

Idiomat�icity and Compositionality in Deverbal Compounds
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Deverbal compounds (i.e. compounds with a deverbal noun head and a non-head noun that is interpreted as an argument of the base verb, e.g. *bookselling*) have served as the ground for theoretical debates between lexicalist and syntactic models of word formation. We assume a syntactic orientation and use deverbal compounds to probe into the syntactic domain of idiomatic meaning, by comparison to their corresponding non-idiomatic argument-supporting nominals (ASNs). We first argue for a distinction between argumental compounds (e.g. *teacher evaluation*) and non-argumental compounds (e.g. *orchid nursery*; contra Borer 2013, which takes all deverbal compounds to be non-argumental), of which the former only realize internal arguments. Second, we argue that prima facie external argument deverbal compounds (e.g. *teacher recommendation*) are actually non-argumental. Third, we show that the distinction between the two types of compounds is explained by the restriction that syntactic structure exhibits in accommodating the (weaker or stronger) degree of idiomat�icity of compounds. In particular, we argue that deverbal compounds cannot include the event structure presupposed by Voice, thus failing to exhibit genuine external arguments and other event structure properties and confirming Marantz's (1984, 1997) claims about the syntactic domain of idioms.

(Deverbal) compounds and ASNs. ASNs like *the washing of the windshield* are known to inherit the base verb's event structure with internal and external arguments and a fully compositional meaning, which correlates with their fair productivity. By contrast, compounds like *windshield washing/washer* are more restricted in the choice of verbal bases and in argument realization, and usually acquire a certain degree of idiomat�icity in interpretation. The crucial difference between deverbal compounds and ASNs that is elucidative for the idiomat�icity vs. compositionality contrast is that only the former can be built from verbal idioms as in (1) or can exist themselves as idioms in the absence of a corresponding verb or ASN as in (2) (see Ackema & Neeleman 2004, McIntyre 2009, Borer 2013):

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| (1) | a. to catch the eye; to break the ice | (verbal idiom) |
| | b. *the catching/catcher of the eye; *the breaking/breaker of (the) ice | (ASN) |
| | c. eye-catching/eye-catcher; ice-breaking/ice breaker | (compound) |
| (2) | a. facelifting/facelifter; babysitting/babysitter | (compound) |
| | b. #the lifting/lifter of (a) face; *the sitting/sitter of (a) baby | (ASN) |
| | c. #to lift (a) face; *to sit (a) baby | (verbal idiom) |

Internal argument (deverbal) compounds. Deverbal compounds, usually referred to as 'synthetic compounds', have received contradictory treatments in the literature. For instance, Grimshaw (1990) claims that they have event structure similar to ASNs (her 'complex event nominals'), while recently, Borer (2013) argues that they are headed by result nominals and implicitly lack event structure and arguments altogether. In the former approach, the non-head counts as an argument of the base verb/derived noun head (cf. Harley 2009), while in the latter deverbal compounds are treated as root compounds (cf. Borer 2013). We argue for a distinction between deverbal compounds whose non-head is an internal argument inherited from the root via incorporation (e.g. *student examination*; see Harley 2009) and deverbal compounds that do not realize any argument and pattern with non-derived noun-noun compounds in receiving a root- (or word-/stem-)based analysis (e.g. *orchid nursery*, *expert opinion*; Borer 2013). We show that compounds with internal arguments are argumental by drawing on their productivity and compositionality in contrast to root-compounds and result nominals.

First, deverbal compounds with an internal argument are just as productive as their corresponding ASNs, if a suitable context is provided and a slightly idiomatized meaning is intended: e.g., if John is scratching a tree and we refer to this as *John's scratching of the tree*, we can easily also (ironically) say that John is doing some *tree scratching* or even call him a *tree scratcher*. Similarly, we could speak of *flower watching/watcher*, *fork flipping/flipper* etc. It is in fact hard to find a reasonable verbal/ASN construction that doesn't already have an 'established' internal argument compound. This productivity, however, does not appear when other arguments are meant to be expressed in deverbal compounds: cf. **student reading*, **baby eating*, **boy scratching* with external arguments, though there are some established root compounds like *teacher recommendation*, *court investigation*.

Second, Borer (2013) argues that the deverbal head in compounds behaves like a result nominal, since it disallows *by*-phrases and aspectual adverbials as in (3).

- (3) the house demolition (*by the army) (*in two hours)

Although the facts in (3) indicate that compounds with internal arguments lack the event structure with Voice and Aspect, they do not show that the heads of these compounds are result nominals. Compounds with internal arguments do not appear in the result nominal context in (4) and typical result nominals cannot derive synthetic compounds. In (5), the compounds can allow a compositional reading that comes from the corresponding ASN/verb, but not the special non-compositional interpretation of the result nominal. We thus conclude that they are not result nominals.

- (4) a. The **examination** (*of the patient) was on the table. (result nominal)
 b. *The **patient examination** was on the table. (compound)
- (5) a. Aristotle's **reading/interpretation** of the world (#for several decades) (result nominal)
 b. #this **world reading/interpretation** (compound)
 c. (linguistic) **transformation** on (syntactic) structure (result nominal)
 d. #the **structure transformation** (compound)

The non-existence of external argument compounds. Borer (2013) claims that only compounds with *-ing* and *-er* suffixes exclude an external argument interpretation, which she explains via the special properties of these suffixes. For other suffixes, she gives some examples which she treats as similar to non-deverbal compounds (see *teacher recommendation*, *court investigation*, which are similar in interpretation to *expert job*, *court verdict* or *expert opinion*). While we agree with Borer's analysis of all these as root compounds, we show that they have different properties from internal argument compounds. This indicates that argumental compounds realize only the internal argument.

First, post-posed possessive modifiers work only with result nominals (without event structure and arguments, see (6a); cf. Grimshaw 1990). Internal argument compounds reject such modifiers in (6b), while compounds with apparent external arguments allow them in (6c). This shows that the latter resemble result nominals and must be treated like root compounds.

- (6) a. an examination (*of the patient) **of Bill's** (result nominal)
 b. *a teacher evaluation **of Bill's** (internal argument compound)
 c. a teacher recommendation **of Bill's** (root compound)

Second, to confirm that the internal argument in deverbal compounds is a true argument, while the external one is not, note that a second internal argument-like phrase is excluded, while a second external argument-like phrase is possible. In (7a), the *of*-phrase cannot introduce Ms Smith as a teacher (the internal argument), but in (7b), with a non-argumental compound, the *by*-phrase can introduce Ms Smith as a teacher (the external argument). (Note that in (7b) the *by*-phrase is not a true external argument, it has the 'author' reading as in *a book by Chomsky*; Fox & Grodzinsky 1998).

- (7) a. *teacher evaluation **of Ms Smith** (argumental compound)
 b. teacher recommendation **by Ms Smith** (non-argumental compound)

The syntactic domain of idiomatic meaning. We have argued for a clear distinction between argumental compounds, which realize only the internal argument, and non-argumental compounds, whose non-heads receive an argument-like reading but they behave like root compounds. Argumental compounds have a more compositional meaning than root compounds, which comes from their realization of the internal argument, and yet, as compounds, they have a degree of idiomaticity, which we usually associate with their frequent professional reading and lack of event implications (e.g. *dog-trainer/training*, see Alexiadou & Schäfer 2010). The question that arises is why only internal arguments are possible in argumental compounds, more precisely, why aren't external arguments allowed? We will argue that this is due to the fact that structures that include Voice and true external arguments cannot receive an idiomatic interpretation (see Marantz 1984, 1997, Arad 2005, Anagnostopoulou & Samioti 2014). Given that internal arguments are arguments of the root, argumental compounds are nominalizations of the root, which incorporates its internal argument. These structures do not allow the special interpretations of result nominals, but being first-level categorizations of roots, they still allow some idiomatization of their meaning. Once the event structure that Voice requires is embedded, i.e. once an external argument is realized, idiomatic meaning is not available anymore and we obtain ASNs. Our analysis also accounts for compounds of the type *city employee/employment* discussed in Lieber (2004); in such cases, as Bobaljik (2003) argues, *city* is not an external argument, since even an 'author' *by*-phrase is excluded: see *employee/employment of/in/at/*by the city* (cf. *recommendation by teacher*, *verdict by court*). In our approach, these are root compounds and receive an interpretation that is fixed by the encyclopedia.

Selected references: Bobaljik, J. 2003. Auspicious Compounds. *McGill Working Papers in Linguistics* 17.2. Borer, H. 2013. *Taking Form*. OUP. Harley, H. 2009. Compounding in Distributed Morphology. *The Handbook of Compounding*. OUP.