

LFG Architecture, Semantic Definiteness Structures, and Nonverbal Syntactic Constructions

This paper argues for the need of a semantic definiteness level in LFG theory which expresses three definiteness relations: Existential, Identity, and Characterizational (borrowed from Kuno and Wongthomkong (1981:67)). At Conceptual Level the three relations are indexed for definiteness/specificity features similar to the theories of Heim and Enc, deriving their features from the discourse. These three relations create semantic definiteness structures which provide a template at Conceptual Structure which interfaces the level of Jackendoff's LCSs. The resulting structures are then linked to the F-structures and C-structure of LFG through indexing.

The paper proposes that these modified LCSs offer a means of analysis for nonverbal predicates and the unexpressed SUBJ in imperatives. These syntactic constructions present a problem for linguistic analyses because grammatical relations require an argument to be bound to a verb in order to bind the arguments. This is a problem for LFG because of the extended coherence condition:

“The extended coherence condition requires that all functions in f-structure be BOUND. An argument function (i.e. a subcategorizable function like SUBJ, OBJ, OBL) is bound if it is the argument of a predicator (PRED)”... (Bresnan and Mchombo 1987:746).

Rosen (1996) argues for a modification to F-structures from situation semantics (Fenstad et al, 1987), for languages which have no copula verb, such as Maori, as shown in Example (1) (Biggs 1969:24):

(1) *Nominal sentences* (Maori)

he taariana, te hoiho
INDEF stallion DEF-SG horse
'The horse is a stallion.'

The first NP in this sentence is predicative and the second NP is the 'subject'. Semantically, the first NP predicates a property of the second NP, the property of being a stallion. Rosen's analysis expresses the relation of the two arguments SUBJ and OBJ through indexing and following the path between the F-Structure and the 2 arguments in the 'situation semantics schema' without introducing a PRED.

However, this analysis misses an important generalization seen in the following verbless sentences from two other 'verbless' languages. Example (2) below from Lango shows the distinction between an Existential relation and an Identity relation (Noonan 1981:45 (cited and labelled identificational predicates in Hengeveld 1992:81)).

(2) *Existential/ Identity predicates* (Lango)

An (en) adaktal.
I (COP) 1.SG.doctor.HAB
'I am the doctor.'

In Lango, the copula is not obligatory, but (en) is optional in the Identity use only.

In Sinhala, action nominals may also be verbless, as shown in Example (3) (Henadeerage 2004).

(3) *Action nominals* (Sinhala)

- a. gowiyo wii_wagaawə
farmer.PL.NOM rice_cultivation.DEF
'The farmers are cultivating rice.'
- b. gowiyo wii_wagaawə kərənəwa
farmer.PL.NOM rice_cultivation.DEF do.PRE
'The farmers are doing the rice cultivation.'
- c. gowiyo wii_wagaa_kərənəwa.
farmer.PL.NOM rice_cultivation_do.PRE
'The farmers cultivate rice.'

(3a) has a definite marker and has the progressive aspect meaning in the nominal compound. Both (3b) and (3c) have the verb 'kərənəwa' meaning 'do'. These three examples show the

difference between the verbless structure in 3a and the meanings with 3b and 3c. (3a) uses the definite marker to represent the progressive aspect of the nominal 'cultivate'. This distinction cannot be captured by the word order or thematic structure, but it can be distinguished by its definiteness structure.

The proposed modifications including LCSs are shown below. Figure 1 shows the definiteness and specificity marking on each of the nominals, in the Characterizational state. The copula is optional for those languages which do not have a copula, but have the semantic definiteness relation of assigning a property to a nominal.

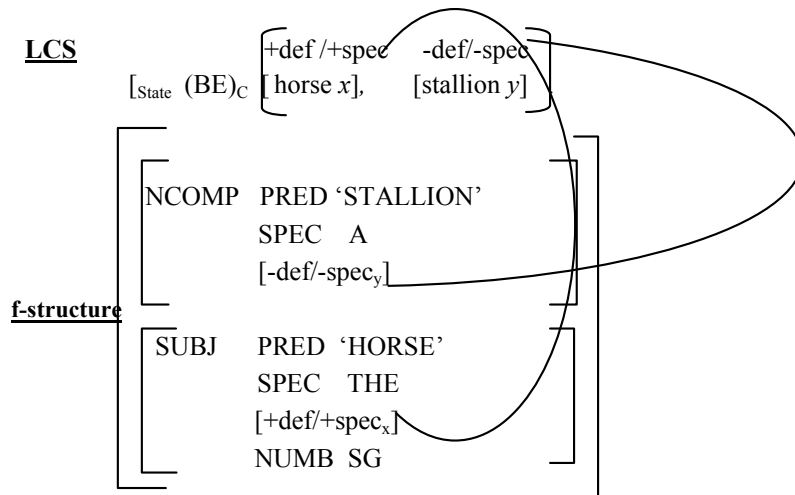
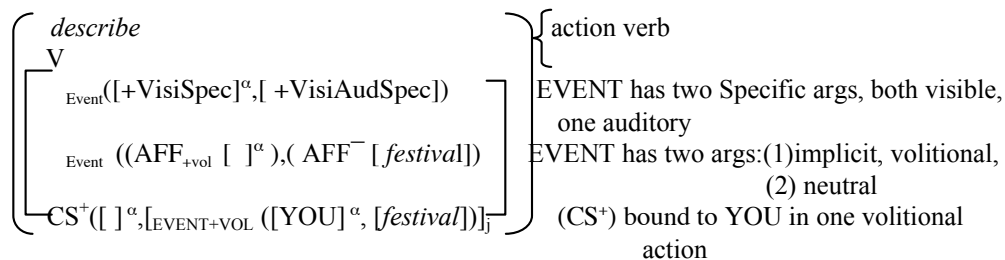


Figure 1.

These two formulae show that the relation of assigning a property to a 'thing' is a characterizational relation between objects represented at the level of the Lexical conceptual structure and then mapped onto an f-structure.

Additional support for this analysis comes from imperatives (Fellbaum Korpi 2004:161). In the sentence *describe the festival*, we have an ACTION verb but no expressed SUBJ. The LCS represents the verb in the top two lines and bracketed on the right side with 'action verb'.



The third line represents the Semantic Definiteness Template. In her representation, definiteness is coded for visible, visual, auditory symbolic, and inferential. The first argument, the Addressee who is visibly present to the speaker is implicit, unexpressed, and visible. The representation of specificity and definiteness at the level of conceptual structure makes this clear. The second argument, a picture of a festival, is both visibly present and also auditorially present to both in the situation. So, the two arguments have to be independently coded to represent the different processing requirements. The fourth and fifth lines represent Jackendoff's LCS Action and Theme Tiers, respectively. In the fourth line, arguments for the imperative are conceptually represented as [AFF ([α], [Y])] for an action with two arguments. In this LCS, [α] = YOU and is visibly present and specific to the speaker, but unexpressed, the implicit argument of the addressee of the imperative. The second argument, [Y], is represented as *festival* and is auditorially represented along with the visible picture in the situation to be described. In addition, the first AFF argument must be volitional; the argument which represents the addressee must be willing to do the action. This argument is unexpressed, so no argument is represented. The second argument, *festival*, is neutral with respect to being affected so we can label this AFF⁻. We then map the respective definiteness indices to the respective f-structure, in a similar manner as shown above in Figure 1.

Note that with the addressee or [YOU] satisfying the condition of the imperative at Conceptual Structure, any syntactic main clause which is "subjectless and has a tenselessV" is automatically linked to the imperative. The linking does not need to be stipulated.

- Biggs, Bruce: 1969, *Let's Learn Maori*, Reed Education, Wellington.
- Bresnan, Joan and Sam A. Mchombo: 'Topic, Pronoun, and Agreement in Chichewa', *Language* **63:4**, 741-848
- Fellbaum Korpi, M.L.: 2004, *Emerging Patterns of Meaning: The Interaction of Specificity and Definiteness in Japanese to English Interlanguage*, [Unpublished Ph.D. thesis, The Australian National University, Canberra, Australia.]
- Fenstad, Jens Erick, Per-Kristian Halvorsen, Tore Langholm and Johan van Benthem: 1987, *Situations, Language and Logic*, D. Reidel Publishing Company, Dordrecht.
- Henadeerage, Deepthi Kumara: 2002, *Topics in Sinhala syntax*, Australian Digital Theses
<http://thesis.anu.edu.au/public/adtANU20060426.142352/index.html>
- Hengeveld, K.: 1992, *Predication: Theory, Typology, Diachrony*, Mouton de Gruyter, Berlin.
- Jackendoff, R.S.: 1990, *Semantics Structures*, v. 18, The MIT Press, Cambridge, Massachusetts.
- Noonan, Michael P.: 1981, *Lango syntax*, [Unpublished Ph.D. dissertation, University of California, Los Angeles.]
- Rosen, Victoria: 1996, *The LFG Architecture and "Verbless" Syntactic Constructions*, Proceedings of the LFG'96 Conference, CSLI Publications, Stanford, California.

