Chapter 6

Structures That Relate Events

1 INTRODUCTION

This chapter concerns the types of sentence structures that represent a Figure event related to a Ground event.[1] The relation that the Figure event bears to the Ground event can be temporal, causal, concessive, or additive, among a range of further possibilities. Such sentences will be said to represent **cross-related events**, and the relation that they represent is the **cross-event relation**.

The linguistic literature has included much work on syntactic structures that represent other types of relations between events. One such type is the argument-predicate relation. Here, one event that is represented by a clause and introduced by a complementizer is related as an argument to another event that is represented by a predicate form. An example is the relation of the *that* clause to *believe*, as in *I believe that she came*. A second type is the relation of a relative clause, which represents one event, to a nominal within a higher clause, which represents another event.

Much attention has also been directed to cross-related Figure-Ground events when these are represented in the form of complex sentences with a main clause and an adverbial clause. Indeed, chapter I-5 examined such complex sentences with the aim of demonstrating that their two represented events have a Figure and Ground function. But there has been relatively little attention to the range of other structures that can represent such cross-related events, nor to the systematic syntactic and semantic relationships that extend across such structures. This chapter directly addresses the full range of such structures and the relationships that extend across them, with particular attention to the semantic relationships.

In this endeavor, much reliance is placed on a method that can be termed the tracking of **semantic alignment**. By this method, first, we

treat two syntactic structures as related if they both represent the same semantic structure, and, second, we track the systematic patterns in which particular components of the semantic structure are differently represented by the components of the two syntactic structures. That is, we characterize the pattern of alignment between the two syntactic structures in accordance with the locations in which they represent corresponding semantic components.

The example sentences in (1) can provide an introductory sense of the topic. Each pair of sentences represents the same semantic structure, but the first sentence has the syntactic structure of a complex sentence, while the second sentence has a coordinate sentence structure. These two structures can be seen to exhibit the following pattern of semantic alignments. The first clause of the complex sentence corresponds semantically to the second clause of the coordinate sentence. The second clause of the complex sentence corresponds to the first clause of the coordinate sentence. Further, as will be argued, the second clause of the complex sentence also corresponds to a particular constituent within the second coordinate clause. This constituent, to be called the "adverbial pro-clause," is realized in the following examples as *so, anyway, then*, and *also*.

(1) a. They stayed home because they were feeling tired.
They were feeling tired, and so they stayed home.
b. They went out even though they were feeling tired.
They were feeling tired, but they went out anyway.
c. She went home after she stopped at the store.
She stopped at the store, and then she went home.
d. He works at a sideline in addition to holding down a regular job.
He holds down a regular job, and he also works at a sideline.

Such forms and their constituents have terms in traditional grammar, which this chapter both adopts and augments. In traditional grammar, the upper form in each pair is, as noted, a "complex sentence" consisting of a "main clause" and a "subordinate clause" or "adverbial clause." The subordinate clause is introduced by a "subordinating conjunction"—for example, *because*—which takes a standard finite clause with subject and tensed predicate. In addition, we will say that a subordinate clause can be introduced by a **subordinating preposition**, such as *despite*, which takes a nominalized clause, as in *They went out despite their feeling tired*. We will extend the use of the terms subordinating conjunction and sub-

ordinating preposition to functionally equivalent complex forms, such as the underlined phrases in *They went out even though they were feeling tired.* | *in spite of their feeling tired.* The term **subordinator** will be used here to cover both a subordinating conjunction and a subordinating preposition (including their more complex forms).

In traditional grammar, the lower form in each pair is a "compound sentence" or a "coordinate sentence" consisting of a "main clause" and a "coordinate clause." The coordinate clause is introduced by a "coordinating conjunction." However, we will call such coordinate sentences **copy-cleft** sentences for reasons developed below.

Our main concern in this chapter is semantic. It is to further establish the semantic category of cross-related Figure and Ground events, together with a range of the cross-event relations that they manifest. And it is also to trace the semantic correspondences across the range of syntactic structures that represent this category. Accordingly, the main function of the syntactic formulations and diagrams used in this chapter is to help reveal the semantic correspondences and relationships, rather than to advance any particular syntactic approach. Hence, the syntactic formulations and diagrams have been cast in a relatively neutral form.

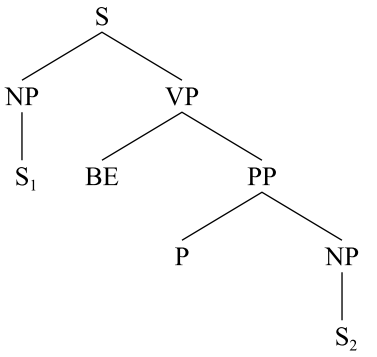
2 A FAMILY OF SYNTACTIC STRUCTURES THAT REPRESENT CROSS-RELATED EVENTS

The semantic structure of a Figure event related to a Ground event can be represented by a certain family of syntactic structures. We now progress through the members of this family.

2.1 Simple Sentence

We can begin with a grammatically simple sentence type that represents the two events as nominals. Here, the Figure event is the subject nominal and the Ground event is an object nominal. Each of these nominals can either be a nominalized clause or some noun or pronoun that refers to the whole of an event. As diagrammed in (2), the figure event is represented by an S with the subscript 1, and the Ground event by an S with the subscript 2. Each S node is placed under an NP node to indicate that the event it represents is expressed by a nominalized clause or by some other nominal form.

(2)



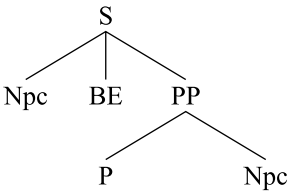
A variant version of the proposed syntactic structure might represent the cross-event relation by a single constituent, a deep verb, that would then take the Ground-event nominal as a direct object. (Such a structure might, for example, represent the sentence *Her going home followed her stopping at the store*.)

But the present version distributes this role over two constituents: a copula *BE* and a preposition that takes the Ground-event nominal as its prepositional object. The reason for this division is that it allows for the separate representation of two distinguishable functions, that of assertion and that of identification. The main verb *BE* serves to assert or foreground the existence of a relation that the Figure event bears to the Ground event—whereas, in other constructions, this relation is presupposed or backgrounded. And the preposition P serves to identify the particular relation that the Figure event bears to the Ground event. The *BE* constituent is typically realized in English by the copula *be*. For its part, the P constituent can represent any of a range of cross-event relations—for example, that of the 'concession' semantic type, or of the 'reason' or 'additionality' semantic type. Thus, in English, a P representing the 'concession' semantic type can be realized by the preposition *despite* or by the prepositional complex *in spite of*. The sentences in (3) exemplify the present type of syntactic structure. Such sentences are, to be sure, not the most colloquial in English, but they take their place within the range that does include more colloquial forms.[2]

(3) a. Their staying home was because of their feeling tired.
b. Their going out was in spite of their feeling tired.
c. Her going home was after her stopping at the store.
d. His working at a sideline is in addition to his holding down a regular job.

Because it will play an important role later, we now introduce the fact that the combination of an S node under an NP node can be represented by a pro-form. Such a form will be termed a **nominal pro-clause** and symbolized as Npc. The simple-sentence type of syntactic structure with nominal pro-clauses representing both the Figure event and the Ground event would appear as in (4).

(4)



Anaphoric forms like *this* or *that* can instantiate the nominal pro-form in English. Example sentences with two such anaphoric forms appear in (5), and these—given sufficient context—might be able to refer to the same semantic situations as those referred to in (3).

(5) a. This was because of that.
b. This was in spite of that.
c. This was after that.
d. This was in addition to that.

A further feature of the simple-sentence type of syntactic structure is that it makes explicit the semantic parallelism between a cross-event relationship and a cross-object relationship, as well as the possibility of a syntactic parallelism between the two. Specifically, it shows a parallelism between a Figure event bearing a particular temporal, causal, or other such relation to a Ground event, and a Figure object bearing a particular spatial relation to a Ground object. An example of both semantic and syntactic parallelism is seen in (6).

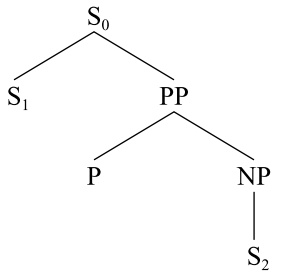
(6) a. Her going home (F) was after her stopping at the store (G).
b. The bike (F) was behind the church (G).

2.2 Complex Sentence with Subordinating Preposition

The next type of syntactic structure we consider—diagrammed in (7)—differs from the preceding simple-sentence type in that the Figure event is expressed not by a nominalized clause but by a finite clause. This finite clause thus now constitutes the main clause of the full sentence. The prepositional phrase—otherwise the same as in the preceding syntactic structure—is now an adverbial adjunct to the main clause. This prepositional phrase still contains reference to the Ground event, and so we will

consider it a subordinate clause introduced by a subordinating preposition. Accordingly, the full sentence is here considered as a complex sentence with a subordinating preposition. Here, as throughout this presentation, the S node that dominates a complex sentence is marked with the subscript 0. Semantically in such a complex sentence, the Figure event—which was presupposed in the simple sentence—is now asserted, while the existence of its particular relationship to the Ground event is now not asserted but presupposed.

(7)



The same examples seen before are now shown in (8) with this new syntactic structure. They are now more colloquial. Further, the coreferential possessive forms (here, *their*, *her*, and *his*) can be omitted in such complex sentences, which thereby become still more colloquial.

(8) a. They stayed home because of (their) feeling tired.
b. They went out in spite of (their) feeling tired.
c. She went home after (her) stopping at the store.
d. He works at a sideline in addition to (his) holding down a regular job.

The example sentences in this chapter are generally composed so that their two clauses have the same subject. By keeping this factor constant, other grammatical differences between the forms can be observed more clearly. But different-subject clauses have their own grammatical particularities, hence some examples with this characteristic are also included to point out such distinctions. In the present context, we can note that prepositional complex sentences with different-subject clauses, like those in (9), do not permit omission of the second subject, as do the coreferential forms seen above.

(9) a. They stayed home because of their child's crying.
b. They went out despite their child's crying.
c. She went home after the store's closing.

d. John works at a sideline in addition to Jane's holding down a regular job.

It is perhaps customary to reserve the terms "complex sentence" and "subordinate clause" or "adverbial clause" for the case of a sentence that contains a subordinating conjunction plus finite clause, as treated next. But we argue that these terms—and the structural concepts that they represent—should be extended to the present case of a sentence that contains a subordinating preposition plus a nominal that refers to an event. In support of this view, we note that generally only a subset of the prepositional forms in a language can take event-specifying nominals. Indeed, such forms can often not also serve in the semantic functions of the other prepositional forms, such as to indicate spatial relations between object-specifying nominals. These two types of prepositions—event-nominal taking and object-nominal taking—as well as prepositions exhibiting an overlap of function, are illustrated for English in (10).

(10) a. *Prepositional types*
   i. *Prepositions that take only object-specifying nominals*
   to, into, out of, up, down, along, across, around, over, under, above, below, behind
   ii. *Prepositions that take only event-specifying nominals*
   during, after, because of, despite, in addition to, instead of, in case of
   iii. *Prepositions that can take either object- or event-specifying nominals*
   on, upon, from, before, past

   b. *Examples of the usage or nonusage of the different prepositional types*
   The balloon floated [a/*b/c] the chimney.
   I will eat [*a/b/c] working.

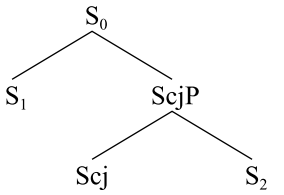
Accordingly, it might be appropriate to establish a formally distinct grammatical subcategory of prepositions—perhaps P_E—that only enter into construction with event-specifying nominals. Such a P_E would then be the same as our subordinating preposition. Perhaps the event-specifying nominal type that it takes should itself be accorded the formal status as a distinct grammatical subcategory, NP_E. And perhaps the combination of two such subcategories should itself be dominated by a subcategorial PP_E. For simplicity, we have avoided all such notational niceties in the syn-

tactic structures shown here. But, in principle, it would only be the subcategorial PP_E that one would wish to regard as a subordinate clause. And it would only be this subcategorial constituent that one would wish to grouped together with the constituent consisting of a subordinating conjunction plus a finite clause.

2.3 Complex Sentence with Subordinating Conjunction

The preceding syntactic structure included the combination of a subordinating preposition and a nominalized clause. In place of that combination, our next syntactic structure instead has the combination of a subordinating conjunction and a finite clause. This subordinating conjunction is here labeled Scj. Correspondingly, where the previous combination constituted a prepositional phrase, shown dominated by a PP node, the present string constitutes a **subordinating conjunctional phrase**, which is dominated by a ScjP node. As with the earlier PP, this phrase is a subordinate or adverbial clause that is in construction with the main clause. The whole sentence is still a complex sentence, though now one with a subordinating conjunction, as diagrammed in (11).

(11)



Like the subordinating preposition seen earlier, the subordinating conjunction can represent any of a range of cross-event relationships, in fact, generally ones of the same semantic types. Thus, the subordinating conjunction can generally represent the 'concession' semantic type or the 'reason' semantic type.

Within a language, for any such semantic type, the lexical elements in the one grammatical category can differ in form from those in the other grammatical category. Thus, expressing the 'concession' semantic type, English has as subordinating prepositions the forms *despite* and *in spite of*, but as subordinating conjunctions it has the distinct forms *although, though*, and *even though*. And, expressing the 'reason' semantic type, English has as subordinating prepositions the forms *because of, due to*, and *on account of*, but as subordinating conjunctions, it has *because, since*, and *as* with only a partial similarity in the "because" forms.

Of course, a language can have the same form serving for both grammatical categories. Thus, to express the cross-event relation 'posteriority', English has the same form *after* both as subordinating preposition and as subordinating conjunction. This can be seen in *She went home after stopping at the store*, and *She went home after she stopped at the store*.

Often a language that has both subordinating prepositions and subordinating conjunctions will have a lexical form in one of these grammatical categories without a counterpart form in the other grammatical category. Thus, English can express the cross-event relation of 'additionality' with its subordinating prepositional complex *in addition to*, but it has no subordinating conjunction to express this relation.

The prior example sentences are reillustrated in (12) with the corresponding subordinating conjunctions—except, of course, for the 'additionality' case. These are the most colloquial forms yet.

(12) a. They stayed home because they were feeling tired.
b. They went out, even though they were feeling tired.
c. She went home after she stopped at the store.

Synchronically as well as diachronically, certain constructions with subordinating prepositions within a language can be reinterpreted as, or can turn into, constructions with subordinating conjunctions. Thus, consider the English cases in which a subordinating preposition—which requires a nominal form of a clause—takes not a gerundive version of such a nominal but rather a version with a complementizer and a finite clause. Thus, the form *despite the fact that they were feeling tired* would appear instead of the form *despite their feeling tired*. Now, a syntactic reinterpretation of the first form could consist of treating the words *despite the fact that* as a subordinating conjunctional complex, which then simply takes the finite clause *they were feeling tired*.

Just such reinterpretations have occurred diachronically in English. Thus, English *because* developed from the prepositional complex *by [the] cause that*. Certain forms in other languages also seem well on their way toward such "conjunctivization." Thus, Russian *po tomu chto S* and French *parce que S*—both of which can be glossed as 'due-to it that S'—can be regarded as acting as single conjunctional units, comparable to that in English *because S*. In a similar way, Yiddish *nokhdem vi S*, 'after it as S', can be regarded as a subordinating conjunction comparable to that in English *after S*.

2.3.1 Subordinating Conjunction with a Gerundive English has a further category of subordinators with distinctive grammatical properties that resemble those both of subordinating conjunctions and subordinating prepositions. Forms in this category can be discerned for those cross-event relations for which the subordinating prepositions and conjunctions are phonologically distinct. A form in this category has the phonological shape of a regular subordinating conjunction, but while the latter takes a clause in finite form, the new category takes the clause in gerundive form, much as a subordinating preposition must do. Accordingly, we can designate the earlier category as the **finite type** of subordinating conjunction, and the new category as the **gerundive type** of subordinating conjunction. Of the cross-event relations we will be considering below (see the extended listing in (47)), four exhibit gerundive-type subordinating conjunctions, shown in italics in the illustrations in (13a). Other subordinating conjunctions do not participate in this construction, as illustrated in (13b).

(13) a. i. *'Concession'*
They went out *although* feeling tired.
ii. *'Concurrence'*
She dreamt *while* sleeping.
iii. *'Punctual coincidence'*
She said goodbye *when* leaving.
iv. *'Conditionality'*
If experiencing seasickness, one should take an antinausea pill.
b. i. *'Reason'*
*They stayed home *because*/*since* feeling tired.

Despite the preceding similarities, a gerundive-type subordinating conjunction differs from a subordinating preposition in that it allows only a subject coreferential with that of the Figure clause, and it refuses any possessive form to represent this subject, as shown in (14).

(14) a. *They went out, although their feeling tired. / although their child's crying.
b. *She dreamt while her sleeping. / while her husband's watching TV.

Note that subordinators with the same phonological shape for both conjunction and preposition—for example, *after, before, since*—may also

have a gerundive-type subordinating conjunction, but the present tests cannot discern that possibility. Thus, the subordinator in (15a) must be a subordinating preposition, since it is followed by a subject-representing possessive. But the subordinator in (15b) could either be the same subordinating preposition with the possessive omitted, or it may represent a switchover to a gerundive-type subordinating conjunction.

(15) a. She went home after her stopping at the store.
b. She went home after stopping at the store.

2.3.2 Zero Subordinating Conjunction with a Gerundive For expressing certain cross-event relations, English has a further construction that quite resembles a complex sentence with a gerundive-type subordinating conjunction, except that no conjunction is present. In this construction, the subordinate clause is simply in a gerundive form, and, as with the gerundive-type subordinating conjunction, it requires a subject coreferential with the main clause subject and it refuses a possessive form referring to that subject. The only apparently distinct characteristic of this construction is that it tends to favor sentence-initial positioning. Since this construction lacks any overt indication of the cross-event relation being expressed, the latter can be determined only on semantic grounds. Some relations to which the construction appears to apply are exemplified in (16a), while some that appear to reject the construction are illustrated in (16b). (Again, the examples and relation terms refer forward to the listing in (47).) Note that the example for 'posteriority' in (16aii) depends on the perfect formation within the gerundive construction for its viability.

(16) a. i. *'Reason'*
Feeling tired, they stayed home.
ii. *'Posteriority'*
Having stopped at the store, she went home.
iii. *'Concurrence'*
Sleeping on the couch, she dreamt about the day's events.
iv. *'Regard'*
I was careful/took care drying the cups.
b. i. *'Concession'*
*Feeling tired, they went out.
ii. *'Anteriority'*
*Going home, she stopped at the store.

iii. *'Subsequence'*
*Escaping, he has been spotted once.
iv. *'Conditionality'*
*Losing her job, she will move back to Boston.

Looking outside English, one construction that may well be structurally homologous with the zero-conjunction gerundive form just discussed is the Latin participial clause, whose subject is coreferential with the main clause subject, and whose usage covers a range of cross-event relations. Further, the Latin ablative absolute construction appears to be the counterpart of the participial construction for the case in which the subjects are different. Such an absolute construction would appear to fit well our generic characterization of a subordinate clause within a complex sentence. But it may represent a yet further distinct syntactic type beside the prepositional and the conjunctional types that we have been treating.

2.4 Complex Sentence with Initial Subordinate Clause

Consider first here the basic, or unmarked, constituent order for different cross-event sentence types. As seen in section 2.1, there is a syntactic and semantic parallelism between a simple sentence that relates a Figure object to a Ground object (e.g., spatially), and a simple sentence that relates a Figure event to a Ground event. For both structures in English, the unmarked order is for the Ground constituent to follow the assertional constituent—that is, the constituent in which the assertional component of the sentence's meaning is localized—which there was the copula. Thus, *The bike was behind the church* is a more unmarked construction than *Behind the church was the bike*. And, analogously, a construction like *Their staying home was because of their feeling tired* is more unmarked than *Because of their feeling tired was their staying home*.

It may be judged that a comparable principle of unmarked constituent order applies as well to the complex sentence type just discussed in sections 2.2 and 2.3. Here, the assertional constituent is the main clause, and the Ground constituent is contained in the subordinate clause, which follows the main clause in the sequence that is seemingly the most unmarked in structure. Thus, the complex sentence in (17a) may be deemed more unmarked than the construction in (17b).

(17) a. They stayed home because they were feeling tired.
b. Because they were feeling tired, they stayed home.

Of course, in English, structures with the subordinate clause before the main clause do occur readily as well. Their syntactic structure can be represented by reversing the two main substructures of the tree diagrams in (7) and (11). Now, in terms of syntax, such forms may be judged to be more marked in structure. But in terms of functional or pragmatic properties, they exhibit characteristics distinct from those of the structurally unmarked sentences and presumably at the same level of markedness with them. Thus, in a complex conditional sentence with marked order, like *If she comes, we'll stay*, the hearer already expects the contingent character of the main clause event, since the condition that determines it was expressed first. But in the counterpart form with unmarked order, *We'll stay if she comes*, the hearer might initially take the main clause event as given, and then subsequently have to undertake some corrective processing to demote its status to one of contingency. Such functional concomitants of Figure-Ground event order presumably account for the different proportions of sentence-initial and sentence-final appearance of the subordinate clause that has been observed for different cross-event relations (see Diessel 1996).[3]

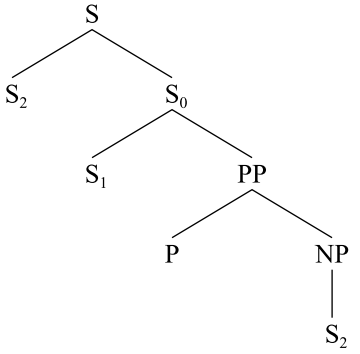
2.5 Paratactic Copy-Cleft Sentence

The next set of syntactic structures we consider includes a major syntactic and semantic break from the previous structures. In the previous structures, the Ground event was referred to only once. It was represented lower down in the syntactic hierarchical structure than the Figure event—and was accordingly expressed after the Figure event in its most basic realization in English. And, in the complex-sentence forms, it was represented as presupposed or more backgrounded by comparison with the Figure event, which was asserted or more foregrounded. In the new syntactic structures, on the other hand, the Ground event is represented twice, one of these representations is at or near the top of the hierarchical structure, and that representation separately serves to assert or foreground the Ground event.

Specifically, as diagramed in (18), the syntactic structures in the new set all have an initial representation of the Ground event, symbolized as before by an S_2 node, followed by the whole of a complex sentence with subordinating preposition, as before symbolized by an S_0 node. This complex sentence contains the other representation of the Ground event with another S_2 node. The fact that the initial S_2 is a duplicate of the

subsequent embedded S_2 has suggested our term for this set of structures as **copy-cleft** structures.

(18)



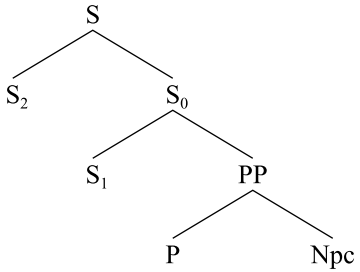
The most basic form of these structures just consists of the S_2 constituent followed by the S_0 constituent in what can be termed the **paratactic copy-cleft** form. This form can be regarded simply as a succession of two separate sentences. But for consistency of exposition, we will treat the two sentences as constituents of a single higher sentence—which is the interpretation represented in the tree diagram. And examples illustrating the form will be written as a single sentence with a semicolon between the two constituents.

Parallel to the earlier examples with the 'concession' type of cross-event relation, the counterpart for a paratactic copy-cleft sentence appears as in (19). Here, the same S_2 clause literally appears twice, once in finite form and once nominalized. Such forms can of course occur for particular stylistic effects and might scan better with a heavier stress on the subordinating preposition and a low pitch on the nominalized clause.

(19) They were feeling tired; they went out despite their feeling tired.

More often, though, the second reference to the Ground event appears as a nominal pro-clause—in English, usually *that*—which is coreferent with the initial reference to the Ground event. The corresponding syntactic structure with such a nominal pro-clause is shown in (20), and the counterpart to the preceding example is shown in (21).

(20)

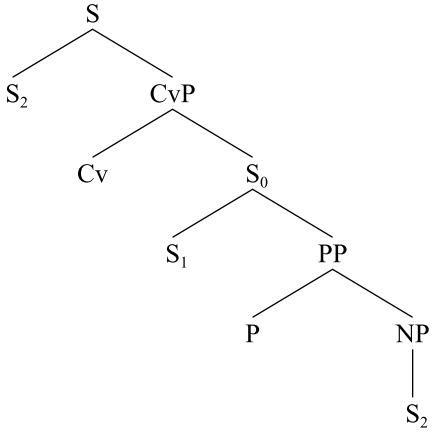


(21) They were feeling tired; they went out despite that.

2.6 Connective Copy-Cleft Sentence

It seems probable that all languages have paratactic copy-cleft constructions of the type just seen. But the next syntactic structure we consider is the basis for a typology. Some languages employ this structure, while others do not (as discussed below). This new syntactic structure is that for a **connective copy-cleft** sentence. Where the paratactic type of copy-cleft sentence simply had an embedded complex sentence as a constituent, the present structure has two constituents, a **connective**, here symbolized by a Cv, and the complex sentence. These two constituents together constitute a **connective phrase**, dominated by a CvP node, as diagrammed in (22).

(22)



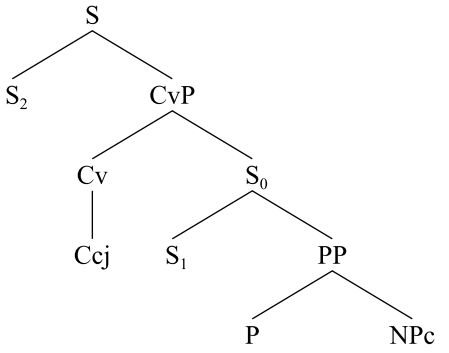
As will be treated below, the connective has three main forms: a coordinating conjunction, a form that represents relativeness in a clause, and a form that represents nonfiniteness in a clause. We now consider only the

coordinating conjunction form, and represent it with a Ccj node that is directly dominated by the Cv node.[4] In English, the coordinating conjunction is regularly realized as either *and* or *but*. Thus, the counterpart of the paratactic copy-cleft example in (21) here appears as in (23).

(23) They were feeling tired, but they went out despite their feeling tired.

Much as in the paratactic case, a version of the connective copy-cleft structure can contain a nominal pro-clause in the place of the later-occurring S_2, which is coreferential with the initial occurrence of the S_2. The syntactic structure for this appears in (24), here shown with the coordinating conjunction option for the connective. The corresponding example sentence appears in (25).

(24)



(25) They were feeling tired, but they went out despite that.

It seems probable that, at a basic level, the semantic parameter that determines the choice between the use of *and* and *but* for the coordinating conjunction is distinct from the semantic parameters that pertain to the Figure-Ground event relations. The conjunctional choice largely involves the observance or the breaking of expectations about an association between two events (see Segal and Duchan 1997, Koenig and Benndorf 1998). For their part, the cross-event relations involve the semantics of 'reason', 'concession', 'posteriority', 'additionality', and the like. And these two semantic domains can be independent, as seen in (26).

(26) a. They were feeling tired, and/but they went out despite that.
b. She stopped at the store, and/but she went home after that.
c. He holds down a regular job, and/but he works at a sideline in addition to that.

To be sure, the two semantic domains can interact or exhibit pragmatic correlations. Thus, a cross-event relation of 'concession' is mostly more consonant with a *but* conjunction, even though it can be expressed with the accompaniment of either conjunction, as represented in (27a). Second, a cross-event relation of 'reason' virtually demands an *and*, as seen in (27b). Third, a cross-event relation of 'anteriority' virtually demands a *but*, as seen in (27c). Further, purely lexical constraints exist. Thus, the concessive adverbial pro-clause *yet* (see below)—unlike other concessive forms—requires *and* and refuses *but*, as in (27d). Nevertheless, the two semantic domains appear to be basically distinct.

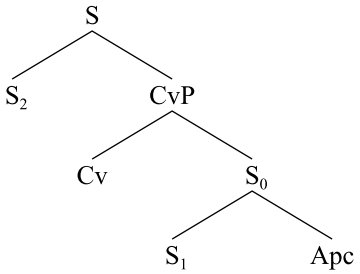
(27) a. They were feeling tired, but/?and they went out despite that.
b. They were feeling tired, and/*but they stayed home because of that.
c. She went home, but/*and she stopped at the store before that.
d. They were feeling tired, and/*but yet they went out.

2.7 Copy-Cleft Sentence with Adverbial Pro-Clause

We have just seen a particular type of pro-form—a nominal pro-clause, or Npc—appear in the syntactic structure for either a paratactic or a connective copy-cleft form. This pro-form represented the second reference to the Ground event, and it was anaphorically coreferential with the antecedent initial representation of the Ground event. In English, this nominal pro-clause is typically expressed by the form *that*, and takes part in such subordinating prepositional phrases as *despite that, because of that, after that, in addition to that*.

Now, in the next structure we consider, in the place of this entire constituent, the subordinating prepositional phrase, there now stands a new type of pro-form. Recall that this constituent is an adverbial clause (or is the equivalent of one, if only a subordinating conjunctional phrase is taken to be a true adverbial clause). Accordingly, its replacement is a pro-form for an adverbial clause that—as will be seen below—is itself instantiated by forms that are adverbial. Thus, we term this new constituent an **adverbial pro-clause**, and symbolize it as Apc. Considering only the connective type of copy-cleft sentence, the syntactic structure that contains the new pro-form is shown in (28).

(28)



Thus, where example (25) had the form *despite that*—a subordinating prepositional phrase with nominal pro-clause—the counterpart example in (29) has the form *anyway* as an adverbial pro-clause. In English, this type of construction is often the most colloquial of all the options for representing the relation of a Figure event to a Ground event.

(29) They were feeling tired, but they went out anyway.

The adverbial pro-clause is a major type of grammatical category represented in languages around the world that has not been duly recognized. English has many lexical forms in this grammatical category that take part in some of the most colloquial constructions. There are often a number of adverbial pro-clause forms for a single cross-event relation. Thus, we just saw an example with *anyway* as an adverbial pro-clause for 'concession'. But beside that form, English also has *even so, all the same, nevertheless, regardless, still, yet, however*, and *though*.

Further, the adverbial pro-clause forms can be wholly distinct from the subordinator forms. It was previously noted that forms can differ even across the subordinator types. Thus, for 'concession', the subordinating conjunction *although* differs from the subordinating preposition *despite*. And now the observation can be added that the adverbial pro-clause *anyway* and all its just-indicated peers differ from these prior forms. Also as before, though, an adverbial pro-clause form can be the same as or similar to a subordinator form. Thus, as seen below in (47E), the form *since* serves in all three grammatical capacities to express the cross-event relation of 'subsequence'.

With respect to position within a sentence, for the constituent that consists of a subordinating preposition and a nominal pro-clause, the basic location in English is sentence-final. And for many adverbial pro-clauses—which can replace that constituent—the basic position is also sentence-final. This is the case for *anyway*, as in the example sentence seen

above. But other adverbial pro-clauses either must, or preferentially, do occupy other sentence positions. Thus, one of the adverbial pro-clause equivalents of *anyway*, namely *yet*, must occur just before the final clause, as in (30a). And another equivalent adverbial pro-clause, namely *still*, preferentially occupies a position between the subject nominal and the main verb, as in (30b). Such constructions may call for representation by syntactic structures similar to, but distinct from, that in (28).

(30) a. They were feeling tired, and yet they went out.
b. They were feeling tired, but they still went out.

This observation about their range of position requirements leads into a more general observation about adverbial pro-clauses: they can be highly individualistic in their grammatical behavior. Unlike subordinating conjunctions and prepositions, which generally all have the same fixed position in the sentence, stress level, intonation contour, and junctural transitions, each adverbial pro-clause can have its own requirements or range of variation with respect to these and still further grammatical factors. In this regard, consider again the set of adverbial pro-clauses for 'concession' in English. The patterns of behavior for six of these is illustrated in (31).

With regard to one parameter of variation, that of position, in (31) the symbol 1 indicates that the adverbial pro-clause can appear clause-initially, that is, just before the finite clause; 2 indicates that it can appear between the subject NP and the main verb; and 3 indicates that it can appear clause-finally. We see that *nevertheless* and *hence* can appear in all three positions; *yet* can occur only initially and *though* only finally; *still* can occur only initially and medially; and *anyway* appears mainly finally and perhaps also initially.

With regard to connectivity, all of the forms can appear in a paratactic copy-cleft construction—in effect, therefore, directly after a semicolon, as symbolized below by ";". Further, though, two of the adverbial pro-clauses, *nevertheless* and *still*, can follow a coordinating conjunction, preferentially *but*; *yet* can follow a coordinating conjunction, but only *and*; and *hence* and *though* cannot occur with a coordinating conjunction at all.

An additional factor is that both *hence* and *though* must be pronounced with a separational juncture and, when final, with low pitch—that is, with the suprasegmental pattern of a parenthetical aside, symbolized below with an underline, "__". But the other three adverbial pro-clauses are integrated into the phonetic stream of their clause. Still further differences

appear. For example, *yet* is typically pronounced with a high-level pitch, short duration, and very slight junctural pause following it—a phonetic complex not used for the other forms.

Thus, although the adverbial pro-clause forms cited here are all semantically akin, grammatically each is a law unto itself. This fact exemplifies a much more general property of language as a type of system, that it is **densely constrained**. That is, principles as to the particular formal properties that may, must, or must not be exhibited in a language largely do not apply over broad portions of the grammar, but rather vary from form to form, where such "forms" can range from single morphemes to extended constructions.

(31) They were feeling tired
  a. *nevertheless*
    1 ;/but nevertheless they went out.
    2 ;/but they nevertheless went out.
    3 ;/but they went out nevertheless.
  b. *anyway*
    3 ;/but they went out anyway.
    ?1 ;/but anyway they went out.
  c. *still*
    1 ;/but still they went out.
    2 ;/but they still went out.
  d. *yet*
    1 ;/and yet they went out.
  e. *however*
    1 ;/however, they went out.
    2_ ;/we, however, went out.
    3_ ;/they went out, however.
  f. *though*
    3_ ;/they went out, though.

The adverbial pro-clauses so far discussed in this section have all pertained to the cross-event relation of 'concession'. We can now add some examples for other relations. Thus, an adverbial pro-clause that expresses the relation of 'reason' and that is a counterpart of *because of that* is *so*, as in (31a). An adverbial pro-clause that expresses 'posteriority' and is a counterpart of *after that* is *then*, as in (31b). And one that expresses 'additionality' and that is a counterpart of *in addition to that* is *also*, as in (31c).

(32) a. They were tired, and so they stayed home.
b. She stopped at the store, and then she went home.
c. He holds down a regular job, and he also works at a sideline.

Now that the category of adverbial pro-clauses has been established, we can point to its occasional occurrence outside of copy-cleft structures. In English, an adverbial pro-clause can appear in the main clause of a complex sentence, especially if the subordinate clause has appeared initially, as seen in (33).

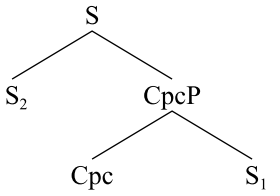
(33) a. Even though they were feeling tired, they went out *anyway*.
b. After she stopped at the store, she *then* went home.
c. In addition to holding down a regular job, he *also* works at a sideline.
d. If he is smiling, *then* he's in a good mood.

Such an occurrence of an adverbial pro-clause does not add new information, but only expresses again the same cross-event relation already expressed by the preposed subordinating conjunction. Accordingly, an apt term for this use of the form is a *resumptive* or *pleonastic* adverbial pro-clause. This repetition of information generally becomes apparent if the adverbial pro-clause is spelled out as a subordinating preposition plus a nominal pro-clause, as in this revision of (33b): *After she stopped at the store, she went home after that*. The acceptability of sentences of this sort is greater if the resumptive form is phonologically different from the original subordinator.

2.8 Copy-Cleft Sentence with Conjunctional Pro-Clause

The preceding section showed that a single form, the adverbial pro-clause, could stand in the place of a composite constituent, that consisting of a subordinating preposition and a nominal pro-clause. We now see that a language can carry this sort of substitution relationship one step further. Where one copy-cleft sentence might contain both a coordinating conjunction and an adverbial pro-clause, a counterpart sentence can contain instead of that combination a single new form, one that otherwise behaves syntactically like a coordinating conjunction but that semantically encompasses the combined meaning of the earlier two constituents. We will term such a form a **conjunctional pro-clause** and symbolize it as Cpc. A syntactic structure with this new grammatical category is indicated in (34).

(34)



None of the cross-event relations cited so far exhibit this new form in English. But it is exhibited by another relation, 'negative additionality'—that is, one deficiency augmented by another. This relation can be represented in English in a complex sentence by the subordinating conjunction *no more than*, which takes a positive form of both the Figure and the Ground events, as in (35a), or by *any more than*, which takes a negative form of the Figure event, as in (35b).

(35) a. He takes odd jobs no more than he holds down a regular job.
b. He does not take odd jobs any more than he holds down a regular job.

The copy-cleft counterpart of this complex sentence can take the coordinating conjunction *and* plus any one of three different adverbial pro-clauses—*also, either*, and *neither*—each of which requires a different position within the clause, as shown in (36).

(36) He does not hold down a regular job,
and he also does not take odd jobs.
and he does not take odd jobs either.
and neither does he take odd jobs.

Now, as seen in (37), the new formation that corresponds semantically to the preceding type of structure contains the form *nor*. This form appears to behave like a coordinating conjunction, but it requires none of the prior adverbial pro-clause forms for the same meaning to be conveyed.

(37) He does not hold down a regular job, nor does he take odd jobs.

One may think of this *nor* as equivalent to the combination of the sequence *and neither* that appeared in (36c), since (1) it has just about the same meaning, (2) it requires auxiliary inversion just like *neither*, and (3) the form *neither* cannot co-occur with it. In fact, neither the form *neither* nor the form *also* can co-occur with *nor*, as seen in (38a) and (38b).

(38) He does not hold down a regular job,
  a. *nor neither does he take odd jobs.
  b. *nor does he also take odd jobs.
  c. nor does he take odd jobs either.

Now, *nor* can co-occur with *either*, as seen in (38c), and this fact might suggest that *nor* does not include expression of a cross-event relation—a task left to the form *either*—but is simply equivalent to the combination *and not*. But this idea does not hold up, since *nor* cannot stand in the place of other combinations of *and* plus *not*, as seen in (39). The apparent reason for this failure is that *nor* really does refer specifically to the cross-event relation of 'negative additionality' and not to any other relation, or to no relation at all. The ability of *either* to co-occur with *nor* would then finally have to be understood as pleonastic.

(39) a. i. They didn't stay home because they weren't feeling tired.
  ii. They weren't feeling tired, and so they didn't stay home.
  iii. *They weren't feeling tired, nor (so) did they stay home.
  b. i. They didn't go out even though they weren't feeling tired.
  ii. They weren't feeling tired, but they didn't go out anyway.
  iii. *They weren't feeling tired, nor did they go out (anyway).

Thus, it can be concluded that *nor* in the present construction is genuinely equivalent to the combination of a coordinating conjunction and an adverbial pro-clause that itself refers to the cross-relation of 'negative additionality' and anaphorically to the Ground event. Accordingly, *nor* represents a novel grammatical category, for which the term ''conjunctional pro-clause'' seems apt.

Another example in English of a conjunctional pro-clause is the form *or* when it refers to the cross-event relation of 'exceptive counterfactuality'. This relation is expressed within an English complex sentence by the subordinating conjunction *except* or *only*, as seen in (40a). In the counterpart copy-cleft construction, it is expressed by a subordinating preposition like *except for*, as in (40b), or by the adverbial pro-clause form *otherwise*, or by its now obsolescent equivalent, *else*, as in (40c).

(40) a. I would have joined you, except (that)/only I was busy.
  b. I was busy, but I would have joined you
  except for that/but for that/other than for that.
  c. I was busy, but otherwise/else [obs] I would have joined you.
  d. I was busy, or (else) I would have joined you.

The *or* in (40d), then, is the corresponding conjunctional pro-clause, which may be thought to be equivalent to the combination *but otherwise*. Again, the ability of *else* to co-occur with the *or* may be considered pleonastic. Alternatively, since *else* in such constructions is itself all but obsolete, it may be considered simply part of a complex form of conjunctional pro-clause.

Additional evidence that the *or* in this copy-cleft construction is a distinct grammatical category with its own distinct semantics is that it cannot be paired with an *either* in the prior clause, whereas this can be done by the *or* that is used in the usual 'alternative' sense, as seen in (41).

(41) a. *Either I was busy or I would have joined you.
b. Either I was busy, or I was fooling myself into thinking I had a lot to do.

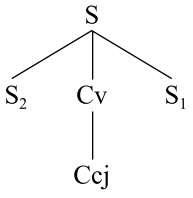
2.9 Copy-Cleft Sentence without Representation of a Cross-Event Relation

English, for one language, permits structures that consist of a finite clause, representing what we have otherwise identified as a Ground event, followed simply by a coordinating conjunction and a finite clause representing a Figure event. These structures, though, lack any specific indication of a particular cross-event relation, as seen in (42).

(42) a. They were feeling tired, and they stayed home.
b. They were feeling tired, but they went out.
c. She stopped at the store, and she went home.
d. He holds down a regular job, and he works at a sideline.

We can present two interpretations of such forms. By one interpretation, such forms exhibit a distinct syntactic structure, one that might be considered a "true" coordinate sentence, as this has been traditionally understood, and not a copy-cleft formation at all, as diagrammed in (43). Here, the subscripting of the component clauses for Figure and Ground representation is parallel to that used before, but it is no longer clear if such indexing is semantically appropriate.

(43)



Toward an alternative interpretation, though, consider the semantics of the coordinating conjunctions in forms of this sort. It seems probable that the presence of a coordinating conjunction—as against its absence in a paratactic construction—does express the concept of the 'existence' of a relation between the linked events. It thus shares that component of meaning with the elsewhere-occurring pro-clause forms (either adverbial pro-clause or subordinating preposition plus nominal pro-clause), which indicate both this component and the specific cross-event relation that is present. But it does not seem likely that the coordinating conjunction also indicates such a specific cross-event relation. In fact, as seen in section 2.6, the semantic difference between particular coordinating conjunctions such as English *and* and *but* is basically distinct from the semantic differences among the pro-clauses. Thus, there is little reason to hold that the occurrences of *and* in (42a) to (42c) literally have such extended meanings as, respectively, 'and so', 'and then', 'and also', as some might maintain. In our view, rather, it is likelier that the 'so', 'then', and 'also' components of meaning are not part of the 'and' meaning—that they are at most only semantically consonant with the 'and' meaning. By this view, they are merely implicit in the sentence as a "zero" realization of a distinct structural component, namely, of a pro-clause type of constituent.

Comparably for the relation of 'anteriority', there is little reason to hold that the occurrence of *but* as in (44b) has the meaning 'but first'. More likely, its meaning is merely consonant with that of an adverbial pro-clause like *first*, and that the latter, overtly present in (44a), is simply omitted in (44b).

(44) a. She went home, but first she had stopped at the store.
b. She went home, but she had stopped at the store.

Thus, an alternative interpretation of forms like those in (44) is that they are simply copy-cleft sentences in which the otherwise expected adverbial pro-clause is omitted. On this view, a particular cross-event relation is structurally implicit, but is unspecified. By this interpretation, in fact, there may not even exist any "true" coordinate sentences as traditionally conceived. All candidates for such a status would instead be copy-cleft sentences with an unexpressed cross-event relation. Thus, the syntactic structure depicted in (28) would serve here as well, with the proviso that the pro-clause—for example, the Apc—has no lexical realization. This is the interpretation favored here.

3 COMPARISON OF FORMS AND STRUCTURES

The family of semantic and syntactic factors distinguished to this point can now be brought together as an ensemble, both for their structural interrelationships and for the range of meanings they can be used to express.

3.1 Factors That Distinguish the Cross-Event Structures

The syntactic structures treated in the foregoing discussion have differed from each other with respect to a certain set of formal factors. These factors can be abstracted and codified, as in (45). Many of these structural factors can be present or absent independently of each other, and so they characterize not only the foregoing structures but further structures not discussed.

(45)
1. A structure can represent the Figure event either (a) as a nominalized clause or (b) as a main clause (the factor distinguishing the simple sentence type from the remaining types).
2. The adverbial clause in the structure is based either (a) on a subordinating preposition or (b) on a subordinating conjunction.
3. The adverbial clause can occur either (a) finally (the apparently unmarked order in English) or (b) initially.
4. The structure either (a) lacks or (b) has an initial duplicate representation of the Ground event (the factor distinguishing a complex sentence from a copy-cleft sentence).
5. In the copy-cleft case, the structure either (a) lacks or (b) has a connective after the initial duplicate (the factor distinguishing a paratactic from a connective copy-cleft sentence).
6. The embedded reference to the Ground event (the second reference to the Ground event in the case of a copy-cleft structure) is represented either (a) lexically or (b) by a pro-form (typically, a nominal pro-clause).
7. A structure that would (a) otherwise have a constituent consisting of a subordinating preposition and a nominal pro-clause can (b) instead represent this constituent with an adverbial pro-clause.

8. The adverbial pro-clause can occur either (a) finally (the apparently unmarked position for most such forms in English) or else (b) initially or between subject and verb.
9. A structure that would (a) otherwise have a constituent consisting of a subordinating preposition plus a nominal pro-clause or of an adverbial pro-clause can (b) instead omit this constituent.
10. A structure that would (a) otherwise contain both a coordinating conjunction and either a subordinating preposition plus nominal pro-clause or an adverbial pro-clause can instead (b) represent this combination with a conjunctional pro-clause.

We illustrate the application of these structural factors with the semantically related set of concessive sentences in (46). For each sentence, the applicable factors are indicated. Note that the (46k) form has no concessive counterpart, and so switches to expressing the 'exceptive counterfactuality' relation.

(46) a. Their going out was despite their feeling tired.
[1a, 2a, 3a, 4a, 6a]
b. They went out despite their feeling tired.
[1b, 2a, 3a, 4a, 6a] (same as preceding, but with 1b instead of 1a)
c. They went out even though they were feeling tired.
[1b, 2b, 3a, 4a, 6a] (same as preceding, but with 2b instead of 2a)
d. Even though they were feeling tired, they went out.
[1b, 2b, 3b, 4a, 6a] (same as preceding, but with 3b instead of 3a)
e. They were feeling tired; they went out despite their feeling tired.
[1b, 2a, 3a, 4b, 5a, 6a]
f. They were feeling tired; they went out despite that.
[1b, 2a, 3a, 4b, 5a, 6b, 7a] (same as preceding, but with 6b instead of 6a and with 7a added)
g. They were feeling tired, but they went out despite that.
[1b, 2a, 3a, 4b, 5b, 6b, 7a] (same as preceding, but with 5b instead of 5a)
h. They were feeling tired, but they went out anyway.
[1b, 2a, 3a, 4b, 5b, 6b, 7b, 8a, 9a, 10a]

i. They were feeling tired, but they still went out.
[1b, 2a, 3a, 4b, 5b, 6b, 7b, 8b, 9a, 10a] (same as preceding, but with 8b instead of 8a)
j. They were feeling tired, but they went out.
[1b, 2a, 4b, 5b, 6b, 9b]
k. They were feeling tired, or (else) they would have gone out.
(expresses a different relation than the above forms)
[1b, 2a, 4b, 5b, 6b, 10b]

3.2 Comparison of Forms Expressing Cross-Event Relations

In (47), we illustrate several of the syntactic structures seen earlier that can represent a Figure event relating to a Ground event for 15 different cross-event relations. For each type of syntactic structure, we show in italics the particular forms in English that represent the specific relation. Thus, each (a) form below is a complex sentence with a subordinating conjunction or its alternatives. Each (b) form is a copy-cleft sentence with a subordinating preposition and a nominal pro-clause, or variants thereof. Each (c) form is a copy-cleft sentence with an adverbial pro-clause. And each (d) form is a copy-cleft sentence with a conjunctional pro-clause.

There are some particular observations. Four of the cross-event relations,—'cause', 'additionality', 'substitution', and 'regard' in (47I), (47L), (47N), and (47O)—lack a subordinating conjunction in English, and so no (a1) form is provided. We include instead an (a2) form that is a complex sentence with subordinating preposition. Such a form is also included for the 'concurrence', 'punctual coincidence', 'conditionality', and 'negative additionality' relations in (47F), (47H), (47J), and (47M), where the usage of the subordinating preposition differs from that in the (b) form. The cross-event relation of 'regard' in (47O) lacks an adverbial pro-clause in English, and so no (c) form is provided. Note that adverbial pro-clauses under (c) that allow a clause-final placement are shown there, while those that do not are presented in separate sentences.

(47) a1: Complex sentence with subordinating conjunction
a2: With subordinating preposition
a3: With subordinating conjunction and gerundive
a4: With zero subordinating conjunction and gerundive
b1: Copy-cleft sentence with nominal pro-clause; b2: with its variants
c1: Copy-cleft sentence with adverbial pro-clause; c2: paratactic form

d: Copy-cleft sentence with conjunctional pro-clause

A. *'Reason'*
   a1. They stayed home *because|since|as* they were feeling tired.
   a4. Feeling tired, they stayed home.
   b1. They were feeling tired, and they stayed home *because of|on account of|due to* that.
   b2. . . . and they stayed home *for* that *reason|on* that *account*.
   . . . and they stayed home there*for*.
   c1. They were feeling tired, and *so|therefore|hence* they stayed home.

B. *'Concession'*
   a1. They went out *although|though|even though* they were feeling tired.
   a3. They went out, *although* feeling tired.
   b1. They were feeling tired, but they went out *despite|in spite of|regardless of|notwithstanding* that.
   c1. They were feeling tired, but they went out *anyway.|even so.|all the same.|nevertheless.|regardless.*
   . . . but they *still* went out.
   . . . and *yet* they went out.
   c2. They were feeling tired; *however*, they went out.
   . . . they went out, *however.|though*.

C. *'Anteriority'*
   a1. She stopped at the store *before* she went home.
   b1. She went home, but she had stopped at the store *before|prior to* that.
   c1. She went home, but she had stopped at the store *first|before|beforehand.*

D. *'Posteriority'*
   a1. She went home *after* she stopped at the store.
   a4. Having stopped at the store, she went home.
   b1. She stopped at the store, and she went home *after|subsequent to* that.
   c1. She stopped at the store, and *then|afterward* she went home.

E. *'Subsequence'*
   a1. He has been spotted once *since* he escaped.
   b1. He escaped, but he has been spotted once *since* that.
   b2. . . . but he has been spotted once *since* then.
   c1. He escaped, but he has *since* been spotted once.

F. *'Concurrence'*
(NB: The illustration is of 'contingent concurrence', since 'dreaming' depends for its occurrence on 'sleeping'. For an example of 'noncontingent concurrence', replace *dream* by *sing* and *sleep* by *work*.)
a1. She dreamt *while*/*as* she slept.
a3. She dreamt *while* sleeping.
a4. Sleeping, she dreamt. (Sleeping on the couch, she dreamt about the day's events.)
b1. She slept, and she dreamt *during*/*in the process of* that.
c1. She slept, and she dreamt *the while*/*in the process*/*at the same time*.

G. *'Continuous concurrence'*
a1. He was lying *the whole time that* he gave his account of the events.
b1. He gave his account of the events, but he was lying *all during* that.
c1. He gave his account of the events, but he was lying *all along*/*the whole time*/*all the while*.

H. *'Punctual coincidence'*
a1. She said goodbye *when* she left.
a2. She said goodbye *on*/*upon* leaving.
a3. She said goodbye *when* leaving.
a4. Leaving, she said goodbye.
b2. She left, and she said goodbye *at* that *point*/there*upon*.
c1. She left, and she said goodbye *then*.

I. *'Cause: nonagentive'*
a1. ——
a2. The napkin slid off the table *from*/*as a result of*/*due to* the wind's blowing on it.
b1. The wind blew on the napkin, and it slid off the table *from*/*as a result of*/*due to* that.
c1. The wind blew on the napkin, and it slid off the table *as a result*.

I′. *'Cause: agentive'*
a1. ——
a2. The batter provided some excitement for the fans *by* driving in three runs.

b2. The batter drove in three runs, and (he) provided some excitement for the fans *in* that *way*/there*by*.
c1. The batter drove in three runs, and (he) *thus* provided some excitement for the fans.

J. *'Conditionality'*
a1. She will move back to Boston *if*/*in case*/*in the event that* She loses her job.
a2. She will move back to Boston *in case of*/*in the event of* her losing her job.
a3. *If* experiencing seasickness, one should take an antinausea pill.
b1. She could lose her job, and she would move back to Boston *in the event of* that.
b2. . . . and she would move back to Boston *in* that *event*/*in* that *case*.
c1. She could lose her job, and she would move back to Boston *then*.

K. *'Exceptive counterfactuality'*
a1. I would have joined you, *except (that)*/*only* I was busy.
b1. I was busy, but I would have joined you *except for*/*but for*/*other than for*/*if not for*/*if it were not for* that.
c1. I was busy, but *otherwise*/*else* [obs] I would have joined you.
d. I was busy, *or (else)* I would have joined you.

L. *'Additionality'*
a1. ——
a2. He works at a sideline *in addition to*/*besides*/*on top of*/*as well as* holding down a regular job.
b1. He holds down a regular job, and he works at a sideline *besides*/*in addition to*/*on top of*/*as well as* that.
c1. He holds down a regular job, and he works at a sideline *also*/*too*/*in addition*/*besides*/*as well*/*to boot*.

M. *'Negative additionality'*
a1. He takes odd jobs *no more than* he holds down a regular job.
He does not take odd jobs *any more than* he holds down a regular job.
b1. He does not hold down a regular job, and he takes odd jobs *no more than* that.

c1. He does not hold down a regular job,
and he *also* does not take any odd jobs.
and he does not take any odd jobs *either*.
and *neither* does he take any odd jobs.
d. He does not hold down a regular job, *nor* does he take any odd jobs.

N. *'Substitution'*
a1. ——
a2. He watched TV *instead of* studying.
b1. He didn't study, but he watched TV *instead of* that.
c1. He didn't study, but he watched TV *instead.*
. . . , but *rather*, he watched TV

O. *'Regard' (in the sense of 'with regard to')*
a1. ——
a2. I took care *in* drying the cups. / I was careful *in*/*at*/*about* drying the cups.
a4. I took care/was careful drying the cups.
b1. I dried the cups, and I took care/was careful *in*/*at*/*about* it.
b2. . . . , *and* I took care/was careful there*in*.
c1. ——

3.2.1 Variants of the Nominal Pro-Clause Consider again a subordinating prepositional phrase that contains a pro-form referring to the Ground event. Earlier, this phrase consisted of a subordinating preposition and a nominal pro-clause. Examples were *despite that* and *in spite of that*. But, as just seen in the (b2) forms of (47), we can now add that there are several variants related to such a structure.

In one such variant, the form *then* appears in its nominal usage with the meaning 'that time'. This form can simply replace *that* in the representation of certain temporal cross-event relations, as in *since then*, which occurs side by side with *since that*, as was seen in (47E).[5]

Another variant is now largely obsolescent in English, though its counterpart is current in German. In this variant, the morpheme *there-* is the pro-form referring to the Ground event, and it is followed by the subordinating preposition. Thus, comparable to *because of that* is *therefor*, comparable to *after that* is *thereafter*, and comparable to *at that point* is *thereupon*. Several forms of this sort were shown in the (b2) entries of (47).

In a third variant, the pro-form that refers to the Ground event is not a nominal, but rather an adjectival or determiner form that is in construc-

tion with the noun within a prepositional complex. An example of this sort is *in that event*, which exists side by side with *in the event of that*, as seen in (47Jb1 and 47Jb2). Some prepositional complexes, such as *in spite of [that]*, do not permit this variant: **in that spite*. On the other hand, other prepositional complexes require the variant, as seen in *for that reason*, but **for the reason of [that]*.

What runs in common through all these variants and allies them as a single type—grouped together in the (b) forms of (47)—is a certain structural factor. They all contain a particular lexeme that refers solely to the Ground event and that is distinct from an accompanying lexeme that separately refers to the relation that the Figure event bears to it. Thus, the underlined forms in (48) are pro-forms referring simply to the Ground event, while the remainder expresses the cross-event relation.

(48) *since then/thereafter/in the event of that/in that event*

On the other hand, an adverbial pro-clause is a single lexeme that as a whole refers to both the Ground event and the relation that the Figure event bears to it. While such a lexeme may comprise two or more morphemes (e.g., like *all the same*), these do not refer separately to the Ground event and to the relation.

Diachronically, of course, a phrase of the first type can become an adverbial pro-clause. Thus, for English speakers today, the form *therefore* must largely be taken as a simple adverbial pro-clause, rather than as a variant of a subordinating prepositional phrase with separate reference to the Ground event and to the cross-event relation.

4 COGNITIVE-LINGUISTIC COMPARISON OF CROSS-EVENT STRUCTURES

To establish the linguistic domain of cross-related events and their representation, we have needed to orient the presentation so far in a more formal direction so as to set forth the basic patterned array of structures that participate in the domain. But it is now time to take a more cognitive direction and turn to a semantic, pragmatic, and processing comparison of the structures.

4.1 Semantic Structure as a Means for Correlating Syntactic Structures

Some attention to a particular adverbial pro-clause will clarify its behavior and open out into a general discussion of relationships among cross-

event syntactic structures. Consider the form *so* in *They were feeling tired, so they stayed home*. On seeing this sentence in isolation, one might at first assume—on the basis of the apparent structure and the intonation contour of the form—that the *so* is simply a subordinating conjunction introducing an adverbial clause and that the whole form is a complex sentence. In support of this assumption, one could observe that the *so* can only appear just before the finite clause, like a subordinating conjunction, but not in other positions within the clause, as adverbial forms are often able to do.

In the case of *so*, though, two aspects of syntactic behavior definitively defeat this initial assumption. First, the clause introduced by *so* cannot appear sentence-initially in the way that subordinate clauses generally can: **So they stayed home, they were feeling tired*. Second, the *so* can be preceded by the coordinating conjunction *and*, as in *They were feeling tired, and so they stayed home*. No regular subordinating conjunction permits this, as seen in **I left work and because I was sick*, or **We will stay and if she comes*. This behavior alone would seem to require the conclusion that *so* is an adverbial pro-clause that can only appear clause-initially and that permits the omission of a coordinating conjunction before it.

Further, though, the semantic organization of the sentence calls for the same conclusion. Chapter I-5 has shown that, given a pair of complementary asymmetric relations between events, generally only one of them can be lexicalized as a subordinating conjunction, and that Figure and Ground roles can be assigned to the two events in only one way, perhaps universally so. Thus, the asymmetric relation in which event A is 'temporally included within' event B is logically equivalent to the reverse asymmetric relation with the events reversed—that is, the relation in which event B 'temporally includes' event A. But (49) shows that, of these two relations, only the former can be lexically represented by a subordinator—at least in English, and perhaps universally. And this privileged relation assigns the Figure role to the included event A and the Ground role to the including event B. The inclusion principle presented in (50), which states these findings, may be based on more general principles of Gestalt psychology.

(49) a. He had two affairs *during* his marriage. / *while* he was married.
b. *He was married *through-a-period-containing* his having two affairs.

(50) *Inclusion principle*
The unmarked (or only possible) linguistic expression for a relation of temporal inclusion between two events treats the larger, containing event as Ground and the smaller, contained event as Figure. Where the complete syntactic form is a full complex sentence, the two events are in the subordinate and the main clause, respectively.

In a similar way, the relation in which a caused event A that 'results' from a causing event B is equivalent to the reverse case in which event B 'causes' event A. But, again, only the former relation can be lexicalized in a subordinator, as seen in (51). And, again, the cause-result principle that characterizes this behavior, shown in (52), may derive from a more general Gestalt principle.

(51) a. They stayed home *because of* their feeling tired. / *because* they were feeling tired.
b. *They were feeling tired *to-the-occasioning-of-(the-decision-of)* their staying home.

(52) *Cause-result principle*
The unmarked (or only possible) linguistic expression for a causal relation between two events treats the causing event as Ground and the resulting event as Figure. Where the complete syntactic form is a full complex sentence, the two events are in the subordinate and the main clause, respectively.

Accordingly, one can generally determine the type of syntactic structure that a cross-event sentence has solely on semantic grounds. For example, we can note that the two sentences in (53) are semantically alike, both referring to the same single situation; that the pair of events in that situation are related causally; and that the 'feeling tired' event is the cause, while the 'staying home' event is the result. By the cause-result principle, the causing event functions as the Ground event, while the resulting event functions as the Figure event. Since the sentence in (53a) represents the Figure event in the main clause and the Ground event in a dependent clause, this form must be a complex sentence with a subordinator. On the other hand, since the sentence in (53b) represents the Ground event in the main clause and the Figure event in the dependent clause, this form must be a copy-cleft sentence with an adverbial pro-clause. Thus, now on the basis of semantic alignments over whole sentential structures, *so* is once

again confirmed as an adverbial pro-clause rather than as a subordinating conjunction.

(53) a. They stayed home because they were feeling tired.
b. They were feeling tired, so they stayed home.

The pattern just described for events cross-related as to 'reason' is just a particular instance of a general principle of semantic alignment, stated in (54).

(54) *Principle of semantic alignment in the representations of cross-related Figure and Ground events*
a. The same Figure event that is represented in the main clause of a complex sentence appears in the second main constituent of a copy-cleft sentence.
b. The same Ground event that is represented in the subordinate clause of a complex sentence appears as the initial clause in a copy-cleft sentence, and additionally in an anaphoric form within the second major constituent of the sentence.

A good diagnostic for tracking the assigned locations in this principle of semantic alignment is provided by the cross-event relation of 'contingent concurrence' illustrated in (47F). As concurrent events performed by a single individual, an event of 'dreaming' is generally taken to be contingent on a determinative event of 'sleeping', in that one can sleep without dreaming but one cannot prototypically dream without sleeping. By a principle of contingency put forward in chapter I-5, where this example is discussed, in a complex sentence with a subordinating conjunction, the contingent event must be the Figure event, represented in the main clause, and the determinative event must be the Ground event, represented in the subordinate clause. This constraint is demonstrated by the acceptability of (55a), in which the 'dreaming' and the 'sleeping' events are located as just described, as against the unacceptability of (55b), in which these two events are represented with their locations reversed. The fact that the sentence in (55c) is acceptable shows that there is no general constraint against referring to an event of dreaming in a subordinate clause, since it can occur there as long as it is not semantically contingent on the main clause event.

(55) a. She dreamt while she slept.
b. *She slept while she dreamt.
c. She twitched while she dreamt.

Now, by the principle of semantic alignment, we should find that in a copy-cleft sentence, the contingent 'dreaming' event can only be represented in the second major constituent of the sentence, while the 'sleeping' event can only appear as the main clause. The reverse of these two locations should be unacceptable. And, indeed, this is just what is found, as seen in (56).

(56) a. She slept, and she dreamt in the process/the while.
b. *She dreamt, and she slept in the process/the while.

4.2 Copy-Cleft Structure as a Compensation for Constraints on Subordinators

From a certain perspective, a copy-cleft construction can be regarded as a means that a language can employ to circumvent its own lexical constraint on subordinators. As we have seen, the pattern in which cross-event relations may be lexicalized as subordinating conjunctions and prepositions in a language is for the most part under a strict constraint of **unidirectionality**. Namely, for any inverse pair of asymmetric relations between two events, generally only one of those relations is ever found lexicalized in the form of a subordinator. Thus, given two related events, only one of those events can be treated as Figure and only one as Ground—respectively, those that constitute the first term and the second term of the privileged asymmetric relation. Accordingly, given a particular subordinator in a complex sentence, only one event type can be asserted in the main clause and only one can be presupposed in the embedded clause.

In some cases, languages do permit the lexicalization of subordinators in either direction. This is often the case with the 'before'/'after' notions of temporal succession. In that case, two complementary complex sentences with the reverse assignment of Figure/Ground status and of assertional/presuppositional status can occur, as illustrated for English in (57ai) and (57aii). But where unidirectionality prevails—as is generally the case with 'concession'—only one form of status assignment occurs, like that in (57bi). On the other hand, any reverse form can only be suggested, not realized, as in (57bii). However, such reversed status assignment, disallowed from representation by a complex sentence, *can* be represented by a copy-cleft sentence, such as that in (57c).

(57) a. i. She stopped at the store before she went home.
ii. She went home before she stopped at the store.

b. i. They went out even though they were feeling tired.
ii. *They were feeling tired in-ineffective-counteracting-of (-the-decision-of) their going out.
c. i. They were feeling tired, but they went out anyway.

Thus, apart from any other functions that may be adduced for it, the existence of the copy-cleft structure in language can be accounted for as a compensation for the unidirectionality of subordinator lexicalization within what can be regarded as a system of interdependent relational means encompassed by language.

4.3 A Pragmatic Property of the Copy-Cleft Construction

Though it may have been clear in the foregoing discussion, we can point explicitly to a particular pragmatic property of the copy-cleft construction. This construction provides for the independent assertion of a proposition that would otherwise be expressed solely presuppositionally. And it further provides for the concurrent presuppositional expression of the same proposition. Both illocutionary forms are often necessary for a proposition: first, an assertion of it because it is new information, and then, once it is established in the domain of the known, the presuppositional use of it as a reference-point Ground against which to assert a further proposition.

Thus, in the copy-cleft sentence of (58b), the event of 'her stopping at the store' does not solely function as a known reference event in relation to which the event of 'her going home' can be temporally located. In addition, it is separately asserted for the addressee who is now finding out about it for the first time. Accordingly, if an addressee were to hear the complex sentence form in (58a), which does not additionally assert the reference event, he could well respond to the speaker's apparent presumption of certain prior knowledge on his part in the following way: "Oh, I didn't even know she'd stopped at the store in the first place." But he could not object in this way on hearing the copy-cleft form of (58b), which does assert the event.

(58) a. She went home after stopping at the store.
b. She stopped at the store, and then she went home.

4.4 Processing Advantages of the Copy-Cleft Construction

An apparent advantage for cognitive processing afforded by the copy-cleft construction is that it breaks up a certain type of complexity into more

easily handled parts. The type is where a complicated constituent requiring much linguistic processing is itself embedded within a complicated construction that also requires much processing. For a noncleft construction, the processing of the former must take place amid the processing of the latter in what may be too cumbersome a performance task. But the copy-cleft construction provides for the processing of the constituent independently and beforehand. And it leaves a place-holding token of the resulting conceptual Gestalt—that is, a pro-form—in the larger construction for the processing, now simplified, next to occur there. The easing of the performance load provided by the copy-cleft construction certainly appears in the clausal forms treated so far, but it is even more notably evident in the nominal forms discussed below in section 9. A preview of an example discussed there is shown in (59). It illustrates how a copy-cleft form, that in (59b), can afford greater ease of processing by comparison with a noncleft form like that in (59a).

(59) a. Now we'll investigate *the more general process of population stabilization*.
b. Now we'll investigate *a more general process, that of population stabilization*.

5 A LANGUAGE TYPOLOGY FOR CROSS-EVENT STRUCTURES

Perhaps every language has the copy-cleft structure—at least of the paratactic type. Thus, in Japanese, beside a complex sentence type like that in (60a), there exists a paratactic copy-cleft structure like that in (60b).

(60) a. *Complex sentence*
hongyoo o motte ite, John wa hukugyoo o motte iru.
main-work OBJ holding, John TPC side-work OBJ holds
'John holds down a side job, in addition to holding down a main job.'
b. *Paratactic copy-cleft sentence*
John wa hongyoo o motte iru; sono ue ni hukugyoo o motte iru
John TPC main-work OBJ holds that top at side-work OBJ holds
'John holds down a main job; on top of that, he holds down a side job.'

But the most noteworthy typological phenomenon in the expression of cross-event relations is that some languages, like Japanese and Jívaro, virtually lack copy-cleft structures with a coordinating conjunction. That is, they virtually lack any forms corresponding to English *and* and *but* between clauses. To illustrate this, consider again the introductory pairs

of examples in (1). For each pair, expressing a particular cross-event relation, English had both a complex sentence with subordinator as the upper form, and a copy-cleft sentence with adverbial pro-clause as the lower form. But Japanese has counterparts for only the upper forms. We schematize these complex sentence forms for Japanese in (61). Here, the structural formulas and the English examples have the subordinate clause occurring in sentence-initial position to accord with Japanese syntax.

(61) a. E: Because S_2, S_1. (Because they were feeling tired, they stayed home.)
J: S_2 tame ni/kara, S_1.
b. E: Although S_2, S_1. (Although they were feeling tired, they went out.)
J: S_2 ga/keredomo/-te mo, S_1.
c. E: After S_2, S_1. (After she stopped at the store, she went home.)
J: S_2 -te/ato ni/kara, S_1.
d. E: In addition to S_2, S_1. (In addition to holding down a regular job, he works at a sideline.)
J: S_2 -te/si/hoka ni/ue ni, S_1.

If English can represent cross-related events with either a complex sentence or a coordinated copy-cleft sentence, and if Japanese only has the former of these two structures, the typological question arises whether any language has only the latter structure. Although the possibility must be investigated, there is some indication that Mandarin may at least favor a copy-cleft structure with adverbial pro-clause to express a Figure event related to a Ground event.

6 THREE TYPES OF CONNECTIVES

As noted earlier, there are three different types of connectives—the Cv constituent—that can be present in a language (that is, pending any observation of still further types). One of these types is the coordinating conjunction, Ccj, which takes a finite form of its clause, as already discussed. Another type is a form of connective that represents relativeness in a clause, to be symbolized as Rel, which again takes a finite form of its clause. The third type is a form of connective that represents nonfiniteness in a clause, to be symbolized as Nf. In English, this type can be realized as either a gerundive or an infinitival form. All three types can be illustrated in English for the same cross-related pair of Figure-Ground events, as

shown in (62). Note that the infinitival constituent in (62c′) is to be understood in a sense akin to that of the gerundive constituent in (62c), not in any purposive sense that might be akin to that of an "in order to" constituent.

(62) *Connective copy-cleft counterparts of the complex sentence*
The batter provided some excitement for the fans by driving in three runs.
The batter drove in three runs, . . .
a. *Conjunctional*
and he provided some excitement for the fans thereby. / and thereby provided some excitement for the fans.
b. *Relative*
whereby he provided some excitement for the fans.
c. *Nonfinite*
providing some excitement for the fans thereby. / thereby providing some excitement for the fans.
c′. to provide some excitement for the fans thereby.

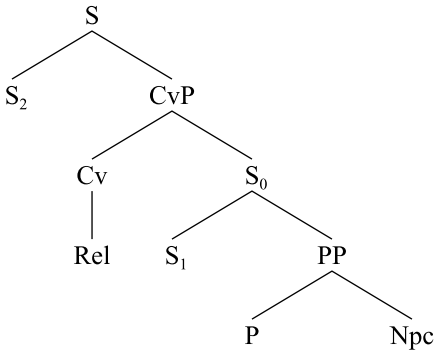
One justification for treating the category of coordinating conjunctions, relativeness, and nonfiniteness as three alternates of a single more abstract category is the fact that they do not co-occur. Thus, there are no sentences corresponding to the ones in (62) that contain any two, or all three, of the alternates, as seen in (63).

(63) The batter drove in three runs, . . .
a. *Conjunctional + relative*
*and whereby providing some excitement for the fans.
b. *Conjunctional + nonfinite*
*and thereby providing some excitement for the fans.
c. *Relative + nonfinite*
*whereby providing some excitement for the fans.
d. *Conjunctional + relative + nonfinite*
*and whereby providing some excitement for the fans.

6.1 The Relative Connective

Section 2.6 presented a connective copy-cleft structure in which the Cv node was particularized as a coordinating conjunction, Ccj, which in turn could be realized in English by such forms as *and* and *but*. The counterpart syntactic structure in which the connective node is particularized as a category for relative clause status, Rel, is represented in (64).

(64)



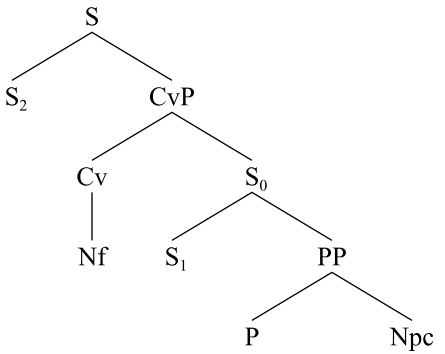
With regard to its pattern of occurrence, a relative connective phrase can be used in English essentially wherever this language has the (b) type of form shown in (47). That is, wherever an English connective phrase can have a pro-form referring to the Ground event alone, it can also exhibit a relative formation there. It was seen earlier that such pro-forms mainly appear in English either as a nominal pro-clause, typically *that*, as an adjectival or determiner form, also typically *that*, or as a suffixed *there-*. These three realizations of the pro-clause all have their relative counterparts, respectively: *which*, *which*, and *where-*, as shown in (65).

(65) a. i. She stopped at the store, and she went home after that.
ii. She stopped at the store, after which she went home.
b. i. She could lose her job, and she would move back to Boston in that case.
ii. She could lose her job, in which case she would move back to Boston.
c. i. The batter drove in three runs, and he thereby provided some excitement for the fans.
ii. The batter drove in three runs, whereby he provided some excitement for the fans.

6.2 The Nonfinite Connective

Paralleling the two corresponding copy-cleft structures already shown, (66) shows the connective copy-cleft structure in which the connective category Cv is particularized as the category for nonfiniteness in a clause, Nf.

(66)



This structure is exemplified in (67) for the cross-event relation of 'concurrence', already seen in (47F). The (i) forms are complex sentences with the subordinating prepositional complex *in the process of*. The (ii) forms are the corresponding copy-cleft sentences with the nonfinite connective. The (a) and (b) forms have different-subject clauses, while the (c) and (d) forms have same-subject clauses. The (a) and (c) forms have positive Figure events, while the (b) and (d) forms have negative Figure events.

(67) a. i. The gas spilled all over in the process of my draining the tank.
ii. I drained the tank, with the gas spilling all over in the process.
b. i. The gas did not spill all over in the process of my draining the tank.
ii. I drained the tank without the gas spilling all over in the process.
c. i. I spilled the gas all over in the process of draining the tank.
ii. I drained the tank, spilling the gas all over in the process.
d. i. I did not spill the gas all over in the process of draining the tank.
ii. I drained the tank without spilling the gas all over in the process.

6.2.1 Gerundive Forms Although in some languages the nonfinite category may be realized by a single undifferentiated form, in English two types can be distinguished, a gerundive type and an infinitival type. And this gerundive type, which we treat first, seems to be associated with the preposition *with* or its negative counterpart, *without*. These two preposi-

tions appear with a different-subject clause, as in (67a) and (67b), and the preposition *without* appears with a same-subject negative clause, as in (67d). Only a same-subject positive clause, as in (67c), lacks a preposition—though some theoretical approaches might posit the presence of an underlying *with* form—and so it appears like a pure gerundive form.

Other languages, such as Spanish, appear to have only a pure gerundive formation in their corresponding construction, using their usual negative form in the negative clauses. But the English *with*-based prepositions may initially give the appearance of being subordinating prepositions introducing a nominalized clause with which they constitute a subordinate clause. The construction may in fact have some structural characteristics of this sort, as will be discussed in section 7, on "secondary subordination." Nevertheless, this gerundive construction affords syntactic and semantic evidence of its being a connective-based constituent within a copy-cleft formation.

The first form of evidence is that the gerundive clause can contain an adverbial pro-clause or a subordinating preposition plus nominalized pro-clause. As has been seen, these constituents are of the kind that is usual for unmistakable copy-cleft sentences—for example, ones with a coordinating conjunction. Such forms, shown in italics, are presented in conjunctional and gerundival counterparts in (68) for two different cross-event relations.

(68) a. I drained the tank,
  i. and I didn't spill the gas all over *(in the process (of that)|during that|the while*.
  ii. without spilling the gas all over *(in the process (of that)|during that|the while*.
 b. The batter drove in three runs,
  i. and he provided some excitement for the fans *thereby|in that way*.
  and he *thus* provided some excitement for the fans.
  ii. providing some excitement for the fans *thereby|in that way*.
  thus providing some excitement for the fans.

The second form of evidence is that the new gerundive forms follow the same principle of semantic alignment, presented in (54), as do copy-cleft sentences with a coordinating conjunction. Once again, the dream/sleep example for 'contingent concurrence' can be used as a diagnostic to track the syntactic locations of the Figure event and the Ground event, as seen

in (69). The fact that the contingent Figure event of 'dreaming' can only appear in the gerundive constituent and not in the main clause demonstrates that this gerundive constituent is behaving just like the second constituent of a copy-cleft sentence, and not like the subordinate clause of a complex sentence.

(69) a. She slept, dreaming in the process/the while.
b. *She dreamt, sleeping in the process/the while.

Each type of connective has its own pattern of usage with the different cross-event relations. The coordinating conjunction form of the connective was able to occur with all the cross-event relations that we have examined—whether realized as an *and* or as a *but*—as was evident in A–O of (47). But the gerundive form of the nonfinite connective is more selective in English. As seen in (70), it occurs gracefully with some 8 relation types, awkwardly perhaps with some 2 additional relations, and not at all with some 5 relations, out of a total of 15 relation types under consideration. Any principle governing its pattern of occurrence is not immediately evident, though there appears to be a tendency toward its acceptable occurrence with cross-event relations that involve some form of simultaneity.

(70) a. *'Reason'*
*They were feeling tired, so/therefore staying home.
b. *'Concession'*
*They were feeling tired, going out anyway. / still going out.
c. *'Anteriority'*
She went home, having first stopped at the store. / having stopped at the store beforehand.
d. *'Posteriority'*
She stopped at the store, going home after that. / ?then going home. The fawn rose for a second to its feet, then immediately falling back down.
e. *'Subsequence'*
*He escaped, having since been spotted.
f. *'Concurrence'*
She slept, dreaming the while.
g. *'Continuous concurrence'*
He gave his account of the events, lying all along/the whole time/all the while.

h. *'Punctual coincidence'*
?She left, saying goodbye at that point/thereupon/then.
i. *'Cause: agentive'*
The batter drove in three runs, thus/thereby/in that way providing some excitement for the fans.
j. *'Conditionality'*
*She could lose her job, moving back to Boston in that event.
k. *'Exceptive counterfactuality'*
*I was busy, otherwise woulding have joined you.
*I was busy, otherwise having joined you. / otherwise joining you.
l. *'Additionality'*
He holds down a regular job, working at a sideline in addition to that. / as well/too.
?He holds down a regular job, also working at a sideline.
m. *'Negative additionality'*
?He does not hold down a regular job, taking no odd jobs either.
n. *'Substitution'*
He didn't study, having watched TV instead. / ?rather having watched TV.
o. *'Regard'*
I dried the cups, taking care in it. / being careful at/about it.

As discussed in section 2.9, a conjunctional copy-cleft form can often omit the constituent that identifies the particular cross-event relation that is in reference, leaving it to be inferred both from context and from its patterns of interaction with the choice of *and* or *but* for the coordinating conjunction. In a similar way, a nonfinite type of copy-cleft form can omit the relation-identifying constituent. But it can do so only under more restricted circumstances. Thus, of the ten relations that show a gerundive form in (70), only two seem to allow omission of the adverbial pro-clause or of the subordinating preposition plus nominal pro-clause, namely, 'anteriority' and 'concurrence', as illustrated in (71).[6]

(71) a. *'Anteriority'*
She went home, having eaten her lunch.
b. *'Concurrence'*
She went home eating her lunch.

We can seek to explain this English constraint on the use of the gerundive without indication of the cross-event relation. A clue may be found in the gerundive's tense properties. As just seen in (71), though the gerundive construction is nonfinite, it can still indicate relative tense. It uses the form *having V-en* for prior time and the basic form *V-ing* for relatively current time. In addition, it can exhibit relatively later time with the presumptive form *be-ing to V*, where the expected form *being* is omitted from the overt expression, as suggested in (72).

(72) a. *Complex sentence*
They were never again to meet after they parted.
b. *Copy-cleft with cross-event relation indicated*
They parted, [being] never again to meet after that.
c. *Copy-cleft with cross-event relation not indicated*
They parted, never again to meet.

We can now propose an account for the gerundive's behavior in English. It is that a copy-cleft form with a gerundive connective can be used to express many, though not all, cross-event relations provided that the relation is overtly expressed. But if no relation is expressed, the gerundive form reverts to an unmarked state, that of expressing only the cross-event relation of 'concurrence'. The gerundive construction, though, can then use its relative tense indications to simulate the expression of two other cross-event relations. With the perfect form of the gerundive, it can be posited, the "aftermath" of the Figure event is concurrent with the Ground event, hence, the Figure event itself can be understood to bear the relation of 'anteriority' to the Ground event. And with the future form of the gerundive, it is the "lead up" to the Figure event that is concurrent with the Ground event, so that the Figure event itself is understood to bear the relation of 'posteriority' to the Ground event.

If the *-te* form in Japanese can be treated as gerundival for consideration here, its availability for use in copy-cleft structures can be checked. To set the background, it can be noted that the *-te* form is regularly used as a subordinator for a subordinate clause in a complex sentence to express the cross-event relations of 'concurrence', as in (73a), and 'posteriority', as in (73b).

(73) a. Nemutte ite, yume o mita.
sleeping being, dream OBJ saw
'She dreamt while she slept.'

b. Mise ni yotte, uti e kaetta.
store at having-stopped, home to returned
'She returned home, after having stopped at the store.'

Recall from section 5 that Japanese generally lacks copy-cleft structures with a connective—there considered for the case in which the connective is a coordinating conjunction. And, following suit, it can here be observed that Japanese also generally seems to lack copy-cleft structures in which the connective is a nonfinite form. Thus, the *-te* form cannot be used in a CvP connective phrase to express the cross-event relation of 'posteriority'.

(74) *Sono ato de uti e kaette, mise ni yotta.
after that home to returning store at stopped
'She stopped at the store, returning home after that.'

However, in what may be its only breach of copy-cleftlessness (except perhaps for manner adverbs, as discussed below), Japanese does allow use of the *-te* form in a nonfinite connective phrase when the relation being expressed is that of 'concurrence', as seen in (75).

(75) (?Sono aida ni) yume o mite ite, nemutta
(that-of course in) dream OBJ seeing being, slept
'She slept, dreaming (in the course of that.)'

6.2.2 Infinitival Forms Beside its gerundive form, English also has an infinitival form of the nonfinite connective. But, in its basic usage, it is extremely limited. Of the 15 cross-event relations in (70), it seems viable only with 2, as shown in (76).[7]

(76) d. *'Posteriority'*
The fawn rose to its feet for a second, immediately to fall back down after that.
i. *'Cause: agentive'*
The batter drove in three runs, thus/thereby/in that way to provide some excitement for the fans.

To expand the investigation, we can observe that Yiddish also has an infinitival connective form, though this only takes part in a specific construction and only represents the cross-event relation of 'concurrence'. In this construction, the infinitive in *tsu* expresses the manner of locomotion that is concurrent with a deictic motion verb, as shown in (77).

(77) a. Es iz gekumen tsu geyn/forn in shtot a soykher.
it is come to walk/ride to town a merchant
'A merchant came walking/riding into town.'
(i.e., "A merchant came into town, walking/riding during that")
b. Er hot gebrakht tsu trogn/firn skheyre
he brought to carry/cart wares
'He carried/carted in wares.'
(i.e., "He broght wares, carrying/carting them during that")

6.2.3 Adverbial Forms Rather speculatively, though still in this chapter's spirit of tracking semantic correspondences, we consider the possibility that a manner adverb can be regarded as a reduced form of a nonfinite connective phrase within a copy-cleft construction. Such an adverb would represent a Figure event that bears the relation of 'regard' to a Ground event and share the same subject with it, a type first seen in (47O). For a standard adverb in *-ly* to occur appropriately in English, perhaps the basic Figure event must be stative and be represented by an adjectival predicate. The illustration in (78) shows the corresponding constructions for a complex sentence and several copy-cleft forms, including the one with an adverb.

(78) a. *Complex sentence*
I was careful in/at/about drying the cups.
b. *Copy-cleft with conjunctional connective*
I dried the cups, and (I) was careful in/at/about it.
c. *Copy-cleft with gerundive connective*
I dried the cups, being careful in/at/about it.
d. *Copy-cleft with manner adverb*
I dried the cups carefully.

What works in favor of this copy-cleft interpretation for manner adverbs is the semantic alignment. The manner adverb *carefully* in (78d) expresses the same notion, and the same relationship of that notion to the whole conceptual structure of the sentence, as do the main clause of (78a) and the subordinate clauses of (78b) and (78c). And such a manner adverb intrinsically has the same "subject" as the main clause verb, much as the same subject is necessarily shared by the two clauses in a 'regard' relation.

Certain formal factors stand against the interpretation, though. The manner adverb does not allow the same explicit specification of the

'regard' relation as (78b) and (78c) do with the phrases *in/at/about it*. Further, the manner adverb is phonologically integrated into the initial clause, without following a junctural break. Finally, the manner adverb can appear between the subject NP and the verb, which the subordinate clauses of (78b) and (78c) cannot do. The case awaits further assessment. If the interpretation does hold, though, it represents another case of copy-cleft formation in any language with manner adverbs, including Japanese, where it would then constitute a second breach of that language's general copy-cleftlessness.

6.2.4 A Split System Some languages have a split system of two or more distinct nonfinite forms for use in copy-cleft constructions that between them divide up the expression of the various cross-event relations. Thus, Swahili, in addition to having a nonfinite form—marked by a *-ki-* prefix in the verb—that expresses at least 'concurrence' and, it seems, several other notions, has a further nonfinite form—marked by a *-ka-* prefix—that specifically expresses 'posteriority', as shown in (79). Thus, this form is comparable to the English gerundive construction *then VP-ing*, as was seen in (70d).

(79) ni-li-kwenda soko-ni, ni-ka -rudi
I-PAST-go market-to I-then ... -ing-return
'I went to the maket, then returning.'

The verb containing *-ka-* is understood to be a nonfinite form because it lacks the overt tense markers that a finite verb form in Swahili has. Rather, it regularly follows a finite form, deriving its tense sense from it. If the *-ka-* form had been finite, then it would have merited a comparison to the English conjunctional connective in *and then VP*.

7 SECONDARY SUBORDINATION

In English and presumably in other languages, a type of structure exists that in several respects appears syntactically like a complex sentence with a subordinate clause, but in which the semantic alignment resembles that of a copy-cleft structure and in which differences in formal behavior also occur. On this latter basis, we will hold that such forms indeed are essentially copy-cleft in character, and have only a secondary appearance as complex sentences, hence we term the phenomenon **secondary subordination**.

7.1 Secondary Subordinating Conjunctions

One type of secondary subordinate clause has what looks like a subordinating conjunction, four examples of which are italicized in (80).

(80) a. I spent a lot of money on my sound system, *although* I haven't even played it once since I bought it.
b. Everyone already knows that the earth is a sphere, *whereas* I now know that the earth is a hollow sphere. [said by a mad scientist]
c. The fence was repaired well, *while* the gate still needs some work.
d. She was lecturing to her class *when* suddenly the door burst open.

The semantic effect of these subordinating conjunction look-alikes can actually seem more akin to that of a relative type of connective construction. This is suggested in (81), where the forms are labeled with the subscript 2 to distinguish them from the putatively true subordinating conjunctions.

(81) a. *although*$_2$: 'notwithstanding which'/'in the face of which'
b. *whereas*$_2$: 'in contrast with which'/'in contradistinction to which'/'above and beyond which'
c. *while*$_2$: 'in distinction to which'/'in comparison with which'
d. *when*$_2$: 'in the midst of which'/'at a point during which'

Here are some reasons for proposing such a correspondence. First, consider the *although*$_2$ form, which is compared with the putatively true subordinator *although*$_1$ in (82).

(82) a. I spent a lot of money on my sound system, *although*$_1$/even though I had no interest in music. / despite my having no interest in music.
b. I spent a lot of money on my sound system, *although*$_2$/*even though I haven't even played it once since I bought it. / *despite my not playing it even once since I bought it.

First, with respect to formal properties, *although*$_2$ is distinct from *although*$_1$. Phonologically, its clause must be pronounced with the low-intoned prosody of an aside, whereas the *although*$_1$ clause may be so pronounced and typically is not. Further, *although*$_1$ can be replaced by

even though, or its clause can be replaced by *despite* plus a nominalized version of the clause, without substantial change in the meaning of the sentence, whereas *although*$_2$ does not permit such replacements.

Second, the two forms differ with respect to semantic properties. Consider the *although*$_1$ clause exemplified in (82a), namely, that in *I spent a lot of money on my sound system, although*$_1$ *I had no interest in music*. This clause refers to a circumstance that has existed prior to the main clause event and that may continue to hold during it. This circumstance has been ineffective either in acting physically against the occurrence of the main clause event, or in serving as a reason against the Agent's voluntarily undertaking the main clause event. Thus, the main clause event has occurred against the background of hindrance from, and of potential blockage by, the preexisting subordinate clause event. This is a standard instance of the way that a Figure event relates to a Ground event. A semantically comparable structure with the embeddedness of the two clauses reversed—that is, with the Ground event expressed as the main clause and the Figure event as an embedded clause—would in fact be a typically concessive copy-cleft form of the sort we have been analyzing: *I had no interest in music, but I spent a lot of money on my sound system anyway*.

Consider now the *although*$_2$ clause exemplified in (82b), namely, that in *I spent a lot of money on my sound system, although*$_2$ *I haven't even played it once since I bought it*. By contrast, this clause refers to a circumstance that has occurred after the main clause event and that never hindered or threatened to block it, but rather, that has simply been inconsistent with the intent of that event. Thus, semantically, it is the main clause event that acts like the Ground, since it is earlier and provides the background against which one considers the subsequent *although*$_2$-clause circumstance, which therefore acts as a Figure. That is, the sentence with *although*$_2$ has the Ground event–Figure event alignment of a copy-cleft form. And, in fact, when one seeks an alternative structure that would be semantically comparable to this sentence but with the embeddedness of its clauses reversed, one finds a regular complex sentence with a standard subordinate clause and a Figure-Ground alignment, something like *I did not even play my sound system once since I bought it, notwithstanding my spending a lot of money on it*.

Since the *although*$_2$ phrase includes a finite clause, it seems more parallel to a conjunctional or relative type of connective phrase than to the nonfinite type. And since *although*$_2$ includes reference to a cross-event

relation with a 'notwithstanding' sense, its parallels should include a subordinating preposition like *notwithstanding* or *in the face of*. Thus, *although*$_2$ is parallel to forms like *but notwithstanding that* or *notwithstanding which*. This latter relative type has been selected to represent secondary subordinators, as in (81).

Turning now to *whereas*$_2$, since this form appears to express a symmetric notion of contrast between two events, one might at first assume that the two clauses it relates could simply be reversed without much effect on the sentence. And yet it is apparent that the sentence in (80b) cannot undergo such an inversion, as seen in (83).

(83) a. Everyone already knows that the earth is a sphere, whereas$_2$ I now know that the earth is a hollow sphere.
b. *I now know that the earth is a hollow sphere, whereas everyone already knows that the earth is a sphere.

The same arguments can be applied here that were advanced in chapter I-5. There it was claimed that a predicate like *be near* is not symmetric, but rather is lexicalized for taking a Figure entity as subject and a Ground entity as object. Given the different characteristics prototypically associated with a Figure and a Ground, a sentence like *The bike is near the house* is generally acceptable, whereas in most circumstances, the inverse version, **The house is near the bike*, is unacceptable. In a similar way, *whereas*$_2$ is asymmetric in that it requires a Figure event in one position and a Ground event in another, though it places these in the reverse order from *be near*. In particular, we can determine that it requires that the main clause represent the Ground event and that the embedded clause represent the Figure event, since, as can be seen from the example, it is the main clause that expresses the earlier more general circumstance, while the embedded clause expresses a later more specific circumstance.

As with *although*$_2$, a sentence with *whereas*$_2$ has a counterpart with the embeddedness of the clauses reversed that behaves like an ordinary complex sentence with the Figure event in the main clause and the Ground event embedded after a true subordinating preposition. Such a sentence here might be the following: *I now know that the earth is a hollow sphere, above and beyond everyone's already knowing that the earth is a sphere*. It thus seems that *whereas*$_2$ can roughly correspond to *above and beyond which*, and that a *whereas*$_2$ clause is parallel to a relative connective phrase within a copy-cleft structure. We can add here that secondary *while*$_2$ seems to behave much like *whereas*$_2$.

Note that as a vocabulary item, *whereas* is specifically lexicalized as a secondary subordinating conjunction—it has no primary look-alike—and so no subscript 2 is strictly necessary to mark it. By contrast, the other forms we have been considering—*although*, *while*, and *when*—do have look-alike counterparts that serve as true subordinating conjunctions.

For a final case, consider the previously illustrated *when*$_2$, shown again in (84a), which we have glossed as 'in the midst of which', or 'at a point during which'. The semantic alignment accompanying the *when*$_2$ appears to favor a secondary conjunctional status for this form. The reason is that the main clause event is the larger containing event, which typically serves as a Ground, while the embedded clause refers to a smaller, indeed punctual, event that is contained within the larger one, a property typically exhibited by a Figure, as per the "inclusion principle" presented in (50). As might accordingly be expected, a true complex sentence with a true subordinator like *in the midst of* and with the events represented in the reverse order, like that shown in (84b), is semantically equivalent to the sentence under inspection.

(84) a. She was lecturing to her class when$_2$ suddenly the door burst open.
b. Suddenly the door burst open in the midst of her lecturing to her class.

Syntactically, moreover, *when*$_2$ has the specific property that its clause cannot appear initially, a formal characteristic that distinguishes it from *when*$_1$. In this respect, *when*$_2$ differs from the other secondary subordinators. Thus, (85) contrasts the fact that *although*$_2$ accepts initial positioning with the fact that *when*$_2$ refuses it.

(85) a. Although I haven't even played it once since I bought it, I spent a lot of money on my sound system.
b. *When suddenly the door burst open, she was lecturing to her class.

7.2 Secondary Subordinating Prepositions and Gerundives

The preceding section proposed the existence of subordinating conjunctions with a formally and semantically secondary status. In addition, the nonfinite connective construction, already treated in section 6.2, was there already seen to have a secondary status, and can be considered here specifically in that regard. Thus the *with* or *without* that accompanies certain nonfinite connective formations can be considered a secondary

subordinating preposition. An example of one, here marked with the subscript 2 to signal its secondary status, appears in (86b). This form can be contrasted with a primary subordinating preposition. An example of one for 'posteriority', here marked with a subscript 1 to signal its primary status, is given in (86a).

(86) a. I drained the tank after$_1$ setting up containers to hold the gas.
b. I drained the tank without$_2$ spilling the gas all over in the process.

Comparably, section 2.3.2 described a gerundive clause without any specific subordinator. This might be considered a primary gerundive clause functioning as a genuine subordinate clause within a true complex sentence. An example of such a gerundive, one in the perfect form to express 'posteriority' and marked with the subscript 1 to signal its primary status, appears in (87a). Relative to this form, the gerundive clause in (87b) has a secondary status, parallel to that of the other secondary forms discussed here, and so also marked with the subscript 2.

(87) a. I drained the tank, having$_1$ set up containers to hold the gas.
b. I drained the tank, spilling$_2$ the gas all over in the process.

7.3 Nested Secondary Subordination

In the preceding sections, the emphasis was on the semantic and syntactic peculiarities of certain subordination-resembling forms that lead one to consider them as a secondary type of construction, separate from their primary look-alikes. But we can also consider their similarities to primary subordination. One such similarity was already observed. This is the fact that all but one of the cited secondary forms allow sentence-initial positioning, just as their primary models do. Thus, while conjunctional and relative connective phrases cannot prepose, as seen in (88a), able to do so are almost all the constituents introduced by secondary forms, whether conjunctional, prepositional, or gerundival, as seen in (88b).

(88) a. i. *And then she went home, she stopped at the store.
ii. *But they still went out, they were feeling tired.
iii. *After which she went home, she stopped at the store.
iv. *Whereupon I entered, the door swung open.
b. i. Although I haven't played it even once since I bought it, I spent a lot of money on my sound system.
ii. Without spilling any gas in the process, I drained the tank.
iii. Dreaming the while, she slept.

But further, to a small extent, a sentence with secondary subordination can behave like an ordinary complex sentence for which, in turn, a new copy-cleft form can serve as the counterpart.[8] Thus, the sentence in (89a), reprised from above, was already discussed as constituting a copy-cleft formation with a gerundive connective accompanied by the secondary subordinator *without*. But, relative to this form, the sentence in (89b) itself behaves like a copy-cleft form. (Here, the pronominalization *doing so* reads better than *that*.)

(89) a. I drained the tank without spilling the gas in the process (of it).
b. I didn't spill any gas in the process of draining the tank, draining it without doing so.

8 CLAUSE CONFLATION

Chapters II-1 to II-3 investigate a type of complex semantic structure, which we have termed a "macro-event," that consists of a "framing event" and a "Co-event," as well as the relation that the latter bears to the former. For the most part, perhaps completely, the semantic structure of a macro-event is most directly represented by the syntactic structure of a basic complex sentence, rather than, say, of a copy-cleft sentence. That is, the framing event appears mostly to act as a Figure event, and the co-event as a Ground event that bears a particular relation to the Figure event. This indeed appears to be the likeliest interpretation where the co-event bears the relation of 'Cause' to the framing event, as shown for both nonagentive and agentive cases in (90).

(90) *A macro-event as a complex event (structured like a complex sentence), composed of*
a framing event as Figure event + relation + a co-event as a Ground event
a. *Nonagentive cause*
[the napkin MOVED off the table] WITH-THE-CAUSE-OF [the wind blew on the napkin]
The napkin moved off the table from/as a result of the wind blowing on it.
b. *Agentive cause*
[I $_{A}$MOVED the keg into the pantry] WITH-THE-CAUSE-OF [I kicked the keg with my left foot]
I moved the keg into the pantry by kicking it with my left foot.

Now, the reason for distinguishing macro-events from the general type of structure examined in section 2.2—namely from the type that can be represented by a complex sentence with a subordinating preposition—is that they have a certain common property: a macro-event can also be represented by a single clause.

Languages fall into two main typological categories on the basis of the way they map a macro-event onto syntactic structure. We can look here at one such category, that of the "satellite-framed" languages, of which English is an example. In the single-clause form in these languages, the predicate of the co-event is represented by the verb, and other co-event components by adjuncts, while the framing-event components are represented by the remainder of the clause. Thus, the semantic structures just seen represented by complex sentences in (90) can also be expressed by monoclauses like those in (91).

(91) a. The napkin blew off the table from the wind.
b. I kicked the keg into the pantry with my left foot.

The syntactic structure of this single-clause type of sentence manifests what we have called "clause conflation." The structure interweaves constituents that represent various components of both the Figure event and the Ground event. That is, it interweaves constituents that in a syntactically standard complex sentence would have been segregated and would have separately referred to the Figure event or the Ground event. Such a clause-conflational sentence, then, constitutes a still further syntactic structure that represents a pair of cross-related events and that can now be added to the family of such structures presented in section 2. We do not here include a tree diagram for this structure to join the others in section 2. But chapters II-1 to II-3 provide representations of the semantic-syntactic mappings involved here.

What seems more open to interpretation, though, is the semantic-syntactic status of a macro-event in which the co-event bears the relation of 'Manner' to the framing event. Perhaps it too should simply be considered to correspond most directly to a complex sentence with Figure-Ground precedence that represents a cross-event relation of 'concurrence'. The troublesome point, though, is that, in the likeliest corresponding complex sentence, the subordinate clause can include the adverbial pro-clause *in the process* or *the while*. This suggests that this subordinate clause—most readily rendered in a gerundive form—actually constitutes a case of secondary subordination and hence that the whole sentence is a

copy-cleft structure with Ground-Figure precedence. This matter is illustrated in (92). Here, the (a) form represents the macro-event structure most directly, the (b) form renders that structure with more suggestive English phrasing, where it is not clear whether the gerundive clause is primary or secondary, and the (c) form is the usual English clause-conflated reflex of the macro-event.

(92) a. [the craft MOVED into the hangar] WITH-THE-MANNER-OF [the craft floated on a cushion of air (in the process (of that)/ the while)]
b. The craft MOVED into the hangar, floating on a cushion of air (in the process (of that)/the while)
c. The craft floated into the hangar on a cushion of air.

We do not here resolve the ambiguity of interpretation. But note that, under either interpretation, the Manner relation that is represented by this kind of conflation is a particular subtype of the cross-event relation of 'concurrence'. And this Manner subtype must be present for the conflated form to be viable.

9 COPY-CLEFTING OF NOMINALS

It is not only clauses that can exhibit copy-cleft structure, but also nominals. Nominals can exhibit such structure either across the scope of a whole sentence or within an NP constituent. To consider first the sentence-spanning type, the syntactic formation that has been referred to in the generative literature as left-dislocation can now be regarded as a certain extension of copy-cleft structure from clauses to nominals. Or, conversely, what this chapter has been treating as copy-cleft structure can be considered as an extension of left-dislocation from nominals to clauses.

For a French illustration, the sentence in (93a) might, for the present purposes, be analogized to a complex sentence. Relative to this, the sentence in (93b) resembles a clausal copy-cleft form in that it has an initial duplicate of the constituent in question—here, not a clause, but a nominal, *ma mère; it has an anaphoric pro-form where the original sentence had a full NP—specifically, the pronoun la* elided to *l-*; and it has a similar constructional meaning, as discussed below.

(93) a. J'ai vu ma mère.
'I saw my mother.'

b. Ma mère, je l'ai vue.
'My mother, I saw her.'

By one interpretation, American Sign Language can produce a multiple copy-cleft structure involving two nominals with different functions in a sentence. Thus, beside a putatively more basic structure like that in (94a) is a doubly copy-cleft form like that suggestively rendered in (94b) (each sign that would be made is indicated by an italicized English word).

(94) a. *Hank went-to Fresno*.
b. You know *Hank*? You know *Fresno* Well, *he-went-there*.

As noted, nominal copy-clefting can take place not only across the scope of a whole sentence, but also within an NP constituent. For example, in German, beside a putatively more basic possessor-possessed construction like that in (95a) is the regularly used copy-cleft formation in (95b). (The formation can also be used for most grammatical relations besides that of direct object.)

(95) a. Ich habe *den Bleistift* *des Jungen* gesehen.
I have the pencil (ACC) the boy (GEN) seen
'I saw the boy's pencil.'
b. Ich habe *dem Jungen* *seinen Bleistift* gesehen.
I have the boy (DAT) his pencil (ACC) seen
'I saw the boy's pencil.'

One can envisage nonoccurrent structures between (95a) and (95b) that in certain respects are comparable to structures seen in section 2 for clauses. Thus, if (96a) below can be taken to underlie (95a) above, then (96b) can be taken as the structure that now includes an initial duplicate—appearing in the dative—of the original genitive constituent, itself still appearing in its right-hand position. The structure in (96c) is the same, but with the later occurrence of the constituent now an anaphoric pronoun. The structure in (96d) simply represents the genitive pronoun as a possessive pronominal in its usual prenominal location. It is this form, then, that underlies the overt form, shown in (96b).

(96) a. [der Bleistift -ACC] [der Junge -GEN]
b. [der Junge -DAT] [- der Bleistift -ACC] [der Junge -GEN]
c. [der Junge -DAT] [der Bleistift -ACC] [er ('he') -GEN]
d. [der Junge -DAT] [sein- ('his') Bleistift -ACC]

English, too, exhibits a copy-cleft formation within an NP constituent, as seen by comparing the straightforward construction italicized in (97a) with the copy-cleft construction italicized in (97b).

(97) a. Now we'll investigate *the more general process of population stabilization*.
b. Now we'll investigate *a more general process, that of population stabilization*.

10 CONCLUSION

This chapter has shown that a certain semantic structure—a Figure event relating to a Ground event—is of central significance. In evidence of this, we have shown that language devotes an extensive array of syntactic structures to the representation of this semantic structure. And a language can allocate a large number of lexical forms of several distinct grammatical categories to represent the range of relations borne by the Figure event to the Ground event. Our method of "semantic alignment" allows one to trace the semantic correspondences across the participating syntactic structures and lexical forms, and so to establish the patterns of relationship that they exhibit. Tracking semantic alignment can also help distinguish between two structures that otherwise resemble each other, as in the case of primary and secondary subordination. The patterns of relationship across structures are not only shown to apply to clauses, but also to extend to nominals. And languages appear to fall into two typological categories on the basis of whether they have or lack a conjunctional copy-cleft structure.

Notes

1. This chapter is a wholly rewritten and expanded version of Talmy 1978b. In turn, that paper was a moderately revised version of a paper titled "Copy-Clefting," which appeared in *Working Papers on Language Universals*, no. 17, June 1975, Stanford University; copyright 1975 by the Board of Trustees of the Leland Stanford Junior University.

My thanks go to Haruo Aoki for help with the Japanese forms in this chapter, and to Kean Kaufmann, Jean-Pierre Koenig, and Holger Diessel for their helpful comments on the present rewritten version.

2. We have avoided sentences here with a form like *take place* in lieu of *be*—as in a counterpart to (3c) like *Her going home took place after her stopping at the store*—because they have a different structure. The *take place* does not serve to assert the cross-event relation. Rather, the full constituent preceding the *after* is

really the main clause of the whole form, itself a complex sentence, a structure treated in the next section.

3. Among other observations, Diessel finds that 'reason' adverbial clauses with *since* occur mostly in initial position, while those with *because* are mostly final. One account for this behavior is that English has only one basic subordinating conjunction for 'reason', but that this has two suppletive forms, *since* and *because*. Each form, then, is lexicalized for representing the conflation of the semantic component 'reason' together with a pragmatic component of preferential initial or preferential final occurrence.

4. In traditional terminology, the use of the term "conjunction" in both "subordinating conjunction" and "coordinating conjunction" suggests a view that these latter two grammatical categories are simply variants of a single grammatical phenomenon. In our analysis, however, there is no particular connection at all—syntactic or semantic—between subordinating conjunctions and coordinating conjunctions.

5. Note that in addition to this nominal use of *then*, (47) has three semantically distinct forms of *then* as an adverbial pro-clause. These are the forms representing 'posteriority', 'punctual coincidence', and 'conditionality' in (47D), (47H), and (47J), which have the senses, respectively, 'after that', 'at that point', and 'in that event'. Some languages have distinct forms for these same three senses of *then*. Thus, Yiddish has, respectively, *dernokh, demolt*, and *dan*.

6. The acceptability of a sentence like *I dried the cups, taking great care* suggests that the relation of 'regard', as presented in (70o), also allows omission of its specific expression. But a likelier explanation is that this sentence is simply interpreted as expressing the relation of 'concurrence'.

7. Another infinitival usage that includes the word *only* and that adds to the Figure event the semantic indication that it is some kind of 'reversal of expectation', especially one in a negative direction, has much wider occurrence over the cross-event relations. Examples include the following sentences:

(i) They were feeling tired, only to go out anyway.

(ii) She slept, only to dream about frightening events.

(iii) She stepped out the door, only to turn around at that point and hurl an insult.

8. If a classical transformation approach were to hold that a standard copy-cleft structure derives transformationally from a complex sentence structure, then, on the basis of the evidence here, it might also hold that the transformation of copy-clefting is cyclic.