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an attempt at discovering similarities and differences

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Functional grammar vs. cognitive linguistics: an attempt at discovering similarities and differences

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Comparison of Functional Grammar and Cognitive Linguistics.

1. Introduction

A fair comparison between cognitive linguistics, as represented by Langacker, Lakoff and others, and the Functional Grammar of Simon Dik and his followers must far surpass the limits of a short article. Certainly, a book-length study on this subject is required. This paper offers therefore only a brief statement of the main similarities and differences between the two approaches to language. We also wish to present the reasons in favor of our conviction that a truly comprehensive view of language will involve the combination of the two theories, with cognitive linguistics providing the cognitive basis for functional analyses and functional grammar providing additional guidelines for a cognitively oriented account of the combinatorial properties of linguistic units and discourse-oriented phenomena. Whether our project will prove to be fruitful will be determined by future research which we intend to undertake.

The task of comparing the two theoretical frameworks is not easy since some of the focal interests of the two theories are different, some notions like cognitive metaphor or radial category are absent in functional grammar (FG) and such devices as Language Independent Preferred Order of Constituents (LIPOC) are inexistent in cognitive linguistics (CL). Nevertheless, the remaining similarities make a comparison of the two frameworks not only possible but perhaps even illuminating.

# 2. Basic theoretical commitments of Functional Grammar and Cognitive Linguistics

Let us start with the most general claims of the two theories related to their philosophical foundations. CL represents an agnostic attitude in epistemology. Hence, it follows the tradition of conceptual semantics. Reference bonds are not strong points in CL. FG is not entirely clear on the issue although what we found in various sources tends to go in the

direction of the referential view on semantics. Some quotations would be here in point: "term in FG is an expression with referential potential i.e. expressions which can be used to refer to entities in some world" (Dik 1980:9); "x_i stands for the intended referent of the term" (Siewierska 1991:32); "States of Affairs are taken to represent not patterns of experience as they exist in the real world, but rather the codified view of reality built into the grammar of a language. Examples of the different ways in which real-world phenomena can be encapsulated in language are not difficult to find." (Siewierska 1991:43)

The purely referential stance present in the above quotations is weakened by the *referential potential* of *States of Affairs* (SoA) which designate something that *may be* (not something that is) the case. However, possible world philosophy seems to be practiced in FG and this in turn leads to truth-conditional logical semantic considerations. This has many consequences which are more or less compatible with the classical view on logical semantics. Although functionalism is the dominant mode of explanation, FG makes extensive use of logical notions and elements of formal notation. Let us consider the term formation schema provided by Dik (1980:10):

$$(wx_i : \phi_1 (x_i) : \phi_2 (x_i) .... : \phi_n (x_i)) \quad (n \geq 1)$$

or Rijkhoff's (1989) complex structure of the term phrase:

$$(\Omega_3 \; \Omega_2 \; x_i : \boxed{\Omega_1 \phi_1} (x_i) : \phi_2 (x_i)........... \phi_n (x_i))$$
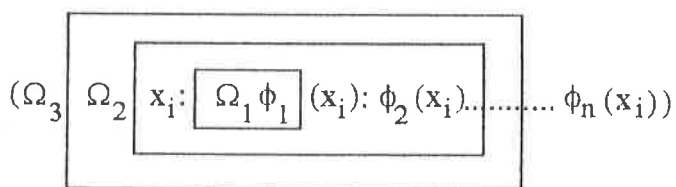
It is evident that the above schemata involve logical and set-theoretical principles. This is common in numerous analyses conducted in terms of FG.

The next consequence of adopting an objectivist logical approach is embodied in the FG notion of *proposition*. Proposition in FG is a level in the underlying structure of the clause hierarchy representing third-order entities (we will return to this issue later). A proposition is according to Dik's (1989) formulation a *possible fact*. We take it that this statement may be interpreted in terms of possible world philosophy. A good distinction between state of affairs

and possible facts would be most welcome - hence the distinction between predication and proposition.

Furthermore, the adoption of logical apparatus leads inevitably to the adoption of predicate argument structure which may be subsequently enriched in FG by the addition of satellites. Predicate structure formation is essential for the overall organization of FG.

Logical analysis in lexical semantics involves meaning postulates and redundancy definitions. It may be claimed that the logical commitment of FG makes it a rather standard and relatively noncontroversial theory in this aspect.

