an approach like Lambrecht's (1994) Focus Structures that tries to identify packaging configurations entirely in terms of focality, this distinction cannot be made.

The constructs in (17) constitute **packaging frames**, similar to the event frames in the nuclear predication at RL and illocutionary frames in the Act at IL. The basic frames mentioned so far reflect three central informational articulations. These are event-reporting, (re)activating a Topical discourse referent, and commenting on an established Topic. I will assume that these are universal, and can be identified in every language given sufficient discourse or the right elicitation experiment.²¹ It will be noted that configurationally speaking, the thetic and presentational frames are both avalent, and do not predicate informational relations, even though both designate different informational units.

Individual languages may require the definition of more complex frames as well, such as frames for multiple Topic statements (attested in Ostyak, cf. NIKOLAEVA, 2001), multiple Comments, etc. Nevertheless, even though data from individual languages may give rise to the definition of such additional frames, it should be noted that their numbers will be limited, and that they can be listed exhaustively with relative ease. In that respect, informational frames do not suffer the 'unboundedness problem' that would present itself with evocational frames, as was noted in p.101, because unlike these, the constraints on possible informational frames are related to cognition and/or processing (cf. CHAFE, 1994 *One New Idea Constraint*), and thus far more restrictive than possible constraints on evocational frames.

6 Some examples

In this last section, I will provide analyses of some English sentences according to the frame-based model of information packaging proposed in this paper. It should be emphasised that these examples merely aim to illustrate

²¹ This universalist perspective notably deviates from canonical FDG in which the postulation of all underlying elements must lead to an effect in surface structure. The present proposal is more closely allied with the approach to Parts-of-Speech suggested in Hengeveld (1992), where universal functional categories map onto expression in various ways, in the process of which distinctions between such categories may be neutralised.

how the system works, in particular with respect to some cases that proved problematic under pragmatic function assignment.

In section 4, we have seen that the pragmatic function assignment approach leads to a cumbersome analysis for certain cases of narrow predicate Focus. In the framing approach, the use of a Focus operator on the appropriate evocational Subact avoids this problem:

(18) A: (*Did the butcher chop the meat?*)

B: (*Chóp?*) He *SHREDDED* it

(18')IL: C₁: [(Top₁: [^{he}(id R₁)]) (Cm₁: [^{shred}(foc T₁) it(id R₂)])]

Adding a Focus operator to the ascriptive Subact instructs the Addressee to update an extant entry under the appropriate discourse address (identified by 'the butcher') with the information that the relational property involved is 'shred'.

Likewise, multiple unmarked Subacts no longer constitute a problem, either:

(19) A: (*What did the poulterer sell the butcher?*)

B: *He sold him some eggs*

(19')C₁: [(Top₁: [^{he}(+id R₁)]) (Cm₁: [^{sell}(+id T₁) ^{him}(+id R₂) ^{eggs}(foc -id R₃)])]

Since evocations are not involved in a predicational but a juxtapositional configuration, it is no problem that they carry no functions.

As a third illustration, consider the case of new Topics, which under pragmatic function assignment would simultaneously carry two functions. In the informational frame approach, they can straightforwardly be modelled as Top-layers with a Focus operator:

(20) *Once there was a butcher*

(20')C₁: [(foc Top₁: [^{butcher}(-id R₁)])]

Presentational statements typically use semantically 'bleached' verbs of (CORNISH, 2004, p.219), suggesting that these merely serve as place-holders and are not actively evoked and hence do not require corresponding Subacts at IL. The informational function of *there* has long been subject to debate; it has been suggested that it conveys an 'abstract topic' of sorts (cf. ERTESCHIK-SHIR, 2007, among many others). If that were the case, English may be argued not to have Top-only structures; nevertheless, other languages do, and allow for

isolated NPs in this function, thus providing evidence that this frame is required. Another approach would be to attribute the use of *there* to morphosyntax, requiring the presence of a Subject with any inflected verb.

Thetic statements lack a Topic-Comment dichotomy, and are entirely Focal. It was pointed out earlier that assigning a Focus function to C_1 in such cases is formally inconsistent. In the informational frame approach, we can render thetics as C_m -only statements with a foc operator on the C_m -layer:

(21) A: (*What's that noise?*)

B: *It's the butcher shredding meat*

(21') C_1 : [(foc C_{m_1} : [^{shred}(-id T_1) the butcher(+id R_1) meat(-id R_2)])]

English does not appear to exploit specialised expression strategies for thetic statements, unlike many other languages that somehow make the Subject less 'subjecty' and therefore less prone to a Topical interpretation.

Finally, the framing approach is capable of dealing with non-evoked Topics, making clear that they are not identical to thetic statements in which the Topic unit is lacking altogether. In addition, (22') makes clear that frames can successfully deal with wide focus constituents.

(22) A: (*What did the butcher do?*)

B: *insult the customer*

(22') IL: C_1 : [(Top₁: \emptyset) (foc C_{m_1} : [^{insult}(-id T_1) customer(+id R_2)])]

In (22'), the categorical structure of the statement is still present, but the Topic referent is not re-evoked, evidently because it is deemed sufficiently identifiable. Since these 'zero-Topic statements' behave differently from thetic statements in many languages, the representation in (22') is not trivial, but captures a key informational feature.

7 Conclusion

The paper has argued against the classical approach to information structure as pragmatic function assignment in Functional Discourse Grammar, and has shown that an alternative model, in which the complementary categories Topic and Comment are portrayed as layers within the head of the communicated content, and orthogonal Focus as an operator attaching to either informational or evocational units, is more adequate descriptively, notionally, and in terms of formalisation.

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- RESUMO: Este trabalho trata do modelo de empacotamento da informação na Gramática Discursivo-Funcional (GDF), em particular do tratamento de Tópico, Comentário e Foco. A GDF atual herdou da FG a representação dessas categorias como funções, que se ligam a Sub-atos evocativos. No entanto, argumentos de natureza formal, nocional e descritiva podem ser propostos contra a atribuição de função pragmática e em favor de uma análise alternativa na qual as estruturas informacionais e evocativas estão dissociadas, de forma a comandar seus próprios primitivos. No contexto de um modelo de organização do conhecimento discursivo no qual os conteúdos comunicados estão associados às instruções de empacotamento que informam ao ouvinte como ele deve tratar o conhecimento evocado, argumenta-se que a focalidade pode ser modelada por meio de um operador de Foco que pode se ligar a vários constituintes no Nível Interpessoal. A Topicalidade, por outro lado, diz respeito a modos binomiais e monomiais de apresentação do conteúdo comunicado. Isso pode ser expresso por meio das unidades informacionais Tópico e Comentário, que interagem nos esquemas.
- PALAVRAS-CHAVE: Empacotamento da informação; tópico; comentário; foco; Gramática Discursivo-Funcional.

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