

Compound Representation at the Interface

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In Asymmetry Theory morphologically complex predicates are formed in $D_{\text{morphology}}$ and are then mapped to D_{syntax} (Di Sciullo 2005). This mapping is subject to the interface conditions between the two domains, and the representations that pass through this interface provide a novel notion of “lexical representation” which connects the morpho-phonological and syntactic-semantic information. We argue that complex predicates such as compounds count as units of linguistic computation by virtue of the interface representation between $D_{\text{morphology}}$ and D_{syntax} , and the use of this representation is necessary in light of our experimental finding.

In another framework, in which syntax is the sole module of structure-formation (e.g., Distributed Morphology of Hale & Marantz 1993), the morphological complexity arises simply at PF, and not at LF. In Minimalism (Chomsky 1995), PF and LF do not interface, and hence, the notion of “word” plays no role outside of the phonological computations. The presence of a direct link between the semantic and phonological representations of a complex predicate, thus, supports the Asymmetry Theory type architecture of the grammar over that of Distributed Morphology. Hence, we report a connection between a phonological representation and the syntactic structure of compound verbs, and argue that the presence of this connection suggests that the computational system must contain such lexical representations as $\text{noun}_{\text{arg}}\text{-verb}$ compound and $\text{noun}_{\text{mod}}\text{-verb}$ compound.

In English, noun incorporation coincides with deverbalization. On the surface, hence, the argument structure of the whole compound seems to correlate with the type of suffix it occurs with. The noun-verb compound in which the noun saturates the internal theta-role of verb surfaces with *-ing* suffix (1). The noun-verb compound in which the noun is interpreted as the modifier of the event and hence the verb remains unsaturated, surfaces with *-ed* (2).

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| (1) The meat-cut ting knife | (Noun _{obj} -Verb) |
| (2) The finger-paint ed portrait. | (Noun _{mod} -Verb) |

This relation between the surface morphology and the interpretation of the nominal constituent of the compound is more direct than the above description might suggest. Given our hypothesis, the constituents [$\text{noun}_{\text{arg}}\text{-verb}$] and [$\text{noun}_{\text{mod}}\text{-verb}$] pass through the interface, and are represented as the lexical unit, which other systems might access. To test this hypothesis, we investigated the acceptability of novel noun-verb compounds with tense/aspect morphemes which are homophonous with the participle forms – i.e. *-ed* and *-ing* morphemes. If the interface representations play a role in determining the acceptability of the new compounds, the forms which contain the homophonous tense/aspect morpheme should be more acceptable than the forms that contain the other morpheme.

In our study, the subjects saw sentences containing two types of novel compounds – $\text{noun}_{\text{arg}}\text{-verb}$, and $\text{noun}_{\text{mod}}\text{-verb}$. Their classification was made evident from the sentential context. We found that English speakers preferred to see the $\text{noun}_{\text{arg}}\text{-verb}$ compounds in the progressive aspect (*-ing*) over the simple past tense (*-ed*). In contrast, they preferred to see the $\text{noun}_{\text{mod}}\text{-verb}$ class in the *-ed* context over the *-ing* context. This pattern indicates that English speakers’ morpho-phonological preference must be stated over the types of N-V

compounds, defined by their argument structural property – whether the nominal constituent is the object or the modifier of the verb. In other words, their linguistic system categorically distinguishes noun_{arg}-verb compounds from noun_{mod}-verb compounds. The presence of this distinction supports the Asymmetry Theory type architecture of the grammar.

This study brings forth novel type of evidence to shed light on the issue concerning the notion of lexical representation. Productivity is a feature of morphology that is often argued to be part of linguistic performance, rather than competence (Mohanen 1986). Recently, productivity is measured over individual lexical items (e.g. Baayen 1992), which pushes the notion of productivity even further from theories of linguistic competence. However, we show that productivity should be defined over the units defined at the linguistic interface. We examined a type of productivity in English which cannot be measured over individual lexical items, and show that the pattern of acceptability that our subjects exhibited suggests the presence of certain units in the linguistic representation. This study thus provides a novel synthesis of performance-based evidence with the theory of linguistic representation.

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