Cognitive linguistics does not assume any logical commitment. Rather, it accepts as its cornerstone experiential commitment. Different consequences stem from this commitment than from the logical commitment entertained by FG. Rejection of referential semantics results in an abandonment of logical apparatus and logical notation (Lakoff continues to use notation but it is rather unorthodox and is reminiscent of natural logic from the generative semantics period). Langacker claims that "biology is a better metaphor for talking about language than mathematical logic". Abandonment of the direct referential relation and acceptance of experientialism leads to subjectivism and the danger of falling into a solipsistic trap. This is partly compensated by the idea of the ICM - Idealized Cognitive Model (Lakoff:1982) or functional assembly (Langacker:1983). However, the individual nature of concepts prevails: *a dog* is something entirely different for a dog lover and for a person who is notoriously afraid of dogs. This subjective aspect, which may be also called cognitive or experiential, leads to a treatment of categorization as a dynamic, active process based on prototype effects and basic level effects. In its treatment of lexical analysis we see the advantage of CL over FG, since it offers a more profound and psychologically realistic analysis. For FG the concept of *a bachelor* is characterized by meaning postulates as e.g.:

$$(x)(\text{bachelor } x \rightarrow \text{not married } x)$$

Every x who is a bachelor is not married. This allows us to draw the inference 'if x is a bachelor he is not married'. A stepwise lexical definition would result in a symmetric implication:

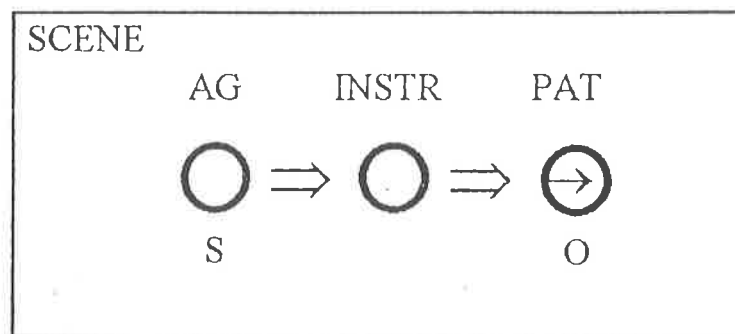$$\text{bachelor } (x) \leftrightarrow \text{unmarried man } (x)$$

CL offers much more with its prototypical properties and the notion of family resemblance. For FG and other theories resorting to meaning postulates, being *a bachelor* is a matter of yes or no. Apart from that an unmarried man can be a widower or a divorcee. It would be slightly embarassing to call a man who has lived with a woman for over twenty years, having five children with her, but who has failed to perform a wedding ceremony *a bachelor*. Is John Paul II a bachelor? The concept of a radial category with fuzzy borders, where not all members of a category have equal status, is a better tool to cope with such cases as the above than any analysis which crucially relies on meaning postulates. Thus, CL appears to have an edge over FG in the sphere of lexical semantics. However, we should keep in mind that FG is conceived as a sentence grammar. Consequently, from the FG perspective lexical semantic studies may be considered relatively marginal since the meaning of a word is related to its contribution to the meaning of a sentence.

Abandoning logical formulae, CL resorts to image schemata of varied schematicity or specificity. Image schemata are used instead of logical formulations. Nevertheless the results of linguistic inquiry are often strikingly similar. In FG we find the ordering of entities in the Personal Hierarchy or four layers of order. CL has instead a very similar Great Chain of Being Hierarchy (Lakoff and Turner 1989) and basic types of profiled entities. Langacker's "thing" (represented graphically as O) is a profiled structure of arbitrary internal complexity which corresponds rather neatly to Dik's term. The next structure, "atemporal relation", simple or complex, may well correspond to predicate and predication respectively. Finally, "processual relation" would correspond to the third and fourth level of FG, namely proposition (possible fact) and clause (speech act). CL, in spite of the various qualifications it makes, such as communicative model, interactional model, does not easily adopt nor is readily compatible with Searlian or Gricean pragmatics. At a conference devoted to cognitive linguistics one might hear a cognitive linguist scoff with disgust (as one of the authors of this article has personally heard): "This is a p ragmatic explanation." Presumably, given such a bias, a cognitive-psychological account is always preferable to a sociological one. FG has no such problems allowing fourth-order entities to be speech acts such as orders, questions, etc.

