Boys buying two sausages each: On the syntax and semantics of distance-distributivity
Zimmermann, M.
In this thesis, I have investigated the syntax and semantics of adnominal distance-distributive elements focusing on the German distributive element *jeweils* in (1a), the German translation of English (1b):

(1) a. Die Jungen haben jeweils zwei Currywürste gegessen.
    the boys have each two curry sausages eaten

b. The boys bought two curry sausages each.

German *jeweils* is much less restricted in its syntactic distribution than its English counterpart binominal *each* in (1b). First, *jeweils* also occurs adverbially, as in (2).

(2) Peter ist jeweils als erster gegangen.
    Peter is each time as first went
    ‘Each time, Peter was the first to leave.’

Second, *jeweils* has a much wider distribution even on its adnominal use as a distance-distributive element. For instance, it can occur in underlying subject position (3a), and it can distribute over pluralities that are not denoted by a DP, but e.g. by two conjoined verbs (3b):

(3) a. Jeweils zwei Offiziere haben die Ballerinnen nach Hause begleitet.
    each two officers have the ballerinas to home accompanied
    i. ‘Each time, two officers accompanied the ballerinas home.’
    ii. ‘Each of the ballerinas was accompanied home by two officers.’

b. Peter hat Maria aus jeweils zwei Gründen gelobt und kritisiert.
    Peter has Maria for each two reasons praised and criticised
    ‘Peter has praised and criticised Maria for two reasons respectively.’

The objectives of the thesis were threefold:

(O1) To account for four puzzles posed by the syntactic and semantic behaviour of *jeweils* by providing a surface compositional analysis of *jeweils* on both its uses, but in particular on its adnominal use, where *jeweils* behaves as a distance-distributive element (DD).

(O2) To provide a unified cross-linguistic analysis of distance-distributivity for a sample of languages including West Germanic, Scandinavian, Romance, Slavic and East Asian languages.

(O3) To show that an integrated syntactic and semantic account of DDs fares better than a purely syntactic account.

The structure of the discussion was as follows: An initial step saw the introduction of the relevant data both from German and from other languages (including English, French,
Italian, Norwegian, Icelandic, Russian, Czech, Bulgarian, Korean, and Japanese). Based on these data, the first hypotheses were formulated. Then, I presented the syntactic analysis of distance-distributive constructions, first for adnominal jeweils, then for DDs in other languages. In a next step, I showed that distance-distributive constructions are interpretable compositionally from surface structure. Finally, the syntactic and semantic analysis was put to use in solving the empirical problem of an unexpected adverbial reading with adnominal jeweils.

The main results of the discussion can be summarised as follows:

(R1) There is no distance-distributivity as an independent grammatical phenomenon: Careful analysis reveals the syntactic and semantic systemacity behind an – at first sight – irregular property of natural languages.

It was shown that the distance-distributive effect observed with adnominal jeweils is the result of (i.) the internal structure of jeweils, namely the presence of an NP-proform –weil-, which is the syntactic complement of the universal quantifier je, and which restricts the latter semantically; and (ii.) the syntactic status of jeweils as part of a complex DP in an inverse linking structure. With these assumptions, a surface compositional analysis of (adnominal) jeweils is possible, thus obviating the need for LF-movement for interpretive reasons. Both adverbial and adnominal jeweils are analysable as generalised quantifiers. The difference in interpretation is due to their different structural position, making the ambiguity of jeweils a case of structural ambiguity.

(R2) Languages exhibit systematic patterns regarding the syntactic and semantic behaviour of distance-distributive elements: Languages are predictable (at least what concerns distance-distributivity)

It was shown that languages fall into four classes regarding the behaviour of DDs, depending on two independent properties. The possibility or impossibility of overt DP-internal movement in a language determines the occurrence of the DD in pre- or postnominal position. The ability or inability of a DD to distribute over the denotations of non-DPs, and to occur with underlying subjects depends on its syntactic feature content, namely on whether the DD contains D-features or not. With the exception of Japanese, the following correlation between the feature content of a DD and its morphological shape was observed: If the DD in a language is identical to the determiner-quantifier of that language, it contains D-features and is restricted to syntactic configurations in which these D-features can be checked. If the DD differs from the determiner-quantifier, it has no D-features and its syntactic distribution is not restricted by the need to check D-features. With these generalisations, a large part of the syntactic distribution and possible interpretation of a DD in a given language is predictable on the base of its morphological shape. This result may therefore serve as a suitable starting point for future investigations of distance-distributivity in languages other than the ones considered in this thesis.

(R3) Structural factors are important for the interpretation of distance-distributive elements (in particular for the adverbial interpretation of adnominal jeweils), but the semantic requirement of interpretability also has an influence on their syntactic distribution.
It was shown that structural factors are responsible for the ambiguity of adnominal and adverbial jeweils. In addition, they are also responsible for whether or not an adverbial interpretation is possible for an adnominal element. On the other hand, the requirement of semantic interpretability also has an (indirect) effect on the syntactic distribution of DDs. DDs are excluded from certain syntactic positions simply because they are not interpretable in this position. In addition, the semantic component was shown to have a more direct influence on the syntactic component in the case of backwards distribution with DDs in subject position. It was shown that in this case, LF-movement is necessary in order to allow for an interpretation that would not be available otherwise.

Given the above considerations, the overall result of the discussion turns out to be that it is a fruitful, and often indispensible strategy to consider both structural and interpretive factors in the quest for an adequate account of a particular natural language phenomenon.