Why uninterpretable features?

1. Many semantic functions are expressed by means of markers on other words. Take for instance the examples in (1). In (1a) person and number features of the subject are expressed by the marker –o; in (1b) the past tense is expressed by the marker –ed; in (1c) negation is marked by the marker –ne; and in (1d) deontic modality is expressed by the obligation marker yaci. Yet, at the same time it is not the case that these markers carry the semantic contents of the semantic functions they represent in the sentence. To illustrate this point, consider (2) taken from Von Stechow (2002). 2. Given that semantic past tense outscopes the universal quantifier every Sunday, which on its turn outscopes the verbal predicate play tennis, it follows that –ed cannot be interpreted in situ. Similar observations apply to the other examples. The marker –o in (1a) can be combined with a subject Io (‘1’): as the Theta Criterion applies, Io must fulfill the theta role of cant-, thus leaving no theta role to be fulfilled for –o. In (1c) ne- outscopes the entire negative predicate and not merely the verb, as has been illustrated in detail by Zeijlstra (2004) and in (1d) the modal marker can be combined with other modal adverbs without introducing extra an extra modal operator in the semantics (cf. Boland (2006), Zeijlstra (2007)). 3. If the markers in (1) do not carry any semantic content themselves, they are semantically uninterpretable and thus carry some uninterpretable feature [uF] (in the sense of Chomsky (1995) and Svenonius (2006)). –o in (1a) would then carry a feature [u1SG], –ed in (1b) a feature [uPAST], ne- in (1c) a feature [uNEG] and yaci in (1d) a feature [uMOD.DEON]. Such an uninterpretable feature must be licensed by a corresponding feature [iF] that can be phonologically empty. For (1a) it has been argued that this is due to an abstract pronominal subject pro (see e.g. Rizzi (1986)), for (1b) by an abstract Past Tense operator (Von Stechow (2002)); for (1c) by an abstract negative operator (Ladusaw (1992), Zeijlstra (2004)) and for (1d) by an abstract modal operator (Zeijlstra (2007)). Hence all examples in (1) have an underlying representation as in (3). 4. This immediately leads to the question as to why language would not use a much simpler strategy, like (4), to express a semantic function. In (4) each semantic function is represented by a word that is interpreted in situ. Note that this question is one of the most important question that current minimalism is facing and that has remained unanswered as of yet. Why does natural language exhibit uninterpretable features in the first place, given that they have to be deleted (or licensed) later on in the derivation? 5. I this talk I argue that the underlying configuration in (4) is actually not simpler than the one in (3), basing myself on Chomsky’s (2005) Strongest Minimalist Thesis (SMT) that takes language to be a ‘perfect’ solution to the task of relating sound and meaning. From the meaning perspective, (3) would by no means be a perfect solution as it exhibits lexical items (i.e. markers), which carry uninterpretable features, whereas there are alternatives like (4) that do not exhibit such features. 6. However, (4) on the other hand is less economic from the sound perspective. In (4) two different prosodic words are used, where in (3) only one is needed. In a way (3) and (4) show a trade-off w.r.t. the Strongest Minimalist Thesis in the sense that where (4) is preferred from the meaning side, (3) is from the sound side. This idea is formalized as follows: I define both a semantic and a phonological simplicity metric, which may be in conflict with each other, one dispreffering uninterpretable features (5), one dispreffering prosodic structure (6). Note that these simplicity metrics follow from the SMT: if language is simple, from the LF side uninterpretable features should be banned as they do not contribute to the meaning of the sentence. Mutatis mutandis the same holds for prosodic boundaries, which do not add to the phonological content of an utterance. 7. The combination of such simplicity metrics already invokes multiple strategies to express semantic functions, which are attested in natural language. This accounts for the fact that some languages exploit strategy (3) and others strategy (4) to express a particular semantic function. It also accounts for the fact why these morphological markers are semantically empty: their semantic emptiness allows them to occupy a phonologically more comfortable position where they would be banned if they were interpretable. Uninterpretability, so to speak, is the ticket towards morphology. Note by the way that I do not claim here that (3) and (4) are the only strategies to express semantic functions, nor that that (5) and (6) are the only possible simplicity metrics. The main aim of this paper is to show that the attested occurrences of marking strategies like (3) and (4) follows from simplicity metrics (5) and (6). 8. To conclude, the existence as well as the cross-linguistic variation of morphological markers like the ones in (1) is the result of the interplay between phonological and semantic simplicity: a trade-off between uninterpretable features against prosodic structure.
(1) a. Canto
   Sing.1SG
   ‘I sing’
   Italian

   b. John danced
   English

   c. Nevidim I
   Neg.saw.1SG them
   ‘I didn’t see them’
   Serbo-Croatian

   d. Os ipe-yaci
   Clothes put.on-MOD
   ‘She must put on clothes’
   Korean

(2) Wolfgang played tennis on every Sunday
    = ‘For every Sunday in Pastc there is a time t at which W. plays tennis’
    ≠ ‘There is a past time on every Sunday at which W. plays tennis’
    ≠ ‘For every Sunday, there is a time before it s.t. W. plays tennis at that time’

(3) \[ O_{P_{[IF]}} \ldots [X-F_{[AE]}] \]

(4) \[ F \ldots X \]

(5) Semantic Simplicity Metric: A structural representation $R$ for a substring of input text $S$ is simpler than an alternative representation $R’$ iff $R$ contains less uninterpretable features than $R’$.

(6) Phonological Simplicity Metric: A structural representation $R$ for a substring of input text $S$ is simpler than an alternative representation $R’$ iff $R$ contains less prosodic structure than $R’$.

References:


