

See discussions, stats, and author profiles for this publication at: <https://www.researchgate.net/publication/292356537>

Adverbial clauses

Chapter · October 2007

DOI: 10.1017/CBO9780511619434.005

CITATIONS

127

READS

21,103

3 authors, including:



Sandra A. Thompson

University of California, Santa Barbara

145 PUBLICATIONS 20,526 CITATIONS

SEE PROFILE

Some of the authors of this publication are also working on these related projects:



Multimodal analysis of Mandarin conversational interaction [View project](#)

Adverbial clauses

SANDRA A. THOMPSON, ROBERT E. LONGACRE and SHIN JA J. HWANG

PART I A TYPOLOGY OF ADVERBIAL CLAUSES



I Introduction

Many languages have mechanisms whereby one clause can be said to modify another in a way similar to the way in which an adverb modifies a proposition.

Just as with adverbs, which are single words or phrases, adverbial clauses can be labeled and categorized with respect to the semantic roles they play. For example, in the English sentences in (1), the italicized expressions can all be called ‘time adverbials’: that in (1a) is a ‘time adverb’; those in (1b) and (1c) are ‘time adverbial phrases’; while in (1d) we have a ‘time adverbial clause’:

- (1) a. She mailed it *yesterday*
- b. He eats lunch *at 11:45*
- c. She has chemistry lab *in the morning*
- d. I get up *when the sun rises*

In Part I of this chapter we examine the various structural types of adverbial clauses found in languages of the world, while in Part II we treat the adverbial clause from its discourse perspective.

The remainder of Part I is organized as follows: section 2 characterizes the notion ‘adverbial subordinate clauses’, while section 3 examines the adverbial subordinate clause types which languages typically manifest. In section 4 we describe ‘speech act’ adverbial clauses, and in section 5 we raise the issue of subordinators being borrowed from one language into another. Section 6 summarizes the findings of Part I.

2 Characterization of adverbial clauses

The relationship between ‘subordinate’ and ‘main’ (coordinate) clause is clearly a continuum. For a discussion of the ways in which clauses can be combined on this continuum, see Lehmann (1988). Assuming the ‘subordinate’ end of this continuum to involve clauses which are grammatically dependent on another clause or on some element in another clause, we can distinguish three types of subordinate clauses: those which function as noun phrases (called complements), those which function as modifiers of nouns (called relative clauses), and those which function as modifiers of verb phrases or entire clauses (called adverbial clauses).

Among these three types, complement clauses and relative clauses usually represent an embedding structure at the subordinate end of the continuum, i.e., a clause within another one and a clause within a noun phrase, respectively. Adverbial clauses, however, are viewed as (hypotactic) clause combining with respect to the main clause since they relate to the main clause as a whole (see Matthiessen and Thompson 1988). Thus while the term subordination includes all three types in its broad sense, adverbial clauses are in some sense ‘less subordinate’ than the prototypes of other two types on the continuum.

There are three devices which are typically found among languages of the world for marking subordinate clauses, all of which are found with adverbial clauses. They are:

- (a) subordinating morphemes
- (b) special verb forms
- (c) word order

(a) Subordinating morphemes. There are two types of subordinating morphemes: (1) grammatical morphemes with no lexical meaning (e.g., English *to*, as in *to buy beer*); (2) grammatical morphemes with lexical content (e.g., English *before*, *when*, *if*). Subordinating morphemes, such as conjunctive elements and adpositions, may be prepositional or postpositional. They tend to occur before the clause in a head-initial language (mostly with the basic word order of VSO or SVO, like Biblical Hebrew and English), and they occur after the clause in a head-final language (SOV order like Korean and Japanese).

(2) a. *Prepositional* (English)

When he saw the picture, he immediately recognized his old friend

b. *Postpositional* (Japanese)

Ame ga agaru *to*, Gon wa hotto shite ana kara haidemashita
 rain NOM stop when Gon TOP relief performing hole from snuck out
 ‘When the rain stopped, Gon got relieved and came out of the hole’

(b) Special verb forms. A special verb form is one which is not used in independent clauses. In languages with subject-verb agreement, the special verb form may be a non-finite form which lacks one or more agreement categories. In Latin, for example, in independent clauses the verb must agree with its subject in person and number:

- (3) Dux scrib-it epistol-as
 leader(NOM SG) write-PRES 3SG letter-ACC PL
 ‘The leader writes letters’

But in an adverbial subordinate clause, the verb may take an ending which signals nothing about the person or number of the subject.

- (4) Ter-it temp-us scrib-endo epistol-as
 spend-PRES 3SG time-ACC SG write-GERUND letter-ACC PL
 ‘He spends time writing letters’

In a language without agreement, a special subordinate verb form may still be identifiable. In Wappo, a California Indian language, for example, the verb in an independent clause ends with a glottal stop (even when it is not sentence final), but this glottal stop is dropped in subordinate clauses of all types:

- (5) a. Cephi šawo paʔ-taʔ

he(NOM) bread eat-PAST
 ‘He ate bread’

b. Te šawo paʔ-ta-wen, ah naleʔiš-khi?
 he(ACC) bread eat-PAST-when/because I(NOM) angry-NONFUT
 ‘When/because he ate the bread, I got angry’

c. Ah te šawo paʔ-tah ha is-khi?
 I(NOM) he(ACC) bread eat-PAST know-NONFUT
 ‘I know that he ate the bread’

(c) Word order. Some languages have a special word order for subordinate clauses; German is a well-known example, where the finite verb appears at the end of the subordinate clause:

(6) a. Wir wohn-ten auf dem Lande, wie ich dir schon gesagt habe
 we live-PAST on ART(DAT) land as I you(DAT) already told have(SG)
 ‘We lived in the country, as I have already told you’

b. Ich habe dir schon gesagt
 I have(SG) you(DAT) already told
 ‘I have already told you’

In (6a), the finite verb *habe* ‘have’ in the *wie* ‘as’ clause appears at the end, while in the independent simple sentence, (6b), it appears in its standard second position. This distinction between verb-final and verb-second order for subordinate and main clauses respectively is fairly regular in German (see Ebert 1973 for some discussion).¹

A slightly different example of a word-order difference between main and subordinate clauses comes from Swedish, where a number of adverbial morphemes - including *kanske* ‘perhaps’, *ofta* ‘often’, and the negative marker - come after the finite verb in main clauses, as in (7a), but before it in subordinate clauses, as in (7b) (see Andersson 1975):

(7) a. Vi kunde inte öppna kokosnöten
 We could not open coconut
 We could not open the coconut’

b. Vi var ledsna därför att vi inte kunde öppna kokosnöten
 We were sorry because that we not could open coconut’
 ‘We were sorry because we couldn’t open the coconut’

A characteristic of adverbial subordinate clauses in some languages is their position. For example, in Korean, Mandarin, Ethiopian Semitic, Turkish, and many other languages, adverbial clauses typically precede the main clause. Here is an example from Korean:

(8) *Kwail-ul sa-le kakey-ey katta*
 fruit-ACC buy-to store-at went

‘(I) went to the store to buy fruit’

In many languages, however, the position of the adverbial clause is determined by its role in linking the main clause which it modifies to the preceding discourse. This phenomenon is discussed in Part II (section 5) of this chapter.

Before going on to a detailed discussion of the various types of adverbial clauses that can be found in languages of the world, it is crucial to point out that, although we have tried to identify the major types of adverbial clauses which we have found in the languages we have looked at, we are by no means claiming that a relationship which may be signaled by an adverbial subordinate clause in one language must be so signaled in every other (see Scancarrelli 1992). For example, where one language may signal consecutivity by means of time adverbial clauses, another may do so by means of constructions involving not subordination but coordination or juxtaposition. Or some languages may have morphology dedicated to a particular interclausal relation which is only inferred in another language, as, e.g., the ‘inconsequential’ clauses of Papuan languages discussed in Haiman (1988) and MacDonald (1988). In (9), an example from Hua, the clause after the inconsequential marker *-mana* ‘describes an unexpected or unwished-for event’ (Haiman 1988:54):

- (9) “Biga badeae!” hi-*mana* rgi’ ve ’afie
 up there boy(VOC) say-3SG INCONS really yeah? 3SG not say
 ‘He said “You up there!”, but the other made no reply’

The Otomanguean languages of Mexico provide good examples of languages in which juxtaposition of clauses with certain aspect markers is more commonly exploited as a signal of clause relationships than are subordinating constructions (see Bartholomew 1973 and Longacre 1966). (10a) is an example of two juxtaposed clauses in the Otomanguean language Otomi, which were translated into Spanish (see (10b)) by an Otomi bilingual using the subordinator *cuando* ‘when’:

- (10)a. Mí-zøni ya kam-ta bi-ʔyøni kha ši-pati kar-hmε
 PAST-arrive (IMPERF) now my-father PAST-ask Q PAST-heated(STAT) the-tortilla
 ‘My father had arrived, he asked if the tortilla were heated’
- b. *Cuando* lleg-o mi papa, pregunt-o si ya hubiera calenta-do
 when arrive-PAST my father ask-PAST if already have(IMPERF SJNCT) heat-PAST PART
- las tortillas
 the tortillas
 ‘When my father arrived, he asked if the tortillas were heated’

Two further examples of the contrast between subordination and juxtaposition are shown in (11-12). English happens to be a language which makes relatively extensive use of the possibilities for subordinating one proposition to another. Thus, in English there is an adverbial subordinate clause type which we term ‘substitutive’ in section 3 below. An illustration is:

(11) *Instead of studying*, he played ball

In Mandarin (and many other languages), however, this relationship is signaled not by a subordinate clause construction, but by a juxtaposition of a negative and a positive proposition:

(12) Ta mei nian shu, ta da qiu le
 he NEG study book he hit ball ASP
 ‘He didn’t study, he played ball’

A similar example can be found by comparing a language in which a purpose clause is expressed by a subordinate clause with one in which a serial verb construction is used for this function. As an example of the first type of language, let us take Literary Arabic, where the subordinate clause is marked with the subjunctive *-a*:

(13) ḍahab-tu ʔila s-su:q-i li-ʔ-aštariy-a samak-a-n
 go(PERF)-I to the-market-GEN for-I-buy(IMPERF)-SJNCT fish-ACC COLLECTIVE-INDEF
 ‘I went to the market to buy fish’

Nupe, a Kwa language of Nigeria, however, like most Kwa languages, expresses purpose by means of a serial verb construction (see Chapter II.2 [Noonan] this volume, in which the second verb phrase is not marked as being subordinate in any way (see George 1975):

(14) Musa bé lá èbi
 Musa came took knife
 ‘Musa came to take the knife’

A somewhat different sort of situation can be found in chaining languages, such as those of the New Guinea Highlands or the Semitic languages of Ethiopia. In a head-final chaining language, a clause is marked as being either final or non-final in a sequence of clauses. Thus, whereas in English a subordinate clause might be used to express one event in a sequence (e.g., with *when*, *before*, *after*, etc.), a chaining language would use a non-final clause followed by a final one (for chaining languages, see Chapter II.7 [Longacre], sections 4 and 5; Longacre 1972; Healey 1966; Hetzron 1969, 1977; Olson 1973; McCarthy 1965; and Thurman 1975).

Thus, it is advisable to keep in mind that both chaining and juxtaposition may occur in some languages to signal clause relationships which other languages use subordination for. For a more thorough discussion of these clause-relating devices, see Chapter II.7 [Longacre] on interclausal relations. For a discussion of text relations which are not signaled, see Mann and Thompson 1986.

