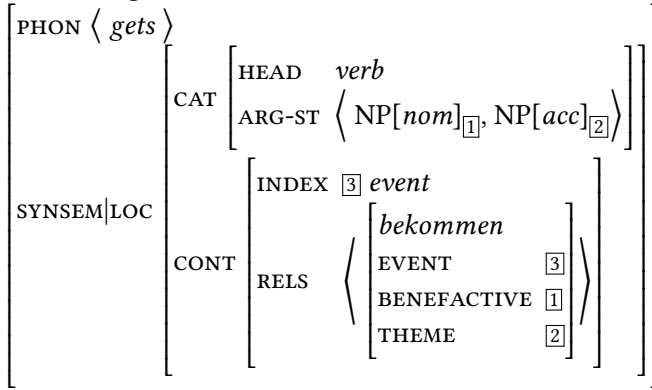


(15) *bekommt* 'gets':

Other studies on the rise of auxiliary verbs in representational theories of grammar include Schwarze (2001) who models this change within the framework of lexical functional grammar. He suggests to capture the rise of auxiliary verbs in Romance by a difference with respect to the f-structure features in the lexical entries between lexical and auxiliary verbs. In actual Romance, the f-structure of a passive clause is headed by the non-finite verb, while the modern Romance counterparts of *esse* 'be' may no longer function as heads of an f-structure with their transition to auxiliary status.

## 2.2 Word Order Changes in the Verbal Complex

Present-day German is an OV language with the finite verb occurring at the right edge of subordinate clauses. In case more than one verb appears in final position, the canonical order is descending, i.e.  $V_3V_2V_1$  with the governing verb following the governed verb as illustrated by the three-place verb cluster in (16). The occurrence of non-canonical orders like  $V_1V_3V_2$  is restricted in Standard German with respect to the number of verbs in the cluster (at least three verbs) and the type of auxiliary. While the auxiliary verb *haben* 'have' requires the non-canonical word order, cf. (17a), the tense auxiliary *werden* 'will' and the modal verbs may occur with both orders. As regards the auxiliary *sein* 'be', the non-canonical order is not available (17b).

- (16) Auch wenn Selma die Noten gefunden<sub>3</sub> haben<sub>2</sub> wird<sub>1</sub>,  
       even if    Selma the notes found    have    will  
       'Even if Selma will have found the music'

- (17) a. Auch wenn Fred das hätte<sub>1</sub> wissen<sub>3</sub> müssen<sub>2</sub>,  
 even if Fred this had know must  
 'even if Fred should have known this'
- b. \*Auch wenn er gestern in der Vorlesung ist<sub>1</sub> gesehen<sub>3</sub> worden<sub>2</sub>,  
 even if he yesterday in the lecture is seen been  
 'Even if he has been seen in the lecture yesterday'

Neither of these restrictions holds for non-standard varieties of German: Upper German dialects provide ample evidence for both descending and ascending verb orders, even if the verb cluster includes only two verbs (Dubenion-Smith 2010). Likewise historical stages of German witness a wide variety of word orders regardless of the number of verbs appearing in final position and independent of the nature of the auxiliary (Ebert 1981; Härd 1981; Sapp 2011). The Early New High German examples in (18) render attestations for a two-place verbal complex with *haben* preceding a past participle and a three-place verbal complex with the auxiliary verb *sein* preceding two past participles. Both patterns are ruled out in the standard varieties of Present-day German.

- (18) a. uns ist ein Abentüer widerfaren underwegen, daz uns ein Wolff  
 us is an adventure happened on the way that us a wolf  
 vil Leids hat<sub>1</sub> gethon<sub>2</sub> (Ulenspiegel 226.4)  
 much harm has done  
 'An adventure happened to us on the way: a wolf has done much harm to us.'
- b. so schreibt man auch aus Holl. das newlich in Frießlandt ein  
 so writes one also from Holland that recently in Friesland a  
 fewriger fliegender Trach sey<sub>1</sub> gesehen<sub>3</sub> worden<sub>2</sub> (Aviso 35.14)  
 fiery flying dragon were seen been  
 'News come from the Netherlands that a fiery flying dragon has been seen in Friesland.'

The restrictions effective in Present-day German arise in a two-step process: The order  $V_2V_1$  becomes fixed with two-place verbal complexes throughout the 16th century, while it took about a hundred more years for the order  $V_3V_2V_1$  to become the canonical order for three-place verbal complexes (Ebert 1981; Härd 1981; Sapp 2011).

How is this change modeled in a representational framework such as HPSG? Auxiliary verbs and their verbal complements as given in (16) through (18) are