This leads us to the next extremely important issue, namely the nature of explanation in the two theories. Dik's functionalism is different from Talmy Givón's (1989) functionalism which embraces pragmatics conceived almost cognitively as a superscience. Pragmatic adequacy is one of the requirements for the evaluation of theories in Dik's account, together with psychological and typological adequacies. However, for syntactic and semantic principles an explanation is sought in terms of pragmatic purposes. Cognitive linguistics in Langacker's account postulates only phonological, semantic and symbolic (hence syntactic) units. Functional pragmatic explanation corresponds in CL to the conceptual content of human experience. Profile-base, figure-ground, trajector-landmark dichotomies and the idea of active zones serve this purpose. Dik's system and use relation, although theoretically acceptable to cognitive linguists, does not enjoy explanatory priority in CL. Theme, Focus and Tail do not belong to the favorite notions employed in CL. Thus, it may be claimed that explanation priorities are different in the two theories. Nevertheless, particular solutions of linguistic and general experiential phenomena are often comparable and similar although achieved from different perspectives.

Although CL does not treat predicate-argument structure as methodologically primitive, it has valency structures which easily correspond to predicate-argument structures. There is no distinction, however, between arguments and satellites in CL in contrast to FG. On closer scrutiny we must notice a significant difference between the FG and CL accounts: Agent, Goal and Recipient constitute arguments, while the Instrumental role is treated as a satellite, e.g.: "It should be noted finally that such semantic functions as Instrument and Beneficiary are not interpreted as functions attached to arguments but as functions of 'satellites' by means of which nuclear predicate-frames can be extended." (Dik 1980:9)

For Cognitive Linguistics, again in Langacker's formulation, the Instrument plays an essential role in valency structure. Langacker formulates the idea of an action chain which may be metaphorized to the logical domain as argument structure in the following way:

```
┌─────────────────────────────────────────────┐
│ SCENE                                        │
│       AG        INSTR      PAT                │
│                                              │
│      ◯  ⇒   ◯   ⇒   ⊖→                       │
│                                              │
│       S                    O                 │
└─────────────────────────────────────────────┘
```

In the diagram, circles stand for things in Langacker's terminology and double arrows represent transfer of energy from one object to another. Here we have three participants entering interactions in a scene, hence the term *action chain*. Obviously energy transfer does not refer only to physical force - such force can be conceived metaphorically, e.g. social pressure as in case of such verbs as *urge* or *persuade*. Instrument plays a primary role in the action chain and that constitutes a major difference between Langacker's and Dik's account.

It can be noted that both FG and CL eagerly utilize such semantic roles as Agent, Goal or Location. Langacker calls them archetypal, conceptual roles. The Agent is a source equipped with will. It is the initiator of an action in an energy chain. The Patient is a participant in which observers may perceive an internal change of state caused by an outside force directed towards it. The Instrument is a "mediator" between an Agent and a Patient in an energy interaction. It is a tool through which the Agent exercises influence upon the Patient. Grammatical relations, i.e. subject and direct object, are defined prototypically in terms of the archetypal roles of Agent and Patient; however, they are conceived more schematically, being defined in terms of basic human cognitive abilities, i.e. organization of the figure-ground type.

For FG Agent, Goal, Recipient and other semantic roles represent semantic functions, where, for example, an Agent constituent is semantically more prominent than a non-Agent constituent. Summing up, semantic roles/functions are employed in both theories for similar purposes, although particular accounts in the two theories differ in details (e.g. the Instrument plays a major role in Langacker's action chain, while Dik's Functional Grammar relegates it to the status of a satellite).

Lakoff (1977) suggests to treating semantic roles, such as the above, as clusters of properties. The role of Agent would then consist of the following properties (which are

operational): primary responsibility, volition and control. Curiously enough the notion of *control* plays a significant role in FG studies on the course of action (Siewierska 1991:48). Dik (1989) distinguishes eleven nuclear semantic functions. Thus FG enjoys a theoretical advantage over CL, since the number of roles has never been specified in the latter theory.

Another well specified issue in FG is the typology of phenomena labelled as states of affairs. CL in Langacker's version distinguishes atemporal relations and perfective and imperfective processes, e.g. *He knows a poem* - an imperfective process; *He learned a poem* - a past perfective process; *He is learning a poem* - a present perfective process; a complex atemporal relation - *into* - in contrast with *enter* which represents a process. Apart from the concept of an active zone there seem to be no other distinctions that would correspond to the FG taxonomy of States of Affairs (SoA). The typology as presented in Dik (1989:98) utilizes such features as dynamicity, control and telicity. Every type of SoA has a unique set of values for the above three features. Hence we have Situation subcategorized as Position and State, Event as Action and Process, which are in turn subcategorized further: Action into Accomplishment and Activity and Process as Change and Dynamism. Equally interesting is Dik's earlier (1980) account of types of States of Affairs, where he presents semantic functions which can be attributed to particular types of SoA, e.g.

PROCESSES

Processed	: $John_{proc}$ *fell down.*
Force	: *The* $wind_{Fo}$ *was blowing furiously.*
Force Goal	: *The* $wind_{Fo}$ *opened the* $door_{Go}$*.*
Force Goal Recipient	: *The* $climate_{Fo}$ *gave* $John_{Rec}$ *new* $strength_{Go}$*.*
Force Goal Direction	: *The* $wind_{Fo}$ *blew the* $leaves_{Go}$ *into the* $kitchen_{Dir}$*.*
Force Goal Source	: *The* $wind_{Fo}$ *swept the* $paper_{Go}$ *from the* $table_{So}$*.*

Our piecemeal and certainly inconclusive examination of the similarities and differences between FG and CL leads us to the tentative conclusion that the two frameworks, while differing in some respects, exemplify enough similarities to warrant considering their amalgamation into a single coherent approach to the structure of language. CL could offer in such marriage a subtler treatment of lexical semantics while FG has in its dowry a more

comprehensive typology of SoAs and a better understanding of word order phenomena. The fact that FG embraces the commitment to psychological adequacy (cf. Dik 1980) certainly can only facilitate its combination with psychologically oriented CL. Perhaps, FG could benefit if a cognitive foundation was provided for its functional analyses while CL could similarly make use of the functional tradition to lend substance to its fledgling analyses of various aspects of language structure. One such area where Cognitive Linguistics could learn much from FG is the analysis of word order phenomena. The remaining part of this paper is devoted to the examination of this issue.

3. Word order in Functional Grammar and Cognitive Linguistics

In presenting the FG view of word order we will heavily rely on the description of this aspect of FG conveniently provided by Siewierska (1988). The CL approach to word order will be based on the few statements provided by Langacker (1987) and on the reformulations of Langacker's proposals which we would like to advocate.

According to Siewierska word order in Dik's FG is determined by an interplay of a number of factors. These include *grammatical relations* (subject, object), *semantic relations* (agent, patient, goal), *thematic relations* (topic, focus) and the *Language Independent Preferred Order of Constituents* (LIPOC) (I: clitic < pronoun < noun phrase < adpositional phrase < subordinate clause; II: (i) for any category X, X < PX; (ii) for any category X, X < X&X; (iii) for any categories X and Y, X < X(Y)). In a sense LIPOC amounts to saying that less complex items should precede more complex ones. The influence of grammatical and thematic relations on word order is expressed by means of *functional patterns* which specify the ordering of the basic grammatical constituents (such as subject, verb and direct object) of a predication and the location of thematic elements (such as topics, various left-dislocated items, right-dislocated items). Functional patterns specify special positions (P1, P2, P3) which may be filled by any language-specific items such as question words, complementizers, etc. In instances where such items fill the P1 position, movement of topics into this position will be

precluded. This is so because in FG the P1 position may be occupied by only one item. Semantic roles exert their influence on the specification of word order only when thematic roles have not done so. Functional patterns refer to either grammatical roles or semantic roles, never to both of them simultaneously.