As a final note of caution, it must be mentioned that in some languages the same morpheme can be used for both coordination and subordination. (Gaelic appears to be such a language, with the morphemes *ach* ‘but’ and *agus* ‘and’ performing both functions; see Boyle 1973.) Naturally, to show that this is indeed the case, the linguist must specify precisely what the distinguishing criteria are for that language between subordination and coordination (see Lehmann 1988).

Thus, it should be borne in mind that in outlining the functional types of adverbial subordination which languages manifest, we are simply making no claim about a language which happens not to use subordination for a given function.

In the next section we examine twelve adverbial clause types in detail. Before we begin, however, we must make explicit a very important point about formal similarities. We will assume with Haiman (1978:586) ‘that superficial similarities of form are reflections of underlying similarities of meaning’. Thus, in the discussion of adverbial clause types we will emphasize similarities in form between various types of adverbial clauses as well as between certain adverbial clause types and other constructions. This will not only reveal what semantic categories languages tend to code in their adverbial clause systems, but it will also highlight the types of formal similarities the field worker is likely to encounter in a new language.

3 The types of adverbial subordinate clauses

The adverbial clauses which have been reported for languages around the world can be divided into twelve basic types, which are:

- (i) Clauses substitutable for by a single word:
 - time
 - location
 - manner

- (ii) Clauses not substitutable for by a single word:²
 - purpose
 - concessive
 - reason
 - substitutive
 - circumstantial
 - additive
 - simultaneous
 - absolutive
 - conditional

The distinction between group (i) and group (ii) is that, in general, languages have monomorphemic non-anaphoric adverbs expressing the time, location, and manner relationships, but they do not have such adverbs expressing purpose, reason, concession, etc.

3.1 *Clauses that are substitutable for by a single word*

In this category are clauses expressing time, locative, and manner relationships. To illustrate the replaceability of clauses in this group by single non-anaphoric words, let us look at some examples from Isthmus Zapotec, another Otomanguan language of Mexico (POT=Potential; from Velma Pickett, personal communication, and Pickett 1960):

- (15) *Time*
 - a. Kundubi bi yánaji
is blowing wind today
‘It’s windy today’
 - b. Ora geeda-be zune ni
when (POT)come-he (FUT)do I it

‘When he comes I’ll do it’

- (16) *Locative*
- a. Nabeza Juan *rari*
dwells John here
‘John lives here’
 - b. *Ra zeeda-be-ke nuu ti dani*
where is coming-he-that is a hill
‘Where he was coming along, there was a hill’

- (17) *Manner*
- a. *Nageenda biluže-be*
quickly finished-he
‘He finished quickly’
 - b. Gu’nu *sika ma guti-lu’*
(POT)do you like already (COMPL)die-you
‘Act as if you’re dead’

From these examples, it is clear that in claiming that a clause can be substituted for by a word, we are not suggesting that the word necessarily occurs in the same position as the clause does. What we are suggesting is that the *semantic relationship* between the adverbial clause and the main clause is the same as that between the adverbial word and the main clause. That is, either a word or an entire clause can express the time, locative, and manner relationships. As we will see, this is not the case for any of the other adverbial clause types we will be considering.

In addition to the fact that these clause types are semantically equivalent to single word adverbs, there is another interesting typological fact about such clauses: they tend to take the form of, or share properties with, relative clauses. Let us exemplify this point with English:

- (18) a. *Time*
We’ll go *when Tom gets here*
- b. *Locative*
I’ll meet you *where the statue used to be*
- c. *Manner*
She spoke *as he had taught her to*

Each of these sentences can be paraphrased with a relative clause with a generic and relatively semantically empty head noun: *time*, *place*, and *way/manner*, respectively:

- (19) a. *Time*
We’ll go at **the time** *at which Tom gets here*
- b. *Locative*
I’ll meet you at **the place** *at which the statue used to be*
- c. *Manner*

She spoke in *the way in which he had taught her to*

Looking at just (19b), for example, we can see that the relative pronoun referring to the *place* functions as the location in the relative clause, and the noun phrase *the place at which the statue used to be* functions as the location in the main clause. In other words, time, locative, and manner clauses state that the relationship between the time, place, or manner of the event in the main clause and that of the subordinate clause is the same. And it is precisely for this reason that they often share properties with relative clause constructions.

In contrast, the other adverbial clause types which we will be looking at do not express that two events have something in common, but that one event *modifies* the other, as in the reason and conditional clause sentences, (20) and (21):

(20) *Because it was raining*, I stayed in

(21) *If you like spinach*, you'll love the salad I made

Since these sentences express a reason and a condition, respectively, for the main clause event, but not that two events have a reason or condition in common, they cannot be paraphrased as relative clauses and hence do not appear in relative clause form.³ In what follows we will examine time, locative, and manner clauses in more detail.

3.1.1 Time clauses

3.1.1.1 *Temporal sequence clauses*. The morphemes signaling 'succession' (see Chapter II.7 [Longacre]), or temporal sequence relationships between clauses, are typically either independent morphemes on the order of the English *when, before, after*, etc. or verbal affixes. In the languages of Papua New Guinea, the latter strategy is very common; here is an example from Barai (Olson 1973), where *-mo* is a past sequence marker (PAST SEQ), one of several sequence markers (DS=different subject):

(22) Bae-*mo*-gana e ije bu-ne ke
ripe-PAST SEQ-DS people these 3PL-FOCUS take
'When it was ripe, these people took it'

English has a rich array of subordinating morphemes introducing temporal sequence clauses, including *when, while, as, before, after, since, until, now that, once, as soon as*, etc. But English also has the option of allowing the time clause to be in the form of a relative clause with a head noun such as *time, day, week*, etc.

(23) a. *By the time we got back*, the steaks were all gone.
b. *The week that we spent in Big Sur*, it rained every day.

In Hausa, time adverbial clauses have all the surface characteristics of relative clauses (see Bagari 1976 for details). They contain the relative subordinator, which is *da*, and the aspect marker is the same as that which appears in relative clauses. Head nouns such as *locaci* 'time' and *baya* 'back' are used to make clear distinctions in time and location. Relative clauses may

also be used as time adverbials without a head noun, in which case the meaning is the one understood with the noun *locaci* ‘time’, as in (24), where *sun* = completive aspect pronoun for main clauses; *suka* = completive aspect pronoun for relative clauses:

- (24) a. Yara-n sun ga sarki (*locaci-n*) da suka shiga birni
 kids-the they(COMPL) see king time-the REL they(REL COMPL) enter city
 ‘The kids saw the king when they visited the city’
- b. Yara-n sun fita baya-n da suka ci abinci
 kids-the they(COMPL) go out back-of REL they(REL COMPL) eat food
 ‘The kids went out after they had eaten’

In Mandarin, ‘when’ clauses are simply relative clauses on a head noun such as *shihou* ‘time’ or *neitian* ‘that day’:

- (25) *Ta lai de shihou*, women dou zou le
 he come REL time we all leave ASP
 ‘When he arrived, we all left’

The evidence in Swahili for time clauses being relative clauses is particularly interesting: in relative clauses, the relative clause marker is prefixed to the subordinate clause verb and agrees with the head noun in number and noun class. In time clauses, the relative marker is *po*, which agrees with abstract nouns of place and time, though such a head noun does not appear when the clause functions adverbially:

- (26) Baba a-na-po-pika chakula, kuna pilipili sana
 father SUBJ-PRES-REL-cook food there is pepper plenty
 ‘When father cooks, there is plenty of pepper’

Other languages in which time clauses have the form of relative clauses include Hungarian, Korean, and Turkish.

3.1.1.2 *Time/cause*. In some languages which simply use a subordinating morpheme like *when* for time clauses, this morpheme may signal cause as well. It is easy to see why: two events which are mentioned together as being simultaneous or adjacent in time are often inferred to be causally related. Consider an English example such as:

- (27) When he told me how much money he lost, I had a fit

The natural inference here is that the telling *caused* the fit. Wappo is a language in which one subordinator is neutral between a time and a cause interpretation. Consider again example (5b):

- (5) b. Te šawo paʔ-ta-wen, ah naleʔiš-khiʔ
 he(ACC) bread eat-PAST-when/because I(NOM) angry-NONFUT
 ‘When/because he ate the bread, I got angry’

3.1.1.3 *'Before' clauses*. 'Before' clauses are different from 'when' and 'after' clauses in that it is always the case that the event named in the 'before' clause has not happened yet by the time of the event named in the main clause. Thus there is a sense in which 'before' clauses are conceptually negative from the point of view of the event in the main clause. Languages may deal with this semantic fact in different ways. Some languages have no equivalent to 'before' clauses at all. In others, the 'before' clause interacts with negation in interesting ways. In Mandarin, a negative marker is optional in a past time 'before' clause with no change of meaning:

- (28) Ta (*mei*) lai *yiqian*, women yijing hui jia le
 he NEG come before we already return home ASP
 'Before he arrived, we had already gone home'

In Lakota, 'before' clauses must take the negative marker *ni* in the past tense (Buechel 1939:251):

- (29) *T'e ni it'okab* c'inca-pi kin wahokon-wica-kiye
 die NEG before child-PL the admonish-3PL PATIENT-admonish
 'Before he died, he admonished his children'

Turkish has the same constraint: 'before' clauses must contain a negative marker.

Many languages, including Tolkapaya Yavapai, Quechua, Bauan Fijian (Lynn Gordon, personal communication), and Ethiopian Semitic (Robert Hetzron, personal communication), are different from both of these two cases in that there is no morpheme meaning 'before'; in Yavapai (30), the prior event is signaled by a negative verb which has the simultaneity suffix (SIM) together with the irrealis (IRR) form of the verb (Hardy 1977). Its literal meaning is then something like 'when X hasn't happened, Y happens'.

- (30) Kmun-v-ch vaa-h 'um-t-m tyach-va '-yoo-ch-a
 frost-DEM-SUBJ come-IRR NEG-SIM-SS corn-DEM I-gather-PL-IRR
 'Before the frost sets in, we'll gather corn'

Similarly, in Quechua (31), the negative adverb *mana-raq* 'not yet' is used (David Weber, personal communication):

- (31) *Mana-raq* šamu-r armaku-y
 not-yet come-SS bathe-IMP
 'Bathe before you come' (lit.: 'not yet coming, bathe')

In English, although 'before' clauses cannot occur with the negative *not*, they can occur with negative polarity items such as *any* and *ever*:

- (32) a. *Before any* shots were fired, a truce was declared
 b. *Before he ever* went to UCSD, he had heard of 'space grammar'

The semantic fact that the event in the ‘before’ clause is always incomplete with respect to the main clause event, then, is reflected in many languages in the way negation shows up in the ‘before’ clause. The details may differ, but the principle is the same.

