Adverbs and Adverbial Adjuncts at the Interfaces

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Introduction
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1. Goals
This volume presents the results of a three-year project of the Research Institute for Linguistics of the Hungarian Academy of Sciences, investigating – primarily on the basis of Hungarian material – the syntactic and semantic properties of adverbs and adverbial adjuncts.

The aim of the project has been twofold. The category ‘adverb’ and the function ‘adverbial’ belong to the most controversial notions of grammatical theory. Such basic issues as whether or not adverb is a primitive syntactic category constrained by X’ theory, and whether so-called adverbial adjuncts are targets of adjunction or occupy specifier positions, where they participate in feature-checking, represent open questions. The answers to them should be based, at least partially, on empirical evidence; however, adverbs and adverbial adjuncts are typically ignored, or mentioned only in passing in the generative grammars of particular languages, among them the generative grammars of Hungarian. Our goal has been to contribute to the clarification of issues of the grammar of adverbs and adverbial adjuncts on the basis of extensive and detailed empirical analyses of various types of adverbs and adverbial adjuncts of Hungarian.

More generally, adverbial modification appears to represent an ideal testing ground for the examination of the interaction of the syntactic, semantic, and prosodic components of grammar. In the Minimalist framework of generative theory, syntactic operations can be factored into general computational mechanisms, and into operations satisfying interface requirements. The studies of the present volume examine the division of labor among these components in the grammar of adverbials, separating purely syntactic constraints from requirements imposed upon syntax by semantic and prosodic demands.
2. Questions and answers

2.1. The category ‘adverb’

The category ‘adverb’ has an uncertain status in the set of lexical categories. If lexical categories are those characterized by either one or both of the features [+V] and [+N] (cf. Chomsky 1981:48), then they clearly do not include the category ‘adverb’—despite the fact that adverbs are also open-class items with a descriptive content, similar to [+N, -V] nouns, [-N, +V] verbs, and [+N, +V] adjectives. The possibility has been raised that adverbs (or at least certain types of them) are intransitive prepositions characterized by the features [-N, -V] (cf. Emonds 1985, Huddleston and Pullum 2002). The assimilation of adverbs to adjectives has also been attempted (Radford 1988). The elimination of the category ‘adverb’ has been supported by claims that AdvPs have no properties unique to them; their adverbial function is shared by clauses, noun phrases and pre- or postpositional phrases functioning as adverbials. If we nevertheless accept the existence of the category ‘adverb’, it remains a question if adverbs project a phrase, and if various types of adverbs represent a uniform category in this respect. In other words, the question is if adverbs are constrained by X’ theory. Chomsky (1981), for example, does not include adverbs in the set of heads subject to X’ theory, unlike Radford (1988).

Two chapters of the present volume contribute to the clarification of this issue, which converge on the claim that adverbs are PPs. Chapter 3 by Surányi proves about a type of verbal particles, traditionally categorized as adverbs, that they are PPs involving a pro complement. Chapter 7 by Kádár argues on the basis of historical and synchronic evidence that adverbs are PPs (i.e., [-N, -V] projections), whose NP complement is either incorporated into the P head or is phonologically null. Adverbs of the former type derive from case-marked noun phrases whose adverbial case suffix, or stem, or both have become obsolete, whereby they are understood to be non-compositional synchronically. Adverbs of this type appear not to project an AdvP because they represent a maximal projection in themselves. Manner adverbs derived from adjectives, on the other hand, are hypothesized to represent case-marked NPs involving an adjectival modifier and an empty N head meaning ‘manner’. The -An superrssive case suffix or -Ul essive case suffix cliticized to the adjective is of the category P, hence the manner adverb is also of the category PP. The occasional PP complement of the manner adverb is, in fact, a complement of the adjective, e.g.:
2.2. Argument-adjunct distinction

It is not only the category ‘adverb’ that represents a problem in generative theory; the function ‘adverbial’, or ‘adverbial adjunct’, more precisely, the adverbial adjunct versus argument distinction also lacks clear-cut criteria. Chapter 8 by Peredy demonstrates that the traditional criterion of optionality breaks down in the case of a large class of obligatory adjuncts. The syntactic properties specific to adjuncts are iterability, variable morphological case marking, and islandhood for extraction.

2.3. Adjunction, or feature-checking in specifier position

A question that has been in the focus of interest in the past decade is how adverbial adjuncts enter the derivation of a sentence. According to mainstream generative tradition, adverbs are added to sentence structure by adjunction; that is, they are merged with a category without changing its bar level, merely establishing a new segment of it. This view survives, for example, in Chomsky (1995:329-334). The adjunction theory of adverbial modification does not predict that the order of adverbs is largely invariant across languages, as pointed out e.g. by Travis (1988) – but these ordering restrictions are intuitively felt to be semantically motivated, reflecting...

The most detailed explication of the adjunction theory of adverbial modification has been put forth by Ernst (2002). He claims that adjuncts merge with the projection they modify in a syntactically largely unconstrained manner; their adjunction site is determined primarily by their semantically motivated, lexically specified selectional needs. The selectional requirements of adverbials refer to events, propositions, times, and predicates. The fixed relative order of adverbials adjoined to one and the same projection is derived by means of the so-called Fact Event Object (FEO) Calculus. Fact event objects such as events, propositions and speech acts form a hierarchy, and the FEO Calculus allows any FEO type to be freely converted to any higher FEO type but not to a lower one. Thus an event can be freely converted to a proposition, or a proposition can be freely converted to a speech act, but not vice versa. This ensures that, when a syntactic projection represents simultaneously, say, an event and a proposition (as happens in a topicless Hungarian sentence), and it has a modifier taking an event as its argument, e.g., a manner adverb, and another modifier taking a proposition as its argument, e.g., a modal adverb, the latter must precede the former, as illustrated in (2):

(2)a. \[\text{PredP\ Valószínűleg [PredP\ hangosan [PredP\ horkol\ valaki]]}\]

\[\text{probably\ loudly\ snores\ somebody}\]

‘Probably somebody is loudly snoring.’

b.*\[\text{PredP\ Hangosan [PredP\ valószínűleg [PredP\ horkol\ valaki]]}\]

The innermost segment of PredP represents an event, as required by the manner adverb combined with it. However, in order to satisfy the selectional requirement of the modal adverb, the event represented by the PredP projection subsuming the manner adverb must be converted to a proposition. A manner adverb in front of the modal adverb would mean the conversion of the proposition back to an event, which is excluded by the FEO Calculus.

In the theory of Ernst (2002), the placement of adverbia l adjuncts is also affected by some PF constraints, among them Directionality Principles. It is claimed that head-initial languages allow both left- and right-adjunction, whereas head-final languages only allow the former. Weight theory requires, disallows, or (dis)favors certain positions depending on the weight of the adjunct. It is invoked, for example, to account for the ordering of postverbal adjuncts in the English sentence.
It was observed a long time ago that adjuncts are invisible for certain grammatical processes. For example, an adjunct modifying a preposed wh-expression is not bound by arguments c-commanding the trace of the wh-expression. This fact, e.g., the lack of a Binding Principle C effect between he and the trace of John in Which picture of Bill that John liked did he buy, has been accounted for by the assumption that adjuncts are inserted into the sentence late in the derivation (cf. Lebeaux 1988). Åfarli (1997) derives also the relative freedom of the linear ordering of adverbials from their late insertion. He argues that an adverbial originates on a separate axis (called axis z), beyond the plane in a three-dimensional phrase structure system. In PF, a z-axis element can be linearized at will with respect to the daughters of the node it is adjoined to. According to Chomsky (2001) and Bobaljik (2002), too, adverbs are merged in in a third dimension, in fact, countercyclically, and are integrated into linear order in PF.

The fact that the relative order of adverbs is more or less fixed, and more or less invariant across languages, whereas instances of adjunction to one and the same category are syntactically unordered, has led to the formulation of a theory of adverbial modification in which adverbial phrases are unique specifiers of different functional projections, whose order is fixed in Universal Grammar. Alexiadou (1997) elaborated a restricted version of this theory. She distinguished specifier-type and complement-type adverbs. The former are generated to the left of the verb, in the functional domain, and the latter, to the right of it. Complement adverbs undergo incorporation – cf. also Rivero (1992). In the theory of Cinque (1999), clause structure contains as many as 40 functional projections encoding various subtypes of mood, modality, tense, aspect, and voice. In this structure, each subtype of adverbial phrases occupies the specifier position of a different functional projection, whose head – sometimes realized as an auxiliary – instantiates a functional notion corresponding to the meaning of the given adverbial phrase. The adverbs enter into matching relations with the relevant features of their respective functional heads. Cinque claims that not all of the relative orders among the functional projections harboring adverbial phrases can be reduced to scope relations among semantic operators; therefore, the hierarchy of functional projections is likely to be a property of the computational component of Universal Grammar. The proliferation of adverbial projections also brings about a proliferation of subject and object positions. For example, in Italian (and many other languages) the relative position of sentence adverbs and the subject is free. In the framework of Cinque
(1999), this is indication of the presence of further, DP-related functional projections between those harboring adverbial specifiers.

The specifier theory of adverbs predicts rigid word order positions for adverbs in the sentence. (This is not a necessity though; Alexiadou (1997), for example, does allow adverb movement under limited conditions.) Based on the assumption that adverbs occupy invariant positions, they are interpreted as ‘sign posts’ of sentence structure. That is, if the relative position of an adverb and some other sentence constituent changes, it is taken to indicate the movement of the other constituent across the adverb. (Adjunction theories allowing right adjunction are less strict in this respect.) Cinque (1999) relaxes this rigidity by the duplicating some of the projections, with one occurrence in the postverbal domain, and another, in the preverbal domain, allowing ‘focusing’ and ‘parenthetical’ uses of AdvPs. There have been attempts (e.g. Laenzlinger 2005) to achieve a larger freedom of adverbial word order in Cinque’s feature-checking framework by combining the rigid series of base-generated, universal functional projections harboring adverbs with remnant movement.

Of the alternative approaches to adverbials, the theory of Ernst (2002) proved to be most adequate to account for the facts of adverbial modification in Hungarian. We have opted for Ernst’s theory for the following reasons, among others: (i) The large number of functional projections assumed to harbor the different types of adverbs in Cinque’s theory lack independent empirical motivation in Hungarian, a language with practically no auxiliaries. (ii) In the preverbal section of the Hungarian sentence, all scope-bearing elements precede and c-command their scope. The Scope Principle derives their order, including the order of adverbs and adverbial adjuncts, for free; the base-generation of dozens of functional projections in a predetermined order to derive the word order of adverbs seems redundant. (iii) In Hungarian, all types of adverbs and adverbials can surface both preverbally and postverbally with similar scope possibilities, which falls out in an adjunction framework, assuming both left- and right adjunction, but cannot be derived in Cinque’s theory. If adverbs occupy specifier positions, we can generate further series of functional projections for them in the postverbal part of the sentence, however, we will not be able to derive their scope interpretation from those postverbal positions. (iv) There is clear evidence of weight theory playing a role in the ordering of adverbials in the postverbal section of the Hungarian sentence; but weight theory only has a role in Ernst’s framework.

2.4. Interfaces
4.1. Syntax–semantics interactions

The current Minimalist program of linguistic theory aims to minimize syntax, narrowing it down to general computational principles. The output conditions of syntax are claimed to be determined at the interfaces, by requirements of the interpretive components. In the syntax of adverbs and adverbial adjuncts, the role of semantic factors (e.g., selectional restrictions and scopal needs) is particularly transparent, hence adverbs and adverbial adjuncts provide strong support for the Minimalist strategy.

The position where an adverb or adverbial adjunct is merged into the clausal projection is determined by the selectional properties of the adverb(ial). Each adverbial class selects a specific type of semantic argument, and, in accordance with the Scope Principle, it is merged into the sentence at the point where it c-commands the syntactic realization of this argument. The studies of this volume discuss several adverbial types with different selectional requirements: for example, Ps selecting for a time expression (chapter 6), adverbs selecting for an event, among them degree, manner, and frequency adverbs (chapter 13), adverbs selecting for a proposition, e.g., epistemic adverbs and Ps introducing temporal clauses (chapters 5 and 6), adverbs selecting for a verum focus (chapter 5), and adverbs selecting for AspP (chapter 11). Several chapters analyze semantically underspecified adverbs and adverbials, which can be merged into the sentence at various points of the clausal projection, with the different merge-in points yielding different interpretations. In addition to adverbs ambiguous between a manner and a clausal reading, chapter 5 also discusses adverbs with two clausal readings, one corresponding to probability, the other one, to certainty. There are also three-way ambiguous adverbs, e.g., gyorsan ‘quickly’ (chapter 11), and biztosan ‘certainly’ (chapter 5), whose three readings are associated with three different merge-in points.

The -vA adverbial participle discussed in chapter 4 can be merged with at least four different shells of the extended verbal projection, and the different merge-in points are responsible for the stative versus manner interpretation of the participle, as well as for the lack or presence of circumstantial adverbials, of an external argument, and of clausal operators in the participle phrase. Since the merge-in point of -vA in the participle phrase also determines the merge-in pont of the participle phrase in the matrix clause, it is also responsible for the subject or object control of the subject of the participle.

Chapter 6 compares two types of temporal adverbial clauses introduced by relative pronoun+P complexes. The syntactic and semantic differences
of the two constructions are derived from the selectional properties of the two types of Ps: When a P selects a time expression, the temporal relative clause involves movement of the relative operator from inside the clause, while other temporal clauses, where the P selects an event or proposition, are derived without such movement.

The semantic requirements of adverbs are sometimes manifested in cooccurrence restrictions. Chapter 10 gives a detailed analysis of cooccurrence restrictions among five types of temporal adverbials and nine classes of verbs with different event structures, pointing out their incompatible semantic subcomponents. Chapter 11 derives the interpretation of gyorsan ‘quickly’, having a manner, a rate, or an aspectual reading, from the interplay of its syntactic position and the event structure of the V it modifies. For example, the manner reading requires an event with an agent, the rate reading requires an event with a run-time, whereas the aspectual reading requires an event with a definite onset. As chapter 12 demonstrates, there are cooccurrence restrictions between particular types of counting adverbs and particular types of situations, as well. For example, multiplicatives and frequency adverbs can only modify bounded situations felicitously. Frequency adverbs require a time-interval argument; furthermore, they are strange with unique situations. At the same time, coerced interpretations are also possible, and they can be facilitated by marked merge-in positions and by marked prosody.

Chapter 3 argues – developing ideas of Koster (1994) and Farkas and de Swart (2003) – that all elements in Spec,Pred, the neutral position of both (pseudo-)incorporated bare nominals and verbal particles, are interpreted as semantically incorporated into the verbal predicate. As a consequence of this property of the syntax–semantics mapping, only those locative adverbial elements may appear in this immediately preverbal position whose semantic type is predicative, allowing them to undergo semantic incorporation. Accordingly, adverbials interpreted as strong quantifiers are excluded from this position. As an adverbial PP may be interpreted as a predicate even if its Ground argument is a definite DP, it is also predicted that such PPs are able to fill the Spec,PredP position. The situation is known to be different for nominals of the category DP, which, as non-predicative expressions, are excluded from appearing in Spec,PredP.
Chapter 8 demonstrates the intertwining of syntactic and semantic constraints in licensing a [-specific] or [+specific] theme argument. Sentences involving a verb of existence, coming into being, or creation are known to be ungrammatical with a [+specific] theme, for a semantic reason (the existence of their theme cannot be both asserted and presupposed). It is shown that a purpose state adverbial can also turn verbs of other types into predicates of existence/coming into being/creation. In such sentences it is semantics that imposes a constraint on the referential properties, and hence the syntactic structure, of the internal argument. The non-specificity requirement on the internal argument of Vs of existence/coming into being/creation can also be blocked by a syntactically encoded semantic operation: by adding a focused constituent (an „obligatory adjunct”), whereby the internal argument becomes part of the presupposition.

Chapter 9 derives the syntactic differences of inclusive and exclusive pronoun + comitative constructions from the different referential relation between the comitative and a semantic subcomponent of the plural pronoun. The plural host pronoun is analyzed as the conjunction of a singular pronoun (I, you, or he) and a semantically underspecified element meaning ‘others’. The comitative is adjoined to the host NP in both cases, and the inclusive reading is a consequence of the comitative being coindexed with the underspecified conjunct, forming a kind of appositive construction with it. Such an appositive relation is impossible between a non-referential pronoun (e.g., a wh-pronoun) and a referential adjunct, or between a referential pronoun and a non-referential adjunct (e.g. a universal quantifier), i.e., the inclusive reading is excluded in both constructions.

Chapter 13 also motivates an apparently syntactic constraint semantically: negative adverbs of degree, manner, and frequency are obligatorily moved into focus position (unlike their positive counterparts). These adverbs are scalar elements, representing negative values of bidirectional scales. A scalar element $n$ is shown to mean ‘at least $n$’, ‘$n$ or more’ in every sentence position but in the focus slot, where the [+exhaustive] feature associated with it excludes the higher alternatives. Thus the syntactic constraint serves to prevent a semantic anomaly.

The perspective of chapter 14 is the opposite: it examines the effect of syntactic structure upon semantic interpretation, and notices that the syntactic differences of English cleft sentences and the corresponding Hungarian focus constructions lead to semantic differences (different scope possibilities).
4.2. Syntax–phonology interactions

When the operation of adjunction forms from the objects $\beta$ and $\alpha$ the ordered pair $<\alpha, \beta>$ $\alpha$ adjoined to $\beta$, $\beta$ retains all its properties, therefore $\alpha$ is thought to be attached to $\beta$ on a separate plane (cf. Chomsky (2001)). $\alpha$ is integrated into the primary plane (the linearly ordered structure) in the course of mapping to PF. In Hungarian, different linearization rules apply in the pre- and postverbal sections of the clause (i.e., in the left periphery of the phase constituted by the clause, and in the phasal domain – cf. É. Kiss (2008)). Preverbal constituent order is determined by semantic considerations: scope-bearing elements, among them adverbials, must c-command the domain they take scope over. The Hungarian sentence being right-branching, preverbal scope-bearing elements precede their scope. The postverbal order of constituents, among them right-adjoined wide-scope adverbials, and narrow-scope adverbials crossed by V-movement, on the other hand, is constrained by a phonological principle: the Law of Growing Constituents formulated by Behaghel (1932), requiring that phonologically light (short and/or unstressed) constituents precede heavy ones – as discussed in chapter 2.

The phonological component not only determines postverbal constituent order; it can also participate in the disambiguation of postverbal adverbials. Disambiguation is necessary when the merge-in point of a postverbal adverbial linearized in accordance with the Law of Growing Constituents cannot be reconstructed – because it has more than one potential merge-in points in the clausal projection, or it can have either wide or narrow scope with respect to another postverbal adverbial. As chapter 5 examines in detail, a postverbal adverbial constitutes an Intonation Phrase (IP) of its own, which an IP-restructuring rule unifies with the IP formed by the clausal projection it modifies. Apparently, this optional restructuring rule is subject to the condition of Recoverability, i.e. it is blocked when IP-restructuring would collapse two prosodic structures with distinct interpretations.

The PF component also plays a role in the syntax of directional PPs semantically incorporated into the V. As chapter 3 argues, these PPs raise through Spec,PredP to Spec,TP, establishing a so-called light-headed chain, in which descriptive material is spelled out in the root position. The top link only has the head of PP spelled out. Deletion is ideally complementary in the two chain-links, hence the P of the top link is not required syntactically to be spelled out in its base position. Morphologically, however, it is a bound suffix, hence neither P in the root copy, nor its complement noun phrase in the top copy can be deleted. P of
the root link is spelled out, whereas its complement in the top link is replaced by a covert *pro*, a phonologically null feature bundle.

3. The chapters

‘Syntactic, semantic, and prosodic factors determining the position of adverbial adjuncts’ by Katalin É. Kiss explores the mechanism of adverbial placement in the Hungarian sentence. It shows that the position of adverbial adjuncts is determined by an interplay of semantic, syntactic, and phonological factors. The semantic factor at play is the selectional requirement of the adverbial, encoded in the lexicon. The major syntactic factors determining the grammar of adverbial adjuncts are the Scope Principle, requiring that the adverbial c-command the syntactic realization of this argument, and the requirement that it be merged in via adjunction, on a separate axis, to be integrated into the primary syntactic plane only in PF (cf. Chomsky 2001). The assumption that adjuncts can be linearized either to the left or to the right need not be stipulated; it represents the null hypothesis. The postverbal constituents of the Hungarian sentence, including adverbial adjuncts, can be spelled out in any order, but the order observing the Law of Growing Constituents (Behaghel 1932) is valued as optimal by native speakers.

‘Locative particle and adverbial incorporation at the interfaces’ by Balázs Surányi analyzes „incorporated” locative adverbials, i.e., locative adverbial elements behaving as „verbal modifiers” in the Hungarian clause. Surányi proposes a syntactic derivation of the adverbial+V complex, adopting a pseudo-incorporation analysis. As for the category of adpositional locative particles, Surányi convincingly argues that they are not simply Ps, but full-fledged PPs with a pro argument. They undergo XP-movement from their base position (which, as shown, can be an argument, a secondary predicate, or an adjunct position) to Spec,PredP. At the interpretive level, locative elements in Spec,PredP are semantically incorporated into the verbal predicate. The PredP projection is placed by Surányi lower than by the other authors. Temporal and source adverbials and particles, agents, as well as external stative locatives cannot „incorporate”, which is taken to be evidence that PredP, the syntactic locus of incorporation, is situated below the base position of these constituents, but above that of patients/themes/obliques, as well as goal, route and internal
stative locative arguments/adjuncts. The surface position of pseudo-incorporated locative adverbials and particles is identified as Spec,TP, where they get raised to in a second movement step to satisfy T’s „EPP” property.

Locative particles that have a lexical associate (a ‘double’) are argued to be related to their doubles via movement. In the case of suffixal adpositional particles, this movement creates what is referred to as a 'light-headed’ chain, a marked spell-out pattern resulting from Chain Reduction in which the root link is preserved at PF in full, while the top link is also pronounced, as the inflected form of the P head of the locative PP.

Due to the fact that adverbial constituents in Spec,PredP are semantically incorporated, it is correctly predicted that adverbials interpreted as strong quantifiers are excluded from this position: this is because only those elements are able to undergo semantic incorporation whose semantic type is a predicate.

‘The syntax of Hungarian –vA adverbial participles: A single affix with variable merge-in locations’ by Huba Bartos discusses so-called adverbial participles, a family of constructions including variants differing with respect to the voice of the V, the controller of the PRO subject, the possibility of circumstantial adverbial modifiers and left peripheral operator projections, manner versus state interpretation, and position in the main clause. Bartos claims that these differences all follow if we assume a single -vA participial suffix merged with different shells of the extended verbal projection.

The smallest verbal projection that -vA can merge with is a verbalized root and its internal argument. Such minimal adverbial participle phrases appear in a copular matrix domain, where the nominative case of their internal argument is licensed by matrix Tense. If -vA is merged one shell higher, above the CAUS head, the resulting participle phrase will also include an event variable, which can license circumstantial adverbials. If the -vA suffix is merged in above Voice, the Voice head will assign accusative case to its internal argument, and will licence an external argument represented by PRO, or assigned accusative case by a matrix ECM V. The -vA suffix can also be merged with an IP-type verbal projection, in which case it has a rich functional structure. The size of the verbal projection that -vA combines with not only determines the argument structure of the participial verb but also affects the interpretation of the participle: whereas a participle phrase derived from vP is necessarily
stative, a participle phrase involving an event argument can also denote a transparent relation (e.g., manner) between the event and a participant.

Bartos describes an interesting matching effect between the category of the projection merged with the -\(\nu A\) participle suffix and the category of the matrix projection merged with the participle phrase (i.e., the more extended the projection of the participle phrase is, the higher it is merged in the matrix sentence). This matching effect is identified by Bartos – tentatively and somewhat speculatively – as an instance of the coordinate structure constraint; he analyzes -\(\nu A\) as an element forming a conjunction from the matrix clause and the participle phrase.

‘Adverbial (dis)ambiguities. Syntactic and prosodic features of ambiguous predicational adverbs’ by Barbara Egedi examines various types of semantically underspecified adverbs, which are associated with different readings and different prosodic patterns depending on their adjunction site. In the case of adverbs ambiguous between a manner and a clausal, e.g., a subject-oriented, reading, the manner interpretation arises when the adverb is adjoined to PredP (the predicate phrase of neutral sentences, to be subsumed by FocP and/or NegP in non-neutral ones). The merge-in positions of the clausal variants are more problematic. They follow the topic (i.e., the logical subject of predication) in the unmarked case, but are still not part of the predicate phrase – given that they precede the pitch accent marking its left edge. Egedi identifies their adjunction site with the ForceP projection of Haegeman (2002), and the SD (Speaker Deixis) phrase of Tenny (2000) and Haegeman (2006).

If SDP directly subsumes PredP, the adjunction site of a left-adjoined ambiguous adverb can only be identified on the basis of its stress: PredP-adjointed adverbs are stressed, whereas SDP-adjointed adverbs are unstressed. Interestingly, this difference is neutralized in focus constructions and in negated sentences, where PredP-adjointed adverbs also lose their stress. Owing to a PF rule of Hungarian, which allows the free linearization of postverbal constituents, the adjunction site of a postverbal adverb cannot be determined on the basis of its relative position, either. Egedi demonstrates that such sentences are, nevertheless, disambiguated: the intonational phrase (IP) restructuring rule which unifies the intonation phrase constituted by a sentence adverbial with that of the clausal projection it modifies is blocked in such constructions, presumably because IP-boundary deletion is subject to the condition of Recoverability.

Egedi also finds a three-way ambiguous adverb: \textit{biztosan} ‘certainly’, which has, in addition to its manner reading, two clausal readings, one corresponding to probability, the other one, to certainty. \textit{Biztosan} under the
certainty reading, together with a group of other epistemic adverbs, has a number of atypical properties, e.g., they bear focus stress, destressing the subsequent sentence part; and they can occur in questions, imperatives, in the antecedent of conditionals, and in the scope of negation. Egedi derives their syntactic, semantic and prosodic properties from their association with a so-called verum projection.

‘Temporal adverbial clauses with or without operator movement’ by Barbara Ürögdi compares the syntactic and semantic properties of three types of temporal clauses, and traces back their differences to the selectional properties of the temporal adpositions they involve. Some of the adpositions take a time expression as their complement, whereas others take an event or proposition. In the former case, i.e., in “regular” temporal relative clauses, the relative operator (which can be realized by a bare wh-word as in Hungarian, or an empty operator as in English) originates inside the embedded clause as a temporal modifier of the embedded predicate, and moves up to the left edge of the temporal clause in the standard manner of relative clause formation. In the latter type of temporal clauses, the relative pronoun+P complex starts out externally to the embedded clause; the P functions as an adposition taking the entire embedded IP as its complement (in Hungarian, with the mediation of a relative determiner that ends up morphologically hosting the P element). In sentences involving a regular temporal relative, the time of the relative clause is shared with that of the main clause. In sentences involving an “IP relative”, on the other hand, the temporal relation of the two clauses is indicated by the adposition connecting them, i.e., the adposition functions as a temporal connective. In Hungarian, Ps selecting an entire event can also combine with a propositional that-clause.

Two P elements - óta ‘since’ and -ig ‘while/until’ - exhibit dual behavior with respect to both semantic and syntactic criteria (in particular, time-sharing between the two clauses, and the availability of long-distance dependencies indicative of operator movement, cf. Larson (1990)). Prompted by the extensive literature on ‘until’-clauses in various languages, the chapter examines the properties of –ig in detail. Looking at scope interactions (of negation, focus and –ig) as well as the licensing of negative quantifiers, the chapter argues for a syntactic explanation that does not rely on lexical ambiguity or so-called ‘expletive negation’. The analysis is then extended to English to explain the availability of ‘low readings’ (cf. Geis (1970), Larson (1990)), which is argued to fall out of the same distinction (the presence or absence of operator movement from inside the clause) modulo morphological differences (the P+wh complex is
always generated in a local relationship in Hungarian, whereas in English the P always starts out outside the temporal clause).

‘Adverbial versus adjectival constructions with BE and the category Adv’ by Edit Kádár addresses the question of the syntactic category of adverbs and adverbial adjuncts, focusing on the differences between copula + AdjP and copula+AdvP constructions. Kádár argues that a large subset of Hungarian adverbs represent a transitory stage in the diachronic cycle ‘nominal with an (obsolete) adverbial case suffix → adverb → postposition → adverbial case suffix’, and proposes to analyze both nominals with an adverbial case suffix and adverbs as PPs. Crucially, Advs are not intransitive Ps but Ps having incorporated their complement. Verbal particles, traditionally categorized as Advs, are also PPs (here the analysis converges with that of Surányi, who also argues for the PP analysis of a type of locative verbal particles). Adverbs derived from adjectives with the Hungarian equivalent of –ly, formally identical with the superessive case suffix, are hypothesized to be PPs involving an adjectival modifier and an empty nominal meaning ‘manner’, with the case suffix cliticized to the adjective.

Adverbs and adjectives seem to show up in the same type of Adv+copula/Adj+copula construction. Kádár demonstrates that the parallelism of the two constructions is only apparent; they behave differently in several respects. For example, the copula is always spelled out in the presence of adverbs, but is missing in 3rd person present indicative in the presence of adjectives. Adjectives can undergo predicate clefting on their own; adverbs, on the other hand, undergo predicate clefting only together with the copula. The copula associated with adverbs can be subjected to predicate fronting in itself; the copula associated with adjectives, on the other hand, cannot. Kádár concludes that the copula accompanying adverbs is a verbal element inserted into sentence structure under V; the copula accompanying adjectives, on the other hand, is inserted under I. That is, in sentences involving an adjective + copula, the predicate phrase is the AdjP; the copula is a dummy element providing lexical support to phonologically salient tense and person markers. An adverb, more generally, a PP, whether represented by an adverb, a noun phrase with an adverbial case, a noun phrase with a postposition, or a verbal particle, on the other hand, cannot function as a primary predicate. This is in accordance with the typological findings of Stassen (1997), according to whom locative predications are characteristically encoded by a PP and a verbal „support” element across languages.
‘The Definiteness Effect and the adverbial licensing of presentational constructions’ by Márt Peredy provides a solution to the problem of „obligatory adjuncts” in the framework of a novel theory of presentational sentences. The fact to be accounted for is that certain verbs can take a [-specific] indefinite theme only in the presence of an adjunct, which, therefore, appears to be obligatory in the given construction; for example, ??Útöttem egy tojást ‘I cracked an egg’ vs. Útöttem egy tojást a serényőbe ‘I cracked an egg into the pan’. Peredy provides an explanation in the framework of Parsons’s event semantics (1990). Her theory is built on the distinction of real and intentional theme arguments. Presentational interpretation takes place when an actual entity is identified as the instantiation of an intentional entity. The intentional entity can be introduced either by a verb of creation or existence (e.g., I have written a poem; There is a problem), or by a purpose state adverbial (typically a beneficiary or a goal, as in I have cracked an egg into the pan). She argues that obligatoriness has nothing to do with argumenthood. A purpose state adverbial is obligatory in as much as without the persistence of the purpose state the theme is understood as [+specific], and no presentational reading is available. Another construction with an „obligatory adjunct” also has a prosodic aspect: sentences involving a verb of existence, coming into being, or creation can only have a [+specific] (e.g., a definite) theme if they also contain a focus (in most cases, a focused adjunct), cf. ??The baby was born vs. The baby was born YESTERDAY. Verbs of creation/coming into being, representing par excellence presentational predicates, select a [-specific] theme; however, in the presence of a focused adjunct (or argument) different from the theme, the primary presentational statement can be presupposed, and the presuppositional environment licences a [+specific] theme.

‘Comitative adjuncts: appositives and non-appositives’ by Éva Dékány examines comitatives, focusing on an interesting ambiguity: expressions involving a comitative adverbial and a plural pronoun as its host DP (e.g., mi Jánossal ‘we with John’) have both an exclusive reading, with the comitative added to the referent of the pronoun, and an inclusive reading, with the referent of the comitative included in the referent of the pronoun. Most constructions of this type are ambiguous; however, in certain cases one reading or the other is blocked. For example, the inclusive reading is excluded when the host pronoun has undergone wh-movement; when a non-restrictive relative intervenes between the host and the comitative; when the comitative is expressed in a morphologically marked way; and when the comitative bears the sociative case. The
exclusive reading, on the other hand, is missing when the pronoun and the comitative are focus-moved together. Dékány proposes slightly different analyses for the two constructions. The plural host pronoun is analyzed as the conjunction of a singular pronoun (I, you, or he) and a semantically underspecified element meaning ‘others’. The comitative is adjoined to the host NP in both cases, and the inclusive reading is a consequence of the comitative being coindexed with the underspecified conjunct, forming a kind of appositive construction with it. The distributional differences of the two types of comitatives is predicted as follows. The wh-extraction of the host DP (who, ... t, with John) is impossible under the inclusive reading for the same reason why it is impossible in all appositive constructions: because one and the same expression cannot be simultaneously both referentially open and referentially fixed. The fact that the host and the comitative can undergo focus movement together only under the inclusive reading is also independently motivated: constituents in Spec,FocP must be head-final (hence XPs with a right-adjointed modifier cannot be focused); however, appositive constructions of all types are licensed in Spec,FocP; obviously a head referentially non-distinct from the head of the host XP does not violate this restriction. A non-restrictive relative is also a type of appositive element. If it intervenes between a host pronoun and a comitative, we have an appositive construction of three members. In the Hungarian sentence, syntactically unordered elements have to obey Behaghel’s (1932) Law of Growing Constituents. Hence in the ‘pronoun, non-restrictive relative, comitative’ string, only the pronoun and the non-restrictive relative can be in a syntactically unordered appositive relation; the comitative only has the exclusive reading. A non-referential comitative and its host cannot be in an inclusive relation because the comitative is unable to corefer with the conjunct ‘others’ in the semantic structure of the pronoun. The incompatibility of the inclusive interpretation and the sociative case derives from a morphological property of the -stul/stül sociative suffix, namely, that it only combines with bare nouns. Thus the exclusive or inclusive reading of a pronoun + comitative adjunct follows from the interplay of syntactic, morphological, semantic and pragmatic factors.

‘Types of temporal adverbials and the fine structure of events’ by Ferenc Kiefer employs temporal adverbials to expose a more fine-grained event structure of sentences than was previously thought to be possible. Kiefer’s starting point is an apparently syntactic problem: unpredicted cooccurrence restrictions between certain verb classes, and certain types of temporal adverbials, namely: (i) time span adverbials such as két órán át
‘for two hours’, denoting the length of an ongoing event; (ii) durative-delimitative adverbials such as két óra alatt ‘in two hours’, denoting the length of a process or activity with a culmination; (iii) time point adverbials such as két órakor ‘at two o’clock’, identifying the time of a punctual event; (iv) adverbials denoting the length of a resulting state such as két órára ‘for two hours’, and (v) adverbials denoting the endpoint of a process or activity such as két óráig ‘until two o’clock’.

Compatibility with different subsets of these adverbials determines nine verb types. Kiefer shows that these adverbials identify different atomic events, which constitute subevents of various types of complex events. Adverbials of type (i) identify a state/process/activity; those of type (ii) identify a process and a subsequent state. Adverbials of type (iii), denoting a point of time, identify a punctual (sub)event. Type (iv) adverbials denote the length of a state following an event, whereas those of type (v) identify the endpoint of a process or activity. Hence the event structure of verbs compatible with type (i) adverbials includes a process component; those compatible with type (ii) adverbials includes a process and a state; verbs compatible with type (iii) adverbials include a punctual subevent, whereas those compatible with type (iv) include a reversible resultant state. Verbs compatible with type (v) adverbials involve a delimited process or activity. Relying mostly on this information, Kiefer reveals the fine-grained event structure (the subevents and their temporal relations) of the predicate types determined at the outset, also showing that the lexically determined event structure can be altered on the sentence level. Finally, he argues that aspect, i.e., (im)perfectivity, can be deduced from event structure. The defining property of perfective aspect is claimed to be divisibility, and that of imperfective aspect is claimed to be indivisibility, both of which can be read off event structure.

In sum: both syntactic distribution (i.e., the compatibility of certain verb types with certain temporal adverbials), and syntactic aspect are derived from event structure, in fact, from event semantics.

‘Aspect and adverb interpretation – the case of quickly’ by Boldizsár Eszes demonstrates on a case study how adverb interpretation is determined by the interrelation of the aspeptual class of the verb and the syntactic position of the adverb. He argues that quickly has three readings: a manner reading (‘with quick motions’), a rate reading (‘at a quick rate’), and an aspeptual reading (‘right away’), also providing semantic analyses of the three interpretations. The manner and rate readings are represented on scales of different types, the former involving a scale of intensity, associated with atomic agents of the atomic elements of the event, the latter
involving a scale of quantity, associated with rates of events of the same type. The aspectual reading is based on a comparison class containing the run-time values of intervals between a contextually given reference time and the onsets of events of the same type as the given event. The interpretation of an instance of *gyorsan* ‘quickly’ is determined, on the one hand, by the aspectual type of the predicate (activities/processes, and progressive accomplishments only allow the manner and rate readings of *gyorsan*; perfective accomplishments also allow the aspectual reading, whereas achievements exclude the manner reading, only allowing the rate and the aspectual interpretations). The distributional restrictions attested follow from the proposed semantic analyses. Imperfective events (states/processes and progressive accomplishments) are incompatible with the aspectual *gyorsan* because they do not have their onset specified. Statives, and momentary events, among them semelfactives, exclude the rate reading because they have no run-time. However, in the case of achievements, the rate reading might be interpreted on the preparatory phase of the event. Verb types with no agent necessarily lack the manner reading of *gyorsan*, interpreted on a scale associated with agent-atoms. The readings of instances of *gyorsan* are also structure-dependent: whereas the manner/rate adverb is adjoined to PredP or is focused, the aspectual adverb is adjoined to the AspP projection dominating PredP. This hypothesis has distributional consequences in the preverbal part of the sentence: for example, a *gyorsan* following a manner adverb must itself be a manner or rate adverb, as well, whereas a *gyorsan* preceding a manner adverb can either have the manner, or rate, or aspectual reading. Interestingly, an aspectual *gyorsan* cannot be focused, which may be related to the stativity of the focus construction, expressing identification or specification.