Since linearization rules in FG apply to specified predications, Siewierska briefly explains what is meant by the notion of specified predication in the FG formalism. Mentioning only in passing elements of the predication more loosely integrated into the SoA described in the predication (such as various types of adverbial expressions), Siewierska concentrates mainly on the relationships between the main components of a nuclear predication: the predicate and its arguments. These relationships are characterized by means of *predicate frames*. A predicate frame will specify such information as:

a) the predicate

b) the category of the predicate

c) argument positions associated with the predicate represented by variables x_1, $x_2....x_n$

d) the semantic roles of the arguments

e) the imposed selectional restrictions

The nuclear predication designates a particular state of affairs (activity, position, state, accomplishment, change, dynamism); in other words, a nuclear predication represents a particular configuration of various elements in physical reality as it is experienced by a speaker. Additional information concerning various contextual aspects of the designated SoA and the attitudes to it harbored by persons involved will be provided by *satellites*. Alternative realizations of a given SoA are reflected in alternative assignment of syntactic functions and pragmatic functions (i.e. grammatical and thematic relations respectively). Syntactic functions and pragmatic functions are assigned to the arguments and satellites of predications. The assorted information specified by the predicate frame and the assignment of grammatical and thematic relations will be utilized subsequently in the specification of word order. This task will be performed by *expression rules* which map functional structures into syntactic structures. Apart from word order, expression rules also specify case and/or adpositional

marking, agreement and cross reference and appropriate verbal forms. Functional patterns will presumably play their role in determining word order somewhere at this point.

A notion which in FG is crucial for the determination of the choice of subject and object is the notion of the *perspective* from which a given SoA is viewed and from which the utterance should thereby be interpreted. Subject and object assignment does not affect the semantic roles specified in the predicate frame (and hence active/passive pairs or dative shift pairs must be essentially synonymous). Furthermore, perspective is not only a property which underlies grammatical relations but also a property which plays a crucial role in specifying thematic relations such as topic. Dik claims that the two types of perspective may be reconciled. Siewierska quotes de Vries (1985), who claims that topic represents the contextual perspective from which discourse is organized while subject (and object) determines the perspective from which the predication is presented. The two types of perspective often coincide, since the choice of subject and also of object is influenced by discourse factors.

To round off the FG view of word order we should add at this point that linear ordering within syntactic structures, into which functional structures are mapped by means of expression rules, will be also shaped by LIPOC and by the relator principles which specify the ordering of items below the clause level (i.e. the relative ordering arrangements of heads and their modifiers).

By comparison, word order in CL is relatively marginalized. This marginalization is a consequence of what Langacker calls the *content requirement* which specifies that the only structures permitted in the grammar of a language are (1) phonological, semantic or symbolic structures that actually occur in linguistic expressions; (2) schemata for such structures; and (3) categorizing relations involving the elements in (1) and (2). A symbolic structure is bipolar, i.e. it has a phonological pole and a semantic pole. Schemata are generalizations extracted by speakers of a language from a large number of symbolic structures, thereby expressing the commonalities of these expressions. Symbolic structures may be self-sanctioning (they may have the status of highly entrenched symbolic units, i.e. their cognitive processing is largely automatized) or may be sanctioned (i.e. motivated) by appropriate schemata (this is the norm in the case of composite structures). Linguistic phenomena will be

characterized either in terms of schemata which pertain only to their phonological pole or to their semantic pole or to both poles simultaneously. Langacker proposes to characterize word order in terms of the phonological pole exclusively. "Cognitive grammar does not treat temporal order as a dimension of constituent structure (as does transformational grammar) but rather as one dimension of phonological space; hence the proper temporal sequencing is prescribed at the phonological pole of each constructional schema." (Langacker 1991:226)

Word order is thus presented as not remarkably different from the ordering of morphemes within words or segments within morphemes, i.e. it would be specified by appropriate schemata which sanction composite structures at their phonological pole. Such schemata would represent linguistic convention.

But there are a number of problems with such a view of word order. First of all, the statement that schemata sanction the linear arrangement of elements in phonological space is just about as illuminating as a flat statement that phrase structure rules determine the ordering of constituents in a phrase marker. Such statements within CL and nontransformational versions of generative grammar respectively would be rather uncontroversial, but they would miss the most intriguing aspects of word order. After all, what is of greatest interest is not in what sequence constituents appear in a composite structure but rather why they serialize the way they do. FG attempts to answer this and similar questions by investigating various functions which may be attributed to different facets of linguistic structure. CL should try to find its answers by investigating human cognitive processes which underlie human interactions with the world (including linguistic interactions with other humans). Construction schemata which sanction linear ordering within phonological space do not seem to go a long way towards meeting such concerns. Earlier research has more than adequately demonstrated that communicative, pragmatic and cognitive factors play an important role in determining linear ordering within utterances. If CL wants to address these issues the treatment of word order proposed by Langacker (1991) will not do (a fact which Langacker himself implicitly seems to acknowledge by offering an illuminating discussion of topicalization elsewhere in his work).

Secondly, unlike phonological segments or syllables, words are symbolic units. Since words are inherently meaningful their ordering within an utterance is subject not only to the dictates of language-specific convention (presumably specified in CL terms by means of appropriate schemata) but also to the influence of numerous other factors of a communicative and/or cognitive nature. Furthermore, the more complex composite expressions are taken into account, the less entrenched (i.e. automatically processed) they will be as units. In consequence, highly composite expressions, like clauses and sentences, will tend to remain even less (than words) under the sway of linguistic convention alone. Various other communicative and cognitive factors, external or complementary to linguistic convention, will play a role in determining how speakers/hearers structure and assemble these expressions. Any psychologically realistic linguistic theory should attempt to characterize these factors. Therefore the CL account of word order in terms of schemata sanctioning the combinations of elements in phonological space is clearly insufficient.

Thirdly, and perhaps most importantly, the relegation of word order to the sphere of phonological space does not harmonize very well with the CL view that meaning should be equated with cognitive processing or conceptualization. According to Langacker (1986:3) "...linguistic semantics must attempt the structural analysis and explicit description of abstract entities like thoughts and concepts. [...] our ultimate objective must be to characterize the types of cognitive events whose occurrence constitutes a given mental experience." A grammar which is supposed to accommodate such "mental experience" is conceived "...dynamically, as a constantly evolving set of cognitive routines that are shaped, maintained and modified by language use. A speaker's 'knowledge' of his language is therefore procedural rather than declarative." (Langacker 1987:57)

In the process of communication a hearer reacts to the sequentially presented elements of an utterance by going through these routines, which lead to the activation of concepts and their integration into composite conceptualizations. A view like this seems to invite an analysis of word order in terms of symbolic units rather than just their phonological poles. A similar view may be found in Sperber and Wilson (1986:204) who state that: "... because an utterance is produced and processed over time, the hearer will be in a position to access some

of its constituent concepts, with their associated logical and encyclopaedic entries, before others, for a speaker aiming at optimal relevance, efficient exploitation of this temporal sequencing will be crucial."

Siewierska (1988) mentions Bock, who expresses very similar views: a speaker "...is much more likely to present first information which has already been formulated, rather than information that has not yet been activated. It is hypothesized that such rendition of information not only allows the speaker to concentrate on the formulation and presentation of the less accessible material, but also aids the comprehension task of the addressee. The readily accessible language data is processed automatically, freeing the addressee's processing resources for the controlled processing of the less accessible information. Moreover, the automatically processed data provides the basic frame or perspective for the interpretation of the utterance [...]; hence the processing task of the interlocutor is made easier if this perspective is presented first." (Bock 1982:38)

If CL is really concerned with how speakers and hearers cognitively process utterances, then it must make the inevitable step towards treating word order as a phenomenon characterized in terms of symbolic units and conceptualization strategies, rather than in terms of the phonological poles of these units and schemata sanctioning the combination of phonological material into composite structures. In investigating this new territory CL might well make use of earlier research, and notably of insights provided in the FG analysis of word order (such as the significance of the special positions recognized in the FG formalism).

Much of the information which Siewierska (1988) considers crucial for the characterization of word order phenomena in FG can be readily translated into CL terms. In this sense one can talk of a considerable degree of overlap between the two theories. Thus the information encoded in FG predicate frames is handled in CL by means of image schemata (in the case of words) and constructional schemata (in the case of composite expressions). Argument positions are handled via image schemata and valence relations (i.e. active zones). As in FG the notion of perspective is also a salient aspect of CL analyses. However, the CL conception of perspective is richer and subtler than its FG namesake. It pertains not only to the choice of subject and object (in CL terms clause level *trajector* and *landmark*

respectively) but also other aspects of the subjective construal of objective scenes or events. These aspects concern such notions as: *figure-ground* opposition (of which the trajector-landmark dichotomy is a special case), *vantage point, orientation, epistemic grounding*, etc. The idea that the same objective event may be construed in different ways depending on numerous cognitive factors is not in itself very different from Dik's proposal that the same State of Affairs may be viewed from different perspectives. The crucial difference between the FG account of perspective and the CL proposal is connected with Dik's assessment that the assignment of grammatical and thematic relations does not affect the semantic relations specified in the predicate frame. In other words active and corresponding passive sentences or such dative shift pairs as (1) and (2) must be essentially synonymous.

(1) *I told John the whole story.*

(2) *I told the whole story to John.*

According to Langacker even apparently minute differences in the structure of analyzed sentences represent some semantically relevant differences in the construal of even objectively the same situation. We will come back to this observation shortly.

FG and CL not only overlap but they are in numerous ways complementary (which should constitute one more reason for combining the two approaches to language). FG offers a wealth of insightful analyses of the functional relationships between various aspects of language structure. In the case of the analysis of word order this involves the highlighting of special positions in clause structure reserved for thematic relations and language-specific items, and the attempt to present a comprehensive view of the relationships between semantic, grammatical and thematic relations, the relator principles and LIPOC. CL, on the other hand, offers a psychological and cognitive foundation which FG seems to lack. Langacker attempts to find the rationale for numerous linguistic phenomena and constructions in the cognitive and perceptual properties of the human mind and body. If we drop the misconceived idea that word order should be stipulated in phonological space, it will turn out that various aspects of the semantics of natural language, which Langacker discusses under such labels as figure-ground alignment, sequential scanning, autonomy versus dependence, valence relations, perspective or natural paths, will be directly relevant for the specification of the linear

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arrangement of symbolic structures. If this turns out to be the case, then CL will also have much to offer to a comprehensive analysis of word order phenomena. We remain confident that CL could only benefit from the incorporation of the word order insights provided by FG. Perhaps FG, in turn, could find cognitively based analyses useful in establishing a psychological foundation for functional analyses.

But there are also points on which FG and CL diverge. One has already been mentioned briefly. FG takes the purported synonymy of active and corresponding passive sentences as the starting point for its theory of the assignment of grammatical relations. CL rejects the absolute synonymy of such pairs, claiming that the active/passive opposition helps to encode important semantic differences connected with different construal of the same situation (i.e. state of affairs). That this is not just a terminological dispute is illustrated by the fact that subtle differences may be highlighted in special circumstances. One needs only to recall here the debate among generative grammarians on passivization which resulted in striking passivization off the list of the most typical processes handled by transformational rules (*Many of the arrows didn't hit the target* versus *The target wasn't hit by many of the arrows*). Another example involves sentences like (3) and (4) discussed by Langacker (1986).

(3) *Bill sent a walrus to Joyce.*

(4) *Bill sent Joyce a walrus.*

In FG sentences (3) and (4) would be treated as synonymous and differing only in object assignment (different nominals are assigned the object relation in the two sentences). According to Langacker (1986) sentences (3) and (4) "...represent alternate construal of the profiled event. [(3)] and [(4)] differ in meaning because they employ subtly different images to structure the same conceived situation. [...] Up to a certain point the sentences are semantically equivalent. Each symbolizes a conception in which a walrus originates in the domain under Bill's control and - at Bill's instigation - follows a path that results in its eventual location within the region under Joyce's control. The semantic contrast resides in the relative salience of certain facets of this complex scene. In [(3)] the 'grammatical' morpheme *to* specifically designates the path followed by the walrus, thereby rendering this aspect of the conceptualization more prominent than it would otherwise be. [...] In [(4)], on the other hand,

to is absent, but the juxtaposition of the two unmarked nominals (*Joyce* and *a walrus*) after the verb symbolizes a possessive relationship between the first nominal and the second. Consequently [(3)] lends added prominence to the configuration that results when the walrus completes its trajectory, namely that which finds it in Joyce's possession. [...] This subtle difference in imagery has an impact on the felicity of using *to* or double-object construction for certain types of situations." (Langacker 1986:14-15) Langacker (1986) substantiates this remark with the following data:

(5) *I sent a walrus to Antarctica.*

(6) ? *I sent Antarctica a walrus.*

(7) *I sent the zoo a walrus.*

(8) *I gave the fence a new coat of paint.*

(9) ? *I gave a new coat of paint to the fence.*

(10) *I cleared the floor for Bill.*

(11) ? *I cleared Bill the floor.*

(12) *I cleared Bill a place to sleep on the floor.*

According to Langacker (6) is unnatural because it implies that the first nominal after the verb indicates a possessor of the walrus while (7) is fine because the first nominal after the verb denotes an institution which can function as the possessor. (8) is fine because the two nominals are involved in a part-whole relationship so the fence can be construed as a possessor of the paint, while (9) is weird "because *to* renders the path more prominent than the eventual possessive relationship" (Langacker 1986:16). In (10)-(12) "Bill does not come to possess the floor just because I clear it for him, so [(11)] is peculiar; [(12)] is perfectly acceptable, however, since the additional context provided by the second nominal (*a place to sleep on the floor*) makes it apparent that the spot in question effectively comes under Bill's control and lies at his disposal by virtue of the action of clearing it." (Langacker 1986:16)

To our knowledge the FG conception of perspective is not capable of accommodating such subtle shades of meaning as those represented in Langacker's analysis.

As we have already noted above, another important difference between FG and CL is the tendency in the former to employ elements of formal notation (as in LIPOC, functional

patterns, predicate frames, formulae for derived terms) and the tendency to shun formalism in CL in favor of prototypes, tendencies, scales, degree of entrenchment, etc. While there is nothing wrong with strict formal notation as such, uncritical adherence to it at times might lead an analyst astray and subject his analysis to the charge of artificiality. This might well be the case if the FG account of thematic relations is applied to data representing word order in Polish. There is an undeniable tendency to move topics to the sentence initial position in Polish, a fact that has been well known and in FG terms would require the placement of the topic in the special P1 position. So much is beyond dispute. Complications emerge when one tries to apply Dik's theory that only one item can be located in the P1 position. Siewierska (1988) notes such apparent counterexamples to Dik's analysis as:

(13) *Kto co komu dał?*

who what whom gave

"Who gave what to whom?"

In (13) several question words appear to be located simultaneously in the P1 position, thereby apparently violating Dik's analysis. But there are further complications. The P1 position may be occupied by topics provided no other language-specific items have been located there beforehand. What should we think then of data where the P1 position is filled with language-specific items (e.g. question words) and old information nevertheless continues to gravitate to the left as exemplified by the contrast between (14) and (15)?

(14) *Czy Kowalskiemu mówiłeś już o tej paskudnej historii?*

Q Kowalski-dative tell-past-2nd person already about this bloody mess

"Have you already told Kowalski about this bloody mess?"

(15) *Czy o tej paskudnej historii mówiłeś już Kowalskiemu?*

Q about this bloody mess tell-past-2nd person already Kowalski-dative

"Have you already told Kowalski about this bloody mess?"

In both (14) and (15) the P1 position is occupied by the question word *czy* and yet the old versus new information layout will continue to result in different items gravitating to the left (if they have old information status) even though the P1 position continues to be occupied by

other material. Thus the dative nominal *Kowalskiemu* will tend to be interpreted as old information in (14) and as new information in (15).

We have no doubts that, given an appropriate amount of tinkering, such data could be accommodated within the FG frame of things (Siewierska gives some suggestions based on Connolly for free word order languages like Polish; in the case of data like (14) and (15) we could claim that it is not old information which gravitates to the left but new information which gravitates to the sentence final position frequently allocated to focal elements, etc.). But a cognitive linguist would be happier to conclude after Langacker that biology offers a better metaphor to talk about linguistics than mathematics, and that the tendencies to place lexical material in certain positions are only tendencies and do not necessarily translate into strict formulae which admit no exceptions.

4. Conclusion

In spite of all the methodological and terminological differences FG and CL share enough of their view on language to make amalgamation of the two theories possible. Furthermore, they are complementary enough to make such a task interesting. We would like to entertain the idea that a Cognitive Linguistics which incorporated numerous FG insights connected with the combinatorial and functional properties of linguistic units, or conversely, a Functional Grammar which incorporated cognitively grounded semantics from CL, could open up new and fruitful venues for linguistic research. We believe that CL should move beyond lexical semantics which has tended to be its hallmark into the territory which has long been staked out by the functionalists. On the other hand, the functional tradition could only benefit from adopting a sound cognitive basis for its functional analyses of linguistic phenomena. Given the fact that contradictions between FG and CL, while existent, do not seem to be insurmountable, we would like to believe that the two theories might converge at some halfway point and that such meeting could prove to be illuminating.

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