3.1.2 *Locative clauses*

Locative clauses in English and other languages are introduced by the subordinator *where*, as in:

(33) I’ll meet you *where the statue used to be*

But, as with time clauses, locative clauses in some languages have the shape of relative clauses. In Turkish, for example, locative clauses can only be expressed with a head noun meaning ‘place’ and a prenominal relative clause (Eser Erguvanli, personal communication):

(34) Sen Erol-un otur-dug[^l-u yer-e otur
 you Erol-GEN sit-OBJ-POSS place-DAT sit
 ‘You sit where Erol was sitting’

3.1.3 *Manner clauses*

A manner clause, as illustrated by the Isthmus Zapotec sentence in (17b) above, may be signaled by a subordinate clause marker, as in the following English examples:

(35) a. She talks *like* she has a cold
 b. Carry this *as* I told you to

Manner clauses in a number of languages may also have the form of relative clauses, for example English:

(36) Carry this *the way (that) I told you to*

In Swahili, the verb in the subordinate clause is marked with the relative marker *vyo*, which agrees with an abstract head noun with a meaning like ‘way’ (though the head noun is not present, just as with Swahili temporal clauses, see (26) above):

(37) Sema kama a-sema-vyo yeye
 say as SUBJ-say-REL he
 ‘Say it as he does’

In Quechua the relative marker appears in the manner clause (Weber 1978):

(38) a. Noqa marka-kuna-chaw rika-*shaa*-naw yaykusuxhn
 I town-PL-LOC see-REL-MANNER we will enter
 ‘We will go in like I saw people do in the towns’
 b. Manam kankipaqchu kayku-*shayki*-naw-qa

NEG you will not be being-REL-MANNER-TOP
 ‘You will not be like you are now’

- c. Alista-pan kuura ni-*shan*-naw
 prepare-BEN3 priest say-REL- MANNER
 ‘They prepared it for him just like the priest said’

In line with what we said above, however, it seems clear that only those manner clauses in which the manner in the main clause is the same as that in the subordinate clause would look like relative clauses. Thus, while in (18c), the way she spoke is claimed to be the same as the way he taught her to, in (35a), the way she talks is *not* the way she has a cold. Thus sentences like (18c) have relative clause parallels, but those of the form (35a) do not.

3.1.4 Summary

So far we have seen, then, that clauses expressing time, location, and manner relationships are those which bear the same semantic relationship to the main clause as single adverbial words as *now*, *here*, and *quickly*. They are typically introduced by subordinating morphemes, and may appear in relative clause form in some languages.

3.2 Clauses not substitutable for by a single word

While languages typically have adverbial words to modify a verb in terms of time, location, and manner, as we discussed in section 3.1, the semantic relationships to be discussed below are generally not renderable with a single non-anaphoric lexical item. For example, the conditional relationship is by its semantic nature one which cannot be expressed by a single adverb.

3.2.1 Purpose and reason clauses

Many languages use the same morphology for purpose and reason clauses. Ngizim, a Chadic language, is one such language. The subordinating morpheme for both types of clauses is *gàa à* (see Schuh 1972:380):

- (39) *Reason*
 A ta abən *gàa/à* aci ngaa
 eat(PERF) food he well
 ‘He ate food because he was well’

- (40) *Purpose*
 Vəru *gàa/à* dà ši səma
 go out(PERF) SJNCT drink beer
 ‘He went out to drink beer’

The semantic explanation for the fact that one morpheme can serve these two functions is that both purpose and reason clauses can be seen as providing *explanations*, or *accounts*, for the occurrence of a given state or action (see Chapter II.7 [Longacre], section 2.4.2). They differ in that purpose clauses express a motivating event which must be *unrealized* at the time of the main event, while reason clauses express a motivating event which may be *realized* at the time of the

main clause event. In most languages, even those that share morphology signaling purpose and reason, then, there will be different marking to signal the unrealized status of the purpose clause versus the realized status of the reason clause.

For example, in the Ngizim sentences in (39-40) above, the purpose clause, but not the reason clause, shows the subjunctive morpheme *dà*, which signals that the proposition is unrealized. Similarly, Kanuri, a Nilo-Saharan language of Africa, shows the same morpheme *ro* in both types of clauses. Here is an interesting near-minimal pair (Hutchison 1976:147):

(41) *Purpose*

Biska Monguno-ro lete-*ro* tawange ciwoko
 yesterday Monguno-to go(VN)-*ro* early(1SG) get up(1SG PAST)
 ‘Yesterday I got up early to go to Monguno’

(42) *Reason*

Biska Monguno-ro lengin-də-*ro* tawange ciwoko
 yesterday Monguno-to go(1SG IMPERF)-DEF-*ro* early(1SG) get up(1SG PAST)
 ‘Yesterday I got up early because I was going to Monguno’

In Kanuri, there are two morphological correlates to the realized/unrealized distinction. First, the verb in the purpose clause is a non-finite verbal noun with no person or tense marking, while the verb in the reason clause is a fully inflected finite verb. Second, the presence of the definite marker *-də* preceding *-ro* in the reason clause signals that the reason for which the main clause event happened is asserted as a fact. The purpose clause, representing an unrealized proposition, has no definite marker.

3.2.1.1 *Datives, benefactives, or allatives*. In some languages, the case marker expressing the idea of ‘to’ or ‘for’ used for datives, benefactives, or allatives (‘direction to’) is used for purpose clauses (Matthew Dryer, personal communication). Thus, in Tamil, the case marker for indirect objects and allatives is also suffixed to the purpose clause:

(43) Avan poo-R-atu-*kku* kutu-tt-en
 he go-NONPAST-NOM-‘to’ give-PAST-1SG
 ‘I gave (something) in order that he can go’

The Kanuri examples in (41-42) above provide yet another illustration; the purpose/reason marker *-ro* is the allative suffix which is also used in these sentences for ‘to Monguno’. (Heine *et al.* (1991) show examples from several languages of this type of grammaticalization process from an adposition to a conjunction.)

In Kinyarwanda, the similarity between purpose clauses and benefactives is signaled in a slightly different way: since grammatical relations are marked on verbs rather than on nouns in Bantu languages, what we find is that a verb is marked by the same suffix when it takes a benefactive argument, as in (44a), as when it takes a purpose clause, as in (44b) (Kimenyi 1976):

(44) a. Umugóre a-rá-kor-*er-a* umugabo
 woman SUBJ PRO-PRES-‘work-BEN-ASP man

‘The girl you’re going to meet tomorrow is very pretty’

- (51) *Purpose*
 Yaʔáš ɲé·ɲi suɲá·l kí·š pu-wá·qi-pi
 man leave/remote woman house(ACC) her-sweep-PURPOSE
 ‘The man left in order for the woman to sweep the house’

Finally, some languages, like Wappo, have a special form for same-subject purpose clauses, which is only used to express purpose:

- (52) Isi celahaya cɔaphahaw-taʔ olol-ema
 we(NOM) things put away-PAST dance-PURPOSE
 ‘We put away things in order to dance’

3.2.1.3 *Negative purpose clauses.* Before leaving the discussion of purpose clauses, we should point out that some languages have a special negative subordinator for negative purpose clauses. In English, it is *lest*; in Daga, a language of Papua New Guinea (Murane 1974:156), this morpheme is *tawa* (see also Haiman 1988 and MacDonald 1988):

- (53) Enu-nege-pi tawa tarep war-an
 spear-me-3SG MEDIAL lest dance get-1SG PAST
 ‘Lest he spear me, I dance about’

3.2.2 *Circumstantial clauses*

Clauses expressing the circumstances by which a given state of affairs comes to be can be introduced by either affirmative or negative morphemes. In English these are *by* and *without*, both of which take the participial form of the verb:

- (54) He got into the army *by* lying about his age
 (55) She carried the punch into the living room *without* spilling a drop

3.2.3 *Simultaneous clauses*

Simultaneous clauses code the relationship called ‘overlap’ in the next chapter. In marking that two events occurred simultaneously, it appears to be universally the case that languages allow one of the simultaneous events to be signaled as providing the context or background for the other, or foregrounded, event. The choice of which clause serves as the background is, of course, determined essentially by the nature of the discourse (see Hopper 1979, and Hopper and Thompson 1980 for the relationship between discourse and grammar in the expression of background/foreground information).

There are two common ways of marking a backgrounded clause as simultaneous with its main clause: either a marker explicitly signaling simultaneity is used, or a continuative, durative, or imperfective aspect marker is used. An example of the first strategy can be found in Tolkapaya Yavapai (Hardy 1977). Here the suffix *-t* is a marker of simultaneity:

- (56) Kwawa 'chkyat-a-k vak 'unuu-t-m swach'skyap-ch vqaov-k yuny
 hair I-cut-IRR-SS here I-INCOMPL-SIM-DS scissors-SUBJ break-SS TNS
 'As I was cutting my hair, the scissors broke'

For an example of the second strategy, the use of an aspect marker which functions in simple sentences to mark 'ongoingness', we cite Yessan-Mayo of Papua New Guinea (Foreman 1974). Here the suffix *-men* is a progressive aspect marker:

- (57) Ti Wiywek ti-men-im ti ak sam
 she Wewak be-PROG-FAR PAST she then died
 'While she was in Wewak, she died'

English is a language in which both strategies are used: not only does *while* explicitly signal simultaneity, but the verb in a *while* clause may also be marked by the progressive marker *-ing*:

- (58) *While* (we were) eating, we heard a noise outside the window

Similarly, in Mandarin, the durative (DUR) aspect marker *-zhe* occurs in clauses with such a function:

- (59) Ta ku-zhe xinglai
 he cry-DUR wake up
 'He woke up crying'

And Swahili uses its imperfective aspect marker *ki-* for clauses functioning in this way (Tom Hinnebusch, personal communication).

- (60) A-li-amka a-ki-lia
 he-PAST-wake up he-PROG-cry
 'He woke up crying'

A third strategy for signaling simultaneity is that found in Warlpiri and other Australian languages: what Hale (1976) calls the 'adjoined relative clause'. With this strategy, two clauses are juxtaposed, one of which is marked as subordinate, but not signaling simultaneity in any way. Here is an example from Warlpiri, in which the subordination marking is the complementizer *kutja* (Hale 1976:78):

- (61) ŋatjulu-l u ø-ŋa yankiri pantu-n u kutja-lpa ŋapa ŋa-n u
 I-ERG AUX emu spear-PAST COMP-AUX water drink-PAST
 'I speared the emu while it was drinking water'

3.2.4 Conditional clauses

Before beginning our discussion of the semantics and structure of conditional sentences, let us agree on the term 'if' clause for the clause which names the condition, and the term 'then' clause for the main clause. These terms are not intended to imply anything about the order in which the

two clauses occur with respect to each other, nor about the obligatoriness of the morphemes which signal these clauses.

3.2.4.1 *The semantics of conditionals.* A basic semantic distinction between types of conditionals which is signaled by most languages is the distinction between *reality* conditionals and *unreality* conditionals. (The distinctions below are adapted from J. Schachter's (1971) pioneering study on the syntax and semantics of conditional sentences in English.) Reality conditionals are those which refer to 'real' present, 'habitual/generic', or past situations. Examples from English are:

- (62) *Present*
If it's raining out there, my car is getting wet
- (63) *Habitual/generic*
If you step on the brake, the car slows down
- (64) *Past*
If you were at the party, then you know about Sue and Fred

The term 'unreality conditionals' is used for conditionals which refer to 'unreal' situations. There are two types of unreal situations: those in which we *imagine* what might be or what might have been, and those in which we *predict* what will be. We can label these two types of unreality *imaginative* and *predictive*, respectively. Examples from English:

- (65) *Imaginative*
- a. If I saw David, I'd speak Barai with him (what might be - *hypothetical*)
 - b. If you had been at the concert, you would have seen Ravi Shankar (what might have been - *counterfactual*)
- (66) *Predictive*
If he gets the job, we'll all celebrate

As can be seen from these examples, among the imaginative conditionals, a further distinction can be made. Some imaginatives refer to situations which might happen, as in (65a) above, while some refer to situations which *didn't* happen or which *couldn't* happen, as in (65b). Those which might happen we can call 'hypothetical'; those which *didn't* or *couldn't*, we can call 'counterfactual'.