‘Adverbs of counting, frequency and quantification: Flexibility and rigidity’ by Anikó Csírmaz analyzes adverbs of counting, among them multiplicatives such as *kétszer* ‘twice’, adverbs of (relative and fixed) frequency such as *sűrűn* ‘frequently’ and *naponta* ‘daily’, and quantificational (Q-) adverbs such as *gyakran* ‘often’. Csírmaz argues that these types of adverbs have different semantic features, different scope possibilities, and different distributions. She derives the positions of the adverbs by appealing to their semantic properties (including selectional and referential features), and to the specific properties of Hungarian sentence structure. As regards their semantic differences, multiplicatives count the number of occurrences of situations; frequency adverbs specify the frequency of multiple situations of the same type within a larger time interval; and Q-adverbs quantify over situations. These facts impose
selectional restrictions upon them. E.g., multiplicatives and frequency adverbs can only modify bounded situations felicitously. Frequency adverbs require a time-interval argument, and are marked with unique situations, since they require multiple situations to occur within the time interval. They must be merged locally to the time-interval argument, which is located by Csirmaz above PredP, but below TenseP. Whereas the syntax of Q-adverbs is parallel with the syntax of quantifiers, the syntax of multiplicatives is shown to be partially different from the syntax of indefinites; apparently multiplicatives always occupy a scope position. It is shown that adverbs of counting allow a certain degree of flexibility: they tolerate various forms of coercion, which can be facilitated by marked prosody. 

‘Scalar adverbs in and out of focus’ by Katalin É. Kiss aims to explain the curious fact that positive adverbs of degree, manner, and frequency, and their negative counterparts occupy different word order positions in the Hungarian sentence. Whereas positive adverbs are adjoined to PredP, the syntactic category representing an event, negative adverbs undergo focus movement, landing in Spec,FocP. In the spirit of the Minimalist program, according to which grammatical constraints that are not manifestations of general computational principles represent interface requirements, this chapter finds the motivation for the obligatory focusing of negative gradable adverbs in semantics.

The word order behavior of inclusive and exclusive adverbs of degree, manner, and frequency is derived from their scalar meaning. It is argued on the basis of Horn (1972), Levinson (2000), and Kadmon (2001) that a scalar expression \( n \) is interpreted in natural language, and specifically in Hungarian, as ‘at least \( n \)’; ‘\( n \) or more’ – unless \( n \) is moved to focus position, where it is understood as ‘exactly \( n \)’, owing to the exhaustive identification function of structural focus. In the case of scalar elements in the negative domain of a bidirectional scale, among them negative scalar adverbs, the ‘at least \( n \)’; ‘\( n \) or more’ interpretation would lead to a semantic anomaly, which is avoided by the obligatory focusing of \( n \). Scalar adverbs marking a value in a positive scalar domain can also be focussed. In focus position, the readings ‘to at least \( n \) degree’, ‘in at least \( n \) manner’, ‘at least \( n \) times’, ‘with at least \( n \) frequency’ are changed to ‘to exactly \( n \) degree’, ‘in exactly \( n \) manner’, ‘at exactly \( n \) times’, ‘with exactly \( n \) frequency’.

‘Adverbs of quantification, it-clefts and Hungarian focus’ by Ágnes Bende-Farkas studies – and derives compositionally – the semantic interaction of Hungarian focus constructions and English clefts with adverbs of quantification. She examines the so-called partition problem on
a previously unexamined set of data: in sentences involving an *it*-cleft or Hungarian Focus and a complex subevent structure. She reports that in these environments syntax plays a decisive role for semantic partition, which is a marked difference from the original cases, *in situ* English Focus, where semantic partition is determined by an interplay of prosodic and contextual factors. She finds that, if an adverb of the *mindig* ‘always’ type c-commands the focus/cleft constituent, syntactic structure determines semantic structure: the focus/cleft constituent corresponds to the Scope of the adverb, and the background corresponds to its Restrictor. If, on the other hand, the adverb is c-commanded by the focus/cleft constituent, the Restrictor and Scope division corresponds to the subevent structure. In English, the adverb performing universal quantification clearly cannot outscope the embedded clause of a cleft construction; in Hungarian, too, the post-focus section of the sentence is claimed to represent a different phase by various syntactic analyses. Nevertheless, Hungarian focus constructions and English clefts are not parallel in every respect: a post-focus quantifier can have a wide-scope reading only in the former. Bende-Farkas argues against semantic explanations, e.g., the choice function analysis of post-focus wide-scope existential quantifiers, and proposes a solution based on the possibility of the right-adjunction of quantifiers in the Hungarian sentence.

The formal semantic analysis is built on a focus theory in which the focus-marked expression is a special generalized quantifier that presupposes its scope, similar to a definite description. The focus construction is like the skeleton of an identificational sentence, paraphrasable as *(It is) F (that) is identical to the unique greatest individual with property P.* The explanation of why quantifiers cannot assume narrow scope via reconstruction is that they are generated in their original scope position, so there is no position for them to be reconstructed to in syntax. They cannot undergo semantic reconstruction because of their quantificational type.