The semantic types of conditionals, then, can be summarized as follows:

Real

- 1 present
- 2 'habitual'/'generic'
- 3 past

*Unreal*1 *Imaginative*

- a. hypothetical
- b. counterfactual

2 *Predictive*

In the next subsection, we will see that languages divide up this semantic space in slightly different ways.

3.2.4.2 *The syntax of conditionals.* Most languages, as mentioned above, signal conditionals by means of subordinating morphemes such as *if*. Gwari, a Kwa language of Nigeria (Hyman and Magaji 1970), for example, uses the subordinator *nŋgyē*:

- (67) *Nŋgyē* hō sī shnamá, ho kū gyī
 if you buy yams you COMP eat
 ‘If you buy yams, eat them up’

Ngizim, a Chadic language (Schuh 1972), on the other hand, although it has an ‘if’ word, makes much more extensive use of a clause-final marker *nən* (or its variant *-n*):

- (68) Ká rdə-naa aci bii-*n* dà kii’ya-naa tluwii-gu
 you stop-TRANS him not SJNCT eat-totality meat-the
 ‘If you don’t stop him, he’ll eat up the meat’

nən, according to Schuh, is best viewed as an indefinite determiner which marks the conditional clause as not yet realized or of ‘general relevance’, as in (69):

- (69) Akər ika miya-k sau darəpta-*n*, aa tfa
 thief see(PERF) mouth-ASSOC hut open IMPERF enter
 ‘If a thief sees the door of a hut open, he will enter’

In imaginative conditionals, it is very common to find special marking. In English this marker is *would*; in Hausa (Bagari 1976), it is *daa*, which occurs in both the ‘if’ clause and the ‘then’ clause.

- (70) If he were sick, he *would* call us
- (71) In *daa* sarki za-i ziyarce ni, *daa* naa baa shi tuwo
 if IMAG king FUT-he visit me IMAG I(COMP) give him tuwo
 ‘If the king visited me, I’d give him tuwo’

In both languages, the imaginative marker (IMAG) also shows up in non-conditional imaginative sentences, which is common in other languages as well:

(72) *Would* that he were here now! (a bit archaic, meaning ‘I wish that he were here now’)

(73) *Daa naa sanii*
 IMAG PERF(1SG) know
 ‘Had I only known!’

In some languages, conditional clauses are marked as nominalizations or relative clauses. In Ngizim, as we saw above, they are marked with what may be plausibly argued to be an indefinite determiner. Welmers (1973:433-4) points out that in ‘verifiable’ conditionals in Efik, a Kwa language, the word *dyékè* is used followed by relative clauses, where *dyékè* seems to be derived from a noun phrase meaning something like ‘the indefinite circumstance’. Furbee (1973:15) suggests for Tojolabal, a Mayan language, that conditional clauses may be like relative clauses in that both may be marked with the definite determiner *ha*.

3.2.4.3 *Conditionals and time clauses.* In some languages, including Indonesian and certain languages of Papua New Guinea, there is no distinction between ‘if’ clauses and ‘when’ clauses. In many of these languages, the neutralization holds, however, only for *predictive* conditionals and *future* time clauses. Vai, a Mande language of Liberia (Welmers 1976), is a good example (where the discontinuous *à-’èè* is the conditional marker):

(74) *À à ná ’èè í-ì à fé’è-’à*
 he come you-FUT him see-FUT
 ‘If he comes, you will see him’ or
 ‘When he comes, you will see him’

That is, the distinction between English ‘when’ and ‘if’ clauses is simply one of degree of expectability, and is a distinction which many languages do not code.

A slightly different kind of relationship between predictive conditionals and temporal clauses can be found in a language like Kanuri (see Hutchison 1976): the marker *ga* marks a predictive conditional clause (among other things), while *døga* (the definite marker plus *ga*) signals a reason clause in the future:

- (75)a. *Ishin-ga shi-ga jengin*
 come(3SG IMPERF)-*ga* he-DO wait for(1SG IMPERF)
 ‘If he is coming I’ll wait for him’
- b. *Ishin-dø-ga shi-ga jengin*
 come(3SG IMPERF)-DEF-*ga* he-do wait for(1SG IMPERF)
 ‘Since he’s coming I’ll wait for him’

3.2.4.4 *Predictive clauses: ‘real’ or ‘unreal’?* Though predictive conditionals are semantically ‘unreal’, languages differ as to whether predictive conditionals are grouped *syntactically* with the

imaginary conditionals, i.e., are coded together with them as ‘unreal’, or with the ‘real’ conditionals. Swahili and Chagga, another Bantu language (Saloné 1977), are languages of the first type. In both languages, the ‘then’ clauses in predictive conditionals may be marked with either an imaginative marker (Swahili, *nge-*; Chagga, *we-*) or a future tense marker (Swahili, *ta-*; Chagga, special verb forms). Let us look at three Chagga examples:

(76) *Hypothetical*

a. John a-wé-icha inú ngí-*we*-korá machalári
 John SUBJ PRO-IMAG-come today I-IMAG-cook bananas
 ‘If John came today, I would cook bananas’

b. John k-a-cha inú ngé-*kora* machalári
 John if-SUBJ PRO-come today I-cook(FUT) bananas
 ‘If John came today, I would cook bananas’

Predictive

c. Kokóya John na-icha inú ngé-*kora* machalári
 If John SUBJ PRO-come today I-cook(FUT) bananas
 ‘If John comes today, I will cook bananas’

Sentences (76a) and (76b) are both imaginative hypotheticals; both verbs in (76a) are marked with an imaginative marker, while the main verb in (76b) is a future verb form, exactly like the main verb in the predictive conditional in (76c). Note the difference in subordinating morphemes, none in (76a), different ones in (76b) and (76c).

English and Haya, another Bantu language (Saloné 1977), on the other hand, are both languages in which predictive conditionals are never marked by the same morphology as imaginative conditionals, but have the same verb morphology as ‘real’ conditionals. Looking at an example in Haya, we see that predictive conditionals are marked with future tense markers in both ‘if’ and ‘then’ clauses; imaginative conditionals, on the other hand, may never be so marked, but must contain a past or perfect marker in both clauses:

(77)a. *Predictive*

K-á *la-ijá* n-*da*-mu-bóna
 if-he NEAR FUT-come I-NEAR FUT-him-see
 ‘If he comes I’ll see him’

b. *Imaginative*

Ká n-*a*-ku-bona efarasy’ ein’ ámabába ti-ni-*á*-ku-amini
 if I-NEAR PAST-UNREAL-see horse having wings NEG-I-NEAR PAST-UNREAL-believe
 ‘If I saw a horse with wings, I wouldn’t believe it’

The semantic explanation for the fact that languages differ as to whether predictive conditionals are marked in the same way as imaginative conditionals, i.e., as ‘unreal’, or in the same way as ‘real’ conditionals is clearly that predictive conditionals can be seen semantically as either ‘unreal’ or as ‘real’. That is, a future prediction is about something that hasn’t yet happened, so

it is ‘unreal’, as are sentences about what didn’t happen or what might happen. But it is also ‘real’ in that it is making a prediction about a state of affairs in the ‘real world’, as opposed to the ‘imaginary’ world.

3.2.4.5 *Imaginative conditionals: hypothetical and counterfactual.* The semantic distinction between hypothetical and counterfactual conditionals is typically not matched one-to-one by a morphological distinction. There seem to be two kinds of ways in which the two planes fail to be precisely isomorphic. English is an example of the first way: the same morphology is used for both hypotheticals and those counterfactuals which express not what *didn’t* happen, but what we know *couldn’t* happen. Thus the form

‘ <i>if</i> ’ clause	‘ <i>then</i> ’ clause
‘present subjunctive’	<i>would</i> and uninflected verb
(=past tense, except with <i>be</i>)	

is used in the following situations:

- (78) a. *Hypothetical (what might happen)*
If I *saw* Jimmy Carter, I *would faint*
- b. *Counterfactual (expressing what couldn’t happen)*
If I *were* you, I *would write* a book

For counterfactuals expressing what *didn’t* happen, on the other hand, only the following morphology is found:

‘ <i>if</i> ’ clause	‘ <i>then</i> ’ clause
<i>had</i> and past participle	<i>would</i> and uninflected verb

- (79) If we *had wanted* a quiet evening, we *would have left* you at home

The second way in which meaning and morphology may diverge in imaginative conditionals is for the language to make *no* morphological distinction between hypotheticals and counterfactuals. Isthmus Zapotec is like this: all imaginative conditionals (hypothetical and counterfactual) are marked with the unreality aspect (Velma Pickett, personal communication).

- (80) a. *Hypothetical*
Pa ñuuya ti elefante ra skwela ñate’
if see(UNREAL 1SG) an elephant at school die(UNREAL 1SG)
‘If I saw an elephant at school, I’d die’
- b. *Counterfactual (what couldn’t happen)*
Pa ñaka lii ke ninie zaka
if be(UNREAL 1SG) you not talk(UNREAL) thus
‘If I were you I wouldn’t talk that way’

c. *Counterfactual (what didn't happen)*

Pa ño-be ni ñaka wara-be
 if eat(UNREAL)-he it be(UNREAL) sick-be
 'If he had eaten it he would be sick'

Luiseño is another such language in which hypothetical and counterfactual conditionals are not distinguished.

3.2.4.6 *Negative conditionals*. Many languages have a morpheme to signal a negative condition. In English it is *unless*:

(81) *Unless* you get there by 6:00, we're leaving without you

(82) We'll go to Chicago *unless* the airport is snowed in

Mandarin is another example; its negative conditional marker is *chufei*:

(83) *Chufei* pianyi (yaoburan) wo bu mai
 Unless cheap otherwise I not buy
 'Unless it's cheap I won't buy it'

What these conditionals signal is that the proposition in the main clause depends on a certain condition not obtaining. In languages with a special negative conditional morpheme, they may sometimes have the same truth value as a sentence whose 'if' clause contains the conditional marker and a negative marker, but the implications are not the same. Consider the following pair in English as an example:

- (84) a. *Unless it rains*, we'll have our picnic
 b. *If it doesn't rain*, we'll have our picnic

While (84b) is neutral with respect to how likely the speaker thinks it is to rain, (84a) implies that the speaker thinks it is likely *not* to rain. Negative conditionals are typically like the ordinary conditionals of the language both syntactically, in that they manifest the same restrictions on verb forms, and semantically, in the way the reality/unreality and hypothetical/counterfactual distinctions are expressed.

3.2.4.7 *Concessive conditionals*. The term 'concessive conditional' has been used to refer to clauses analogous to 'even if' clauses in English, coding the relation 'frustrated implication' discussed in Chapter II.7 [Longacre], section 2.9.2.

(85) *Even if* it rains we'll have our picnic

(86) He wouldn't have passed *even if* he had turned in his term paper

Mandarin has a subordinator which is morphologically distinct from any of its ‘if’ morphemes for this relationship:

- (87) *Jiushi ta song gei wo wo dou bu yao*
 even if he give to I I still NEG want
 ‘Even if he gave it to me I wouldn’t take it’

Like negative conditionals, concessive conditionals in a given language are typically similar to ordinary conditionals in that language in terms of verb forms and the expressions of reality/unreality and hypotheticality/counterfactuality. However, concessive conditional clauses do carry additional presuppositions not signaled by ordinary conditionals, which match quite closely those carried by such contrary-to-expectation morphemes as the English *even*. (For some discussion, see Fraser 1969 and de Chene 1976.)

Let us consider just one example from English to illustrate how these presuppositions operate. For a sentence like (88):

- (88) Even if it rains, we’ll have our picnic

we can give the meaning of concessive conditionals roughly as follows:

- (89) asserted: we’ll have our picnic
 presupposed: there is an expectation that the proposition
 [If it rains, we’ll have our picnic] would *not* be true
 presupposed: there is a belief that the proposition
 [If it doesn’t rain, we’ll have our picnic] is likely

A concessive conditional declarative sentence is like an ordinary conditional sentence in that it may be talking about some ‘unreal’ event, either predictive or hypothetical, but it is like a concessive sentence (see next section) in that its main clause is asserted *in spite of* assumptions to the contrary.

3.2.5 Concessive clauses

‘Concessive’ is a general term for a clause which makes a concession, against which the proposition in the main clause is contrasted (see Haiman 1974). There are two types of concessive clauses, those which we might label ‘definite’ and those which we might label ‘indefinite’. ‘Definite’ concessive clauses are simply those marked by a concessive subordinator like ‘although’. Examples from English include:

- (90) *Although* she hates Bartók, she agreed to go to the concert
 (91) *Even though* it’s still early, we’d better find our seats
 (92) *Except that* we ran out of money, we had a great vacation

Tagalog (Schachter and Otnes 1972:479) is a language which has a rich variety of ‘definite’ concessive clause subordinators. Here is one example:

- (93) *Bagaman at hindi sila mag-aaral, umaasa silang pumasa*
 although not they will study expect they(LINK) to pass
 ‘Although they aren’t going to study, they expect to pass’

Evidence of the semantic definiteness of these clauses is that they can be paraphrased with the complex introducer ‘in spite of *the fact* that . . .’

The presuppositional and assertional structure for concessive sentences is similar to that which we discussed above for concessive conditionals. Let us again take one English example to illustrate. In a sentence like

- (94) Although she hates Bartók, she agreed to go to the concert

the meaning of definite concessive sentences can be roughly characterized like this:

- (95) asserted: she agreed to go to the concert
 presupposed: there is an expectation that [if she hated Bartók, then she would agree to go to the concert] would *not* be true

‘Indefinite’ concessive clauses, on the other hand, are those which signal a meaning like ‘no matter what’ or ‘whatever’; these contain some unspecified element, typically an indefinite pronoun or question word. A universal quantifier may be used for an element in the concession, e.g., whoever, whatever, whenever, wherever. Examples from English include such sentences as the following:

- (96) *No matter what* he said, she still refused to go out with him
 (97) *Whoever* he is, I’m not opening that door

In Mandarin, indefinite concessives are introduced by *wulun* or *bulun* and have the form of indirect questions:

- (98) *Wulun* ta shi shei, wo haishi bu qu
 no matter he be who I still not go
 ‘No matter who he is I still won’t go’
 (99) *Bulun* ta lai bu lai, women ye dei zuo
 no matter he come not come we still must do
 ‘Whether he comes or not, we’ll still have to do it’

3.2.6 Substitutive clauses

Some languages have subordinating markers for signaling the replacing of an expected event by an unexpected one. English uses such forms as *instead of* and *rather than* for this purpose (see Thompson 1972 for some discussion):

(100) We barbecued chicken *instead of* going out to eat

(101) Harry decided to eat the salad *rather than* send it back to the kitchen

In Isthmus Zapotec, a morpheme of Spanish origin *lugar de* ‘in place of’ is found in the analogous construction:

(102) *Lugar de* nuni-be ni zaka nuni-be ni sikari´
 place of do(UNREAL)-he it thus do(UNREAL)-he it this way
 ‘Instead of doing it that way, he should have done it this way’

An examination of the verbs in the substitutive clauses in Zapotec and English reveals interesting parallels, which may be shared by a wider range of languages: both the form and the interpretation of the subordinate clause verbs are predictable. In Zapotec, example (102), the subordinate clause comes first, and the first verb must be in the unreal aspect because the action never gets realized. In English, the verb must be a non-finite form, the participial *-ing* form with *instead of* and either the participial or the uninflected verb form with *rather than*. In both languages, the *interpretation* of the time reference of the substitutive clause verb depends on that of the main clause verb.

As was the case with ‘before’ clauses, substitutive subordinate clause, because of their negative meaning, interact with negation in interesting ways. In English, both substitutive and ‘before’ clauses can occur with negative polarity items like *any* and *ever*:

(103) Instead of doing *any* homework, he just sits around watching TV

3.2.7 Additive clauses

Some languages have subordinating morphemes which express one state of affairs in addition to another. In English, *besides* and *in addition to* serve this function; both require that their verbs be in the participial forms, which provides evidence that they are subordinate in this language:

(104) *In addition to* having your hand stamped, you must show your ticket stub

(105) *Besides* missing my bus, I got my feet all wet

3.2.8 Absolute clauses⁴

‘Absolute’ here is a cover term for a subordinate clause type in which the following conditions hold:

- (i) the clause is marked in some way as being subordinate;
- (ii) there is no explicit signal of the relationship between the main and subordinate clause; thus

- (iii) the interpretation of this relationship is inferred from the pragmatic and linguistic context.

There are essentially two ways to mark a clause as subordinate without signaling the precise subordinating relationship; one is to mark the verb in a special way, often by nominalizing it, and the other is to use a general subordinating morpheme. English, Latin, and Ngizim are languages in which the first type of strategy is used. English uses a non-finite verb form:

- (106) a. *Having* told a few bad jokes, Harvey proceeded to introduce the speaker
 b. *Seeing* me, Jamie hid behind his mother's skirt

In Latin (Greenough *et al.* 1903) and in Classical Greek, the verb in the absolutive clause appears in its participial form and is then case-marked according to the following convention: if the subject of the participial subordinate verb and the subject of the main clause verb are understood to be the same, the participial verb agrees with that subject in case, number, and gender; if the subject of the participial subordinate verb is not the same as that of the main verb, then the participial verb and the nouns dependent on it appear in the ablative case (Matthew Dryer, personal communication). Here is an example of each of these two situations from Latin:

- (107) Ab oppid-o *duct-a* femin-a prope templ-um *habita-ba-t*
 from town-ABL lead(PAST PART)-NOM woman-NOM near temple-ACC live-IMPERF-3SG
 'Having been brought from the town, the woman lived near the temple'
- (108) Caesar, *accept-is* litter-is, nuntium *misit*
 Caesar-NOM receive(PAST PART)-ABL letter-ABL messenger-ACC send-3SG PERF
 'The letter having been received, Caesar sent a messenger'

In Ngizim (Schuh 1972), a clause may be nominalized by postposing its subject, deleting its auxiliary, and replacing the finite verb with a verbal noun, which is marked by the possessive suffix. It can then function as an absolutive clause:

- (109) Kalaktayi-gaa ná təfə-n-gaa ii mənduwa
 return-1SG POSS 1SG PERF enter(PERF)-totality-ASSOC to house
 'Having returned, I entered the house'

Languages that illustrate the second strategy for marking an absolutive clause as subordinate, using a multifunctional subordinating morpheme, include Luiseño and Yaqui, in the Uto-Aztecan family, and Godié from the Kru subgroup of Niger-Congo. First, some examples from Luiseño, illustrating the subordinator *qala*, which can only be used when the subjects of the main and subordinate clauses are different (Davis 1973):

- (110) a. ?ó:nu-pil ney wultú?-ya ?i:k nu-htí?a-qala
 he-REMOTE me(ACC) angry-REMOTE there(DAT) my-go-SUBORD
 'He got angry at me when/because I went there (lit. He got angry at me, my having gone there)'

- b. ʔári-n-up póy ʔóy pu-ʔári-*qala*
kick-FUT-IMPERF him(ACC) you(ACC) his-kick-SUBORD
'Kick him when/if he kicks you (lit. Kick him, his having kicked you)'
- c. Wámʔ-ta nó naxánmal ʔi:qal pumó:m-i tów-ma pum-péla-*qala*
now-CONTRAST I old man just they-ACC look-HABIT their-dance-SUBORD
'Now that I'm old I just watch them while they're dancing'

In Godié (Marchese 1976), the general subordinator is *nA*, which can appear with clauses which are introduced by an initial subordinator, as well as by itself in absolutive constructions:

- (111) ɔ yi mɔ Dakpadu' nA gbesi ɔ tla a
he came to Dakpadu SUBORD traps he set recent
'Having come to Dakpadu, he set some traps'

The interpretation of the relationship between the clauses in an absolutive relationship is entirely determined by inference, and may not be very specific. Greenough *et al.*'s Latin grammar (1903:264), for example, lists five types of clauses which the ablative absolutive can 'take the place of':

- 1 a temporal clause (= 'when')
- 2 a causal clause (= 'because')
- 3 a concessive clause (= 'although')
- 4 a conditional clause (= 'if')
- 5 a 'clause of accompanying circumstance'

Absolutive constructions are used, then, when there is no need to specify more than that the clauses are closely related.

3.3 Summary

In this section, we have provided a survey of the types of adverbial clauses which can be found in languages of the world. We have discussed the types of semantic relationships which adverbial clauses signal, and we have indicated and attempted to explain some of the structural regularities which are found in certain of these clause types.

4 'Speech act' adverbial clauses

Some adverbial clauses in any language can be seen to relate not to the main clauses, nor to the preceding discourse, but to the fact that the act of communication is taking place. Examples from English would include such clauses as the italicized one in the following sentence:

- (112) *As I'm sure you're aware*, bananas have doubled in price since last year

Speech act adverbial clauses, although identical in form to the clauses we have been discussing, need to be recognized as a separate category because their function is not to modify or qualify the main clause in any way, but to modify or qualify, as it were, the speech act which the speaker is performing in uttering the main clause. A particularly clear illustration of this fact is an English sentence such as:

(113) *If you're interested*, the Lakers just won

The *if* clause in (113) in no way sets a condition on the Lakers winning; in fact, it is clear that they won whether or not 'you' are interested. Instead, this clause sets a condition on the hearer's appreciating the main clause, and might be paraphrased as: 'If you're interested, then consider the message that the Lakers just won.' Another example from English is:

(114) Harry will be late, *because I just talked to his wife*

If the reason for Harry's being late is that I just talked to his wife, then the *because* clause is a reason clause like those discussed above in section 3.2.1. The more likely interpretation, however, is that in which the *because* clause gives my reason for being able to make the assertion that Harry will be late; that is, I know he will be late because I just talked to his wife, who told me so. Illuminating discussions of speech act adverbial clauses in English can be found in Rutherford (1970) and Kac (1972).

5 Borrowed subordinators

In the description of the adverbial clause systems of certain languages, it is quite evident that the majority of subordinators are borrowed. Two striking examples are Yaqui (see Lindenfeld 1973) and Isthmus Zapotec (Velma Pickett, personal communication, and Pickett 1960). It will be recalled that Yaqui is a Uto-Aztecan language spoken in Arizona and Sonora, Mexico, while Isthmus Zapotec is an Otomanguean language spoken in Oaxaca, Mexico. The majority of speakers of both languages are bilingual, and both languages have borrowed a number of subordinating morphemes from Spanish. For example:

Yaqui

kwando	'when'
si	'if'
paraka/pake	'in order to'
porke	'because'

Isthmus Zapotec

ora	'when'
dede	'until'
kada	'each time'
ante	'before'
para	'in order to'
kumu	'since'

modo	‘the way’
sinuke	‘but rather’
lugar de	‘instead of’
sin	‘without’

While no hard and fast conclusions can be drawn about the nature of subordination or of syntactic borrowing from these two examples, this phenomenon does suggest a basic question which further research might seek to resolve. That question is: Why would a language borrow a number of subordinating morphemes from another language?

There are several factors to be considered in attempting to answer this question. One is the sociopolitical fact of language dominance. In the case at hand, we would want to consider to what extent the sheer fact of the dominance of Spanish speakers over Indian populations contributed to the borrowing of these subordinators into Yaqui and Zapotec. We might also hypothesize that influence from the more prestigious language might be greater in the area of complex sentence use, where there is somewhat greater opportunity for planning and exercising options in the presentation of information than in simple sentence use.

A second factor has to do with the semantic structure of the borrowing language itself. In Otomanguean languages less influenced by Spanish, such as Otomi and Trique, as mentioned above in section 2 (see Bartholomew 1973 and Longacre 1966), and therefore quite possibly in Zapotec as well, the ‘basic’ clause-connecting strategy is one of juxtaposition, with the semantic relationship between the clauses inferred rather than signaled explicitly. We might hypothesize, then, that when such a language comes into contact with one in which there are a number of clause-connecting morphemes which explicitly signal the relationship between the two clauses, there will be a tendency for a bilingual speaker to transfer the explicit signals into the language which uses the less explicit strategy whenever a specific message is intended. Such an explanation for the borrowing of subordinating morphemes, though appealing, is less satisfying for Uto-Aztecans: both Yaqui and Luiseño, on which studies of adverbial clauses are available (Lindenfeld 1973 and Davis 1973), have a fairly rich set of native subordinating morphemes.

Finally, a third factor may be a tendency on the part of bilingual people to create patterns in one of their languages which are structurally parallel to those found in the other. Thus, since in Spanish, subordinating morphemes occur clause-initially, it would be natural for a Luiseño/Spanish bilingual to use a Spanish subordinator in creating an analogous subordinator-initial adverbial clause in Luiseño. Clearly, much more research needs to be done on the parameters of syntactic borrowing before firm answers to these questions can be provided.

One thing is clear, however. When conjunctions are borrowed from one language into another, it must not be assumed that the borrowed conjunction has exactly the same meaning in the borrowing language that it had in the source language. Semantic shifts characterize borrowing on most levels.

6 Summary and conclusions

In Part I of this chapter on adverbial subordinate clauses, we have shown how adverbial subordinate clauses can be distinguished from coordinate clauses and from other types of subordinate clauses, although the distinction is not clearcut in some languages and thus the clauses should be viewed as being on a continuum. We have discussed in detail the twelve types

of adverbial subordinate clauses which we have found in surveying a number of unrelated languages, attempting to relate patterns of correlations between form and meaning from one language to another.

In Part II we will look at the function of adverbial clauses in discourse.

PART II ADVERBIAL CLAUSES BEYOND THE SENTENCE

I Introduction

In Chapter II:7, where he presents various models of sentence structure found around the world, Longacre mentions that for many languages sentences can be considered to consist of a *nucleus* with structural units called *sentence margins* draped around the edges. Sentence margins are considered to be functional slots whose fillers are typically adverbial clauses but which may be embedded sentences of complex internal structure. Positioning such sentence margins is most useful when we find structures that are maximally detachable and occur with many different sorts of sentence nuclei - as in English and other Indo-European languages, Philippine languages, and many languages of Mesoamerica. In some parts of the world where head-final chaining languages are found, we find that, although the model is initial link, medial link, and final link, the initial link is very often specialized for functions similar to those of a sentence margin in contemporary European languages. In head-initial chaining languages, however, a sentence margin may occur before the initial clause (for these chaining structures, see Chapter II.7 [Longacre], sections 4 and 5).

Part of the usefulness of setting up sentence margins is seen on the sentence level itself, i.e., we assume that there are essentially fewer sentence types, because not every margin-nucleus combination constitutes a further sentence type; it simply reflects a further distribution of a given sentence margin. Sentence margins, however, are of much greater usefulness than simply describing internal structure of sentences themselves. We hope to show that, as sentence margins, adverbial clauses have considerable relevance to the structure of paragraphs and discourse.

In the typology of adverbial clauses in Part I, we have seen examples of those clauses that occur before the main clause, preposed adverbial clauses, and those after it, postposed adverbial clauses. While head-initial languages (usually with VO order) tend to exploit both positions, some strongly head-final languages only use preposed clauses in keeping with their tendency to end the sentence with the main clause, which is the head of a sentence with more than one clause. In languages of the former type, one wonders if there are functional differences between the two positions. If there are (this is indeed the case as we will see in section 5), we ask another question: what are the functional equivalents of postposed clauses in languages of the head-final type? The preposed clause primarily serves the text-organizing function of linking sentences and paragraphs together, sometimes marking a higher level boundary. The postposed clause primarily serves a semantic function, similar to coordination, but giving a greater integration with the main clause at the local level. As it is the preposed clause that crucially functions at a level beyond the sentence, the focus will be on those adverbial clauses that are preposed.

Part II consists of the following sections. Section 2 deals with adverbial clauses and discourse movement in general. While section 3 briefly looks at cohesive functions of adverbial

clauses between paragraphs, section 4 discusses in depth cohesion within the paragraph with illustrations of the different types of adverbial clauses described in Part I. Section 5 discusses functional differences between preposed and postposed adverbial clauses, followed by the conclusion in section 6.

2 Adverbial clauses and discourse movement

Adverbial clauses may be used to provide cohesion for an entire discourse by assisting to maintain the discourse perspective and by helping to articulate the sections of the discourse. This discourse-level function of adverbial clauses is more inclusive than the interparagraph and intersentential functions which are described under the next two sections. It is possible, therefore, that a given occurrence of an adverbial clause may be multi-functional.

We will use for illustration a travel book on Mexico (Castillo 1939). While the material in this discourse is essentially descriptive, it is given in pseudo-procedural form, i.e., the discourse is given as if one were on a guided tour through the regions and towns mentioned. Thus, after a section of the discourse which describes Cuernavaca, a further section begins, *Leaving charming, tourist-ridden Cuernavaca . . .* Here an absolute clause, filling a time margin, serves to connect two sections of the discourse.

The portion of the discourse that we will be looking at in particular has to do with the trip from Cuernavaca to Taxco, including an aside to see the caverns of Cacahuamilpa, and some description of the town of Taxco itself.

By skillful use of adverbial clauses in various functions, the author of this discourse is constantly reminding the reader of the ‘you’re-on-a-journey’ perspective of the entire discourse. Thus, in the middle of the visit to the caverns a paragraph begins, *As you walk through these huge chambers decorated with the great icy-looking columns . . .* This, of course, has the function of binding the paragraph which it introduces to the previous paragraph, which describes stalactites, stalagmites, and columns. It seems, however, that a further overriding function of the adverbial clause just cited is to maintain the discourse perspective.

After the section concerning the caverns, there occurs a paragraph which acts as stage to the section which deals with the trip to Taxco. This stage consists of a one-sentence paragraph which begins, *After seeing this underground fairyland . . .* The balance of the sentence tells us, *you get back into your car again, travel back to the main highway, and start for Taxco, the most picturesque village in central Mexico.* Here the adverbial clause serves to separate the part of the discourse that deals with the caverns from the part of the discourse that deals with the trip to Taxco.

After a paragraph about reaching the town of Taxco itself and one which tries to picture one’s initial impression of the town, there’s a paragraph which begins, *As your car moves on . . .* This adverbial clause seems again to function in maintaining discourse perspective. A few paragraphs on, a paragraph begins with, *In a few seconds (you reach) . . .* There follows a series of five paragraphs in which reminders of discourse perspective are absent. Then comes a paragraph which begins, *Wherever you go in Taxco . . .* which is an adverbial clause (locative margin) which again serves to maintain the discourse perspective. The following paragraph continues in the same vein in that it begins, *As you browse about the village . . .* Two paragraphs following, one finds a similar clause which begins a paragraph, *As you prowl up and down the narrow streets . . .*

Thus, we see that what is essentially a descriptive discourse is given a pseudo-procedural perspective and this perspective is maintained through the discourse largely by use of adverbial clauses in the first sentences of various paragraphs. Such clauses also occasionally function to delineate portions of the discourse from each other.

Another device used to maintain discourse perspective in the Mexican travel discourse, in addition to the use of adverbial clauses, is the use of the pronoun *you*. In purely descriptive parts of the discourse both devices are dropped. The overall framework of the discourse can be readily seen in compiling an abstract of the parts which couple the pronoun *you* with various motion verbs, whether in main clauses or in adverbial clauses. I submit the following abstract of this discourse to show the importance of both adverbial clauses and the pronoun *you* in this discourse:

(115) *Leaving charming, tourist-ridden Cuernavaca, you continue your journey south-westward . . . Then, after a time, your guide suggests that you leave the main road and go to see the famous caverns of Cacahuamilpa . . . After seeing this underground fairyland, you get into your car again to go back to the main highway, and start for Taxco . . . Now your upward climb grows more exciting . . . Your driver is taking a series of curves . . . Although he sounds his horn at every turn . . . Meanwhile your road winds upward . . . You take another sharp curve or so; and suddenly, you see before you the quaint, picturesque village of Taxco . . . As your car moves on, you see . . . Your driver takes the narrow, rough streets on high as he drives by . . . In a few seconds you reach the level, well-shaded plaza . . . Wherever you go in Taxco . . . As you browse through the village, you will visit a number of shops . . . As you prowl up and down the narrow streets . . . But you will enjoy Taxco most if you will sit under the famous laurel trees . . .*

3 Cohesion between successive paragraphs

By 'paragraph', we mean a coherent stretch of discourse which is usually larger than a sentence and smaller than the whole discourse; the term can be used for either spoken or written language. A new paragraph typically introduces a new topic.

Now, a further function of adverbial clauses is to provide cohesion between successive paragraphs of a discourse. Notice that this is a more specific relation than that referred to above, where the function of the adverbial clause is to maintain discourse perspective relative to the discourse as a whole. Here the function is narrower, simply that of relating successive paragraphs. A very frequent device used here is what might be referred to as *tail-head linkage*, i.e., something mentioned in the last sentence of the preceding paragraph is referred to by means of back-reference in an adverbial clause in the following paragraph. Thus, one paragraph may end with *So saying, Rutherford gave up the struggle and went home for the night*. The next paragraph can begin, *When he reached his front door . . .*

Since Longacre first noted this in material from the Philippines, we quote here some earlier work (Longacre 1968:I.8-9) in which TAIL-HEAD LINKAGE through adverbial clauses and related elements is described. Notice that he posits devices which separate one paragraph from the other. Nevertheless, these devices are accompanied by those which also provide cohesion among the successive paragraphs of the discourse:

The first device (Tail-head linkage), with S_n of paragraph_i linking S_1 of paragraph_j, is the same device used for intraparagraph narrative linkage. This device is reported in Atta by Claudia Whittle. The narrative in question recounts in first person a man's story of his wife's death by drowning. In the first main paragraph of the discourse, the story is told of the wife and son getting in the boat, crossing the river, and returning - with the boat overturning in the water. The paragraph concludes with 'When the boat had overturned with them, the mother and child were then swimming in the middle of the water'. The next paragraph reintroduces the woman's proper name (not mentioned since the first sentence of the preceding paragraph) and follows with a gerund construction *pakanunnuk* 'swimming' which recapitulates the verb *mannunnunuk* 'they were swimming' of the concluding sentence of the preceding paragraph: 'Therefore (as far as what Ikenia was doing) (as they swam), the child swimmer was exhausted from carrying his mother.' The new paragraph is clearly distinguished from the former by the portion of the sentence which mentions the proper name Ikenia but is linked to the preceding paragraph by the next portion of the sentence (which repeats the verb 'swim').

Similarly, in Botolan Sambal, Harriet Minot reports the use of tail-head linkage several times in a text about a monkey and a turtle. Thus, one paragraph concludes with 'They both planted'. The next paragraph begins with a particle which often functions as a paragraph marker 'Now', followed by a recapitulatory phrase 'when they had both planted . . .'. Thus, both paragraph boundary and paragraph linkage are secured. In other cases where linkage of this sort is found, paragraph boundary is covert, i.e., the typical slot class structures into which the sentences fall require separate paragraphs.

Similarly, in Ilianen Manobo (Narrative Discourse II, paragraphs 3 and 4) one paragraph ends with '(Ukap) he returned to his mother', and the following paragraph contains the recapitulation 'When the mother of Ukap saw that her child had returned home . . .'. Nevertheless, a paragraph boundary is signaled by the particle complex *hune ve su* 'and then ended' which precedes the recapitulatory stretch and which, according to Hazel Wrigglesworth, "marks progress from episode to episode".

Very similar to tail-head linkage is *summary-head linkage*, i.e., the first sentence of a successive paragraph has a clause which summarizes the preceding paragraph. Thus, we may have a paragraph involving description of a variety of activities. The next paragraph may begin, *When he had done all this*, or something to that effect.

Tail-head linkage and summary-head linkage are characteristic not only of narrative (i.e., telling a story), but also of procedural discourse (i.e., telling how something is done). We adapt here from earlier materials (Longacre 1968:1.25) a diagram which shows graphically the use of time, conditional, and concessive clauses in interparagraph linkage in a procedural text from Botolan Sambal, spoken in the Philippines (where ¶=Paragraph):

Diagram I Interparagraph linkage in Botolan Sambal

¶	Sentence	Margin	Nucleus
1	1	Rice farmer	... his work
	3		... go to work
	4		... his work
	5		... he must be tired in what he does
2	6	First thing he does	...
	8		... he scatters <i>his seed</i> ...
3	9	(Time) While his seedlings grow	...
4	12	(Condit) If his seedlings have grown	...
	15	... if he's <i>finished planting</i> his paddy	He is happy
5	16	(Concess) But even tho he's <i>finished</i> and has his <i>planting</i> done	he still has work
	19	... if <i>rice heads</i> are appearing	
6	20	(Time) When <i>rice heads</i> have become a little yellow	
	22	... if he tastes the fruit of his tiredness	He is happy
7	23	(Condit) if the <i>rice heads</i> are mature	it can be <i>harvested</i>
8	27	(Time) When the rice is all <i>harvested</i>	...
9	32		That is the story of the rice farmer

The material in the margin column, which can be seen as the 'ground' against which to view the nucleus, or 'figure', is typically old information, i.e., what is given, while the material in the nucleus column is the new event or state which ensues.

Not all sentences of the component paragraphs are given, but only the first and the last, which are relevant to the linking mechanism. New paragraphs begin with sentences 6, 9, 12, 16, 20, 23, 27, and 32. In some cases in the diagram the linkage is a further type of linkage, HEAD-HEAD; thus, sentence 20 seems to relate to sentence 23 and both are related by virtue of initial adverbial clauses.

4 Cohesion within the paragraph

Cohesion within the paragraph by means of adverbial clauses and similar elements is so important that we are convinced that a theory of paragraph cohesion could be centered around such phenomena. We state here in germ such a theory and then proceed in the balance of this chapter to talk more particularly of intraparagraph connections via adverbial clauses.

(1) Thesis

Lexical overlap is the primary mode of intersentential connection, i.e., a sentence_j may include in it part of sentence_i or a paraphrase of all or part of sentence_j.

This overlap may be via sentence margin filled by adverbial clause. Typical introducers of such clauses are the elements *when, while, after, although, because, in that, since, in order to, if, even if*. A sentence margin (especially time margin) may, however, be filled by a noun phrase or a time phrase of some sort.⁵

(2) Corollary 1

In some parts of the world verbs of highly generic meaning such as ‘do’ and ‘be’ (and sometimes ‘say’) are used as back-reference via adverbial clauses in a highly stylized and reduced manner so that they become in effect conjunctival elements. This is seen in Cayapa, Paez, Guanano, Inga (all in South America), and to some degree in Kosena, a language of New Guinea. See section 4.4 below.

(3) Corollary 2

Instead of a sentence margin or a conjunctival element as described above in (1) and (2), a language may use a true conjunction (i.e., a particle without verbal or nominal structure). See section 4.5 below.

(4) Corollary 3

A conjunction may be an affix. We will not feature this corollary in the present chapter but will confine ourselves to (1-3) as outlined above.

4.1 Linkage via adverbial clauses in sentence margins

4.1.1 Adverbial clauses in prior-time margins

This is the standard linkage in narrative and procedural paragraphs in a typical Philippine language. The units so linked are sentences or embedded paragraphs. Instances involving the latter are a more complex variation of relatively simpler structures of the sort illustrated here in which each successive sequential thesis (ST) of the paragraph is a separate sentence which carries forward the event line. In such simpler structures sentence_j has an initial time clause or a time phrase that is a back-reference to sentence_j - much as described as tail-head linkage under section 3 above. Note the schema presented in Diagram II where A, B, C, and D represent successive events (or event complexes), and ST=sequential thesis. Such a structure could be either narrative or procedural and might better be termed somewhat more neutrally ‘sequence paragraph’ (see Longacre 1996, Ch. 4 for paragraph analysis).

Diagram II Linkage via preposed temporal elements in sequence paragraphs

Margin	Nucleus	
	he A'd	ST ₁
having A'd when he had A'd after A-ing	he B'd	ST ₂
having B'd etc.	he C'd	ST ₃
having C'd etc.	he D'd	ST _n

The form of the back-reference or recapitulation differs considerably from language to language.⁶ The commonest form is a nominalized construction (a non-focus verb). Back-reference may, however, be via an adverbial clause (much as in English) with an introducer meaning something on the order of 'when' or 'after'. In some Manobo dialects a special tense form (irrealis or dependent tense) characterizes clauses in this function (Longacre 1968:I.61). Finally, all the Philippine languages contain certain conjunctions or conjunctive complexes that supply narrative movement and, in effect, are substitutes for the occurrence of a back-reference margin.

It is also important to note the relations which occur between the element in the preceding sentence and the back-reference in the following sentence. We may have simple repetition or paraphrase (often contracted) of the element of the preceding sentence. Thus, a preceding sentence can have a clause, 'And he chopped down five trees'. The next sentence may begin with a back-reference, 'After chopping (them) . . .' On the other hand, the relation may be one of 'reciprocal coupling'. Thus, the preceding sentence may be, 'They said, "Why not let us be the ones to build it?"' And the following sentence may begin, 'When they heard this . . .' Just as frequently, a back-reference may proceed along an expectancy chain and encode 'script-predictable' information so that the action which is referred to in a back-reference is really an action which would naturally succeed on the action which is referred to in the preceding sentence. Thus, the preceding sentence might have, 'They killed a wild pig, cut it up, and cooked it', and the next sentence could begin, 'After eating it . . .'

Back-reference of this sort is endemic for many Philippine languages. Thus, the following short paragraph from Itneg (Walton, in Longacre 1972) shows a regularity which would be difficult to duplicate in English, and, if duplicated, would probably be considered to be stylistically ineffective (this paragraph and some others below are shown without diagrammatic representation for the interest of space).

(116) Sequence linkage in an Itneg paragraph

- | | |
|---|--------------------|
| a. He went. | (ST ₁) |
| b. <i>When he arrived in the forest</i> , he chopped the trees. | (ST ₂) |
| c. <i>When he had chopped them</i> , he shaped them. | (ST ₃) |
| d. <i>When he had shaped them</i> , he went home again. | (ST ₄) |

Such regularity of back-reference is also characteristic of many structures in New Guinea. It is, of course, more characteristic of the oral style than of the written style. In the written style there is sometimes a certain reluctance to write in back-reference with this frequency, a reluctance especially observable in the new literates. Nevertheless, once literacy and writing are firmly established in a community, people frequently return to the resources of the oral language to enrich the written style. Consequently, we suspect that extensive back-reference will probably not be confined to oral style, but also, in at least some languages, will characterize written literature as well.

English, which has a wealth of conjunctions, does not use back-reference nearly as often as do the languages of the Philippines and New Guinea. Nevertheless, examples of the sort illustrated in Diagram III (Tolkien 1969:20) can be found and appear to be stylistically effective.

Diagram III Sequence linkage in an English paragraph (with ST₂ expounded by an embedded paraphrase paragraph)

Margin	Nucleus	
	It was a good cake, and no one had any fault that it was no bigger than was needed.	Setting
When it was all cut up	there was a large slice for each of the children, but nothing left over: no coming again.	ST ₁
	<i>The slices soon disappeared, and every now and then a trinket or a coin was discovered.</i>	ST ₂ : Paraphrase ¶ Thesis
	Some found one, and some found two, and several found none; for that is the way luck goes, whether there is a doll with a wand on the cake or not.	Paraphrase
<i>But when the cake was all eaten</i>	there was no sign of any magic star.	ST _n

The first sentence functions as setting to the entire paragraph, introducing the cake and giving some idea of its adequacy. The first sequential thesis (ST₁) reported in sentence two simply tells us that the cake is cut up and passed out among the children. The third sentence (which initiates a short embedded paragraph which here fills the slot of the second sequential thesis) is a coordinate sentence, the first conjunct of which is, *The slices soon disappeared*. The fourth sentence, as the second sentence of an embedded paragraph, simply expands on the material found in the former sentence. In this sentence the event line of the paragraph does not move forward. The final sentence of the paragraph, however, tells us of the outcome of it all and,

therefore, can be regarded as the final and climactic outcome of the whole paragraph (ST_n). It begins with *But when the cake was all eaten*, which seems to be clearly a paraphrase of *The slices soon disappeared*. As such, this back-reference binds the end of the paragraph to the preceding material.

Another such example from English is from the travelogue discourse which we referred to earlier (Castillo 1939). There is a paragraph which begins, *Even more interesting is the guide's story of the Empress Carlota's visit to Cacahuamilpa*. The next sentence states: *When she visited the caves in 1866, she wrote on one of the walls 'Maria Calota reached this far'*. The clause at the onset of the second sentence is a recapitulation and back-reference to material in the previous sentence.

4.1.2 Adverbial clauses in concurrent-time margins

A rather clear example of this device is from our Mexican travelogue discourse (Castillo 1939). The entire paragraph from which this example is taken consists of four sentences, the first of which is:

- (117) *As you prowl up and down the narrow streets*, you must not fail to see the public washing basin, which looks more like a small outdoor swimming pool than anything else.

This introduces the topic of the paragraph, namely *the public washing basin*. The paragraph likewise ends with an element which refers back again to the topic, *Even though you cannot understand a word that is said, you will find the public washing place a fascinating spot*. In between occur two sentences which apparently express simultaneous actions:

- (118) Here the women and girls of the village come to wash their family clothing on the concrete washboards built along the basin's four sides. *As they dip the water from the basin in their colorfully painted gourd bowls*, these native housewives chatter among themselves combining their gossip with their work.

The initial adverbial clause in the second sentence is a back-reference to the preceding sentence. While the first sentence simply refers to washing the family clothing on the washboards, the adverbial clause in the second sentence refers to an inevitable concomitant activity of that process, namely dipping the water from the basin and pouring it over the clothes. Therefore, the first sentence and its recapitulatory back-reference in the adverbial clause of the second sentence constitute a generic-specific paraphrase, i.e., the whole process of washing clothes is referred to in the first sentence and part of the process is referred to in the recapitulation of the second sentence. The recapitulation serves to tell us (by use of the subordinator *as*) that the activity of the first sentence is to be construed as simultaneous with the activity reported in the balance of the second sentence, namely, *these native housewives chatter among themselves*. Lest we fail to get the point, the rest of the second sentence says, *combining their gossip with their work*.

The above example encodes the notion of coterminous overlap. The situation is somewhat different when an adverbial clause and the balance of the sentence encode span-event overlap, i.e., a span of activity during which an event takes place. Note the example from Tboyl (Doris Porter, in Longacre 1968:1.59):

- (119) Span-event overlap in Tboly
- a. *When it was almost the middle of the morning* then I returned and stopped by to eat some young coconut on the path. (ST₁)
 - b. *While (igò) I was still eating the young coconut*, I just saw Awey coming from downstream carrying a small bag over his shoulder. (ST₂)

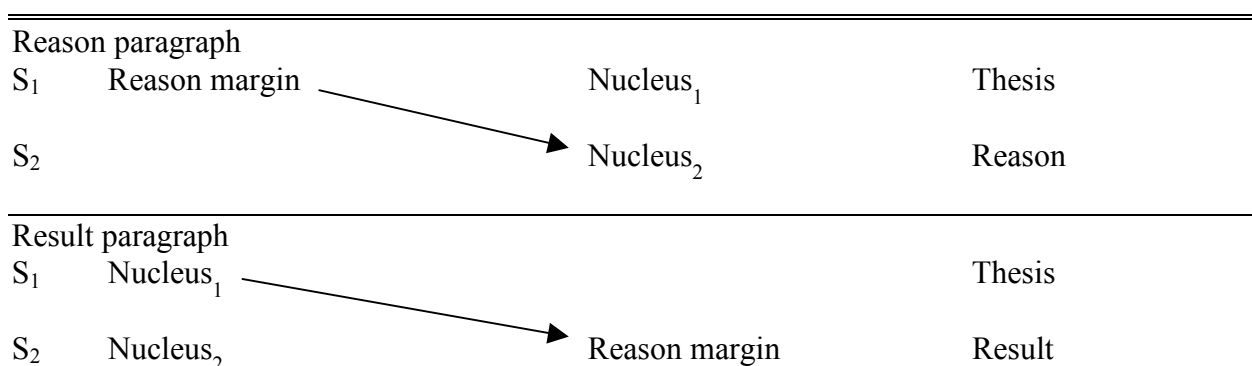
In span-event overlap as illustrated in (119), the events reported in the sentence nuclei are really successive, i.e., we're told that presumably after the 'stopping' stated in the first sentence occurs a further event, 'I just saw Awey coming from downstream. . .' We are given, however, the additional information in the adverbial clause at the onset of the second sentence that the speaker was still eating the coconut when he saw someone coming.

4.1.3 Adverbial clauses in reason margins

Within a single sentence a reason margin may express efficient cause relative to a result which is expressed in the nucleus of the sentence. Thus, in the sentence *I went downtown because I was bored*, the reason margin *because I was bored* expresses efficient cause relative to the nucleus *I went downtown*. If we have a two-sentence sequence in which the reason margin is paraphrased or is a paraphrase of one of the sentence nuclei, then there is an extrapolation of this relationship to the paragraph level. Thus, we may take the above sentence and add a further sentence which paraphrases the reason margin of the former: *I went downtown because I was bored. I just couldn't stand being around them anymore*. The reason-result relationship is now spread over the two sentences.

The structural possibilities include at this point, however, not one but two paragraphs, the first of which expresses reason in its second sentence and the second of which expresses result in its second sentence. The two paragraphs can be called reason and result paragraphs respectively. Diagram IV summarizes these structures (the linear order of margins and nucleus is irrelevant).

Diagram IV Reason and result paragraphs



The two structures schematically sketched above are extremely common in Philippine languages. We will illustrate both of these here. Note the example of a reason paragraph from Dibabawon (Janette Forster, in Longacre 1968:I.76) where the reason margin appears after the nucleus:

- (120) A reason paragraph in Dibabawon

- a. But it was the same as if he had recovered from his illness *because he became famous by riding in an airplane*. (Thesis)
- b. There is no other old man who has ridden in an airplane; he's the only one. (Reason)

Note that in the above example the reason margin of the first sentence is paraphrased as the nucleus of the second sentence, i.e., 'he became famous by riding in an airplane' is explained in more detail: 'There is no other old man who has ridden in an airplane; he's the only one'. Thus, while we might argue that we are told everything in the first sentence itself, the paraphrase of the reason margin in the second sentence serves to spread the relation over both sentences and thus results in an extrapolation of the result-reason relationship to the paragraph level.

That such examples are not limited to the Philippines, but occur in English, is readily deducible, not only from the fact that the translations of these paragraphs make good English, but also from examples readily documentable in English itself. The following rather long and complex example in Diagram V is from a medical writer (Garn 1961):

Diagram V Paraphrase of the reason margin with *since* in the third sentence

Margin	Nucleus	
Since races are natural units reproductively isolated from each other and with separate evolutionary histories through time,	it is not surprising that they differ from each other in a great many gene-determined respects.	Thesis: Paraphrase ¶ Thesis
↓	↓	
Considering the unique history behind each race, and the geographical and ecological uniqueness of its successive homelands,	lack of differentiation would be remarkable indeed.	Paraphrase
↘	↘	
	Particularly in the random loss or chance acquisition of genes each race represents a cumulative succession of accidents that could never be duplicated in millions of years.	Reason

Here the first sentence begins with a reason margin, *Since races are natural units reproductively isolated from each other and with separate evolutionary histories through time*. This is paraphrased in the initial absolute clause of the second sentence, *Considering the unique history behind each race, and the geographical and ecological uniqueness of its successive homelands*. All this is summed up rather skillfully in the nucleus of the third sentence - especially in the last part of that sentence, *each race represents a cumulative succession of accidents that could never be duplicated in millions of years*. Here *isolated* and *separate* in the first sentence, *uniqueness* in the second sentence, and *could never be duplicated in millions of years* in the third sentence all continue the same lexical chain. The first two sentences constitute an embedded

paragraph, not only by virtue of the paraphrase relationship between their reason margins, but also by virtue of the paraphrase found in the nuclei themselves. Thus, we're told that *it is not surprising that they differ* in the first sentence, and in the second sentence that *lack of differentiation would be remarkable indeed*. This is a negated antonym paraphrase, i.e., *it is not surprising that they differ* is paraphrased by a stretch which in effect means 'It would be surprising if they didn't differ'. Therefore, the first slot of this paragraph is filled by an embedded paraphrase paragraph. The marginal elements in the two sentences of this embedded paragraph are paraphrased and developed yet once more in the nucleus of the third sentence. The third sentence fills a reason slot in respect to the two preceding sentences.

We have been looking at situations in which a reason margin in the first sentence in a paragraph is paraphrased as the nucleus of the second sentence. We can also have the opposite situation in which the nucleus of a *first* sentence is paraphrased in a reason margin of a *following* sentence. (Again questions of relative order of margin and nucleus within a sentence are not relevant here.) This is what we are calling a result paragraph in Diagram IV.

We begin again with a Philippine example since structures of this sort are especially common in that part of the world. The following example is also from Dibabawon (Forster, in Longacre 1968:I.121):

- (121) Nucleus of a first sentence paraphrased in a reason margin of a second sentence in Dibabawon
- a. Wow, what a beautiful place that is at Nasuli. (Thesis)
 - b. No wonder they chose to live there *because it is really a place there at Nasuli*. (Result)

Here the nucleus of the first sentence 'Wow, what a beautiful place that is at Nasuli' is closely paraphrased in the reason margin of the second sentence 'because it is really a beautiful place there at Nasuli'. Again we can note that the second sentence is a fairly self-contained unit and that the addition of the preceding sentence is what extrapolates the reason-result relationship from the sentence level to the paragraph level.

For an English example of this we turn to the writings of the Christian apologist Schaeffer (1969:120).

- (122) An English example of a reason margin that paraphrases a preceding sentence in a result paragraph
- a. They are my kind; they are my people; they are not something else; they're that which I am. (Thesis)
 - b. I can really understand them *because I am who they are*. (Result)

Here the reason margin, *because I am who they are*, is a succinct contraction paraphrase of the nucleus of the preceding sentence.

For an example of a reason clause with the subordinator *since* in the same function, we turn again to the medical writer (Garn 1961) quoted above.

- (123) A *since* clause paraphrasing a preceding sentence with the addition of some new information⁷

- a. In the female the homozygote develops early Kuru whereas the heterozygote develops late Kuru.
- b. Among the males the homozygotes die of early Kuru while the heterozygotes survive as do homozygous normals.
- c. *Since most of the heterozygous females live through the reproductive period and even those homozygous for Kuru (married early in life) manage to have children*, the continuation of the abnormal Kuru gene is therefore assured.

Note that in this example we have a coordinate paragraph which compares female and male as to Kuru genes. Then in the third sentence (which expresses result), the reference is to the first sentence, ignoring the data presented in the second sentence which is largely irrelevant. Again the *since* clause is a paraphrase and elaboration of material found in the nucleus of the first sentence.

4.1.4 Adverbial clauses in conditional margins

There are several functions that *if* clauses perform in paragraph structure. To begin with, *if* clauses figure in a paragraph structure that is essentially a two-sentence or more enlargement of a conditional sentence, so that we have in effect a conditional paragraph. These clauses may also figure in successive sentences in stating alternatives, i.e., in a binary alternative paragraph. Finally, *if* clauses may function in what may be called a counterfactual paragraph structure.

Thus, to return to the medical writer quoted above, we find the paragraph in Diagram VI which illustrates the first function of *if* clauses, i.e., enlargement of a conditional sentence into a conditional paragraph.

Diagram VI The enlargement of a conditional sentence into a conditional paragraph

Margin	Nucleus	
	Carleton Gajdusek, the outstanding American authority on Kuru, observes that 'leprosy and yaws are less frequent here (in the Fore) than in many surrounding populaces who do not suffer from Kuru'.	Protasis
Obviously, if the Kuru gene protects against either disease,	it could counteract the loss of genes due to Kuru.	Apodosis

Note that in this example the first sentence broaches the possibility of some connection between the low incidence of leprosy and yaws and the incidence of Kuru. The *if* clause of the second sentence makes this connection a bit more explicit by suggesting that maybe the Kuru gene actually protects against either disease. This is in keeping with the theory of paraphrase assumed here, namely, that paraphrase is not an exact semantic reproduction of the original material, but may involve loss or gain of information. Note that in this two-sentence paragraph structure a lot of the background for the *if* condition within the conditional sentence proper is given in the

previous sentence and, therefore, is not repeated in the *if* clause of that sentence. Again, we conclude that the two-sentence sequence is essentially an extrapolation from the second sentence by the addition of a former sentence that gives extra background and explanation.

We can think of more colloquial, everyday examples which are parallel to the above, such as the following:

- (124) I'm wondering if you would be interested in coming to my house for supper Thursday night along with three students from the National University. *If you are*, please let me know.

If clauses may also be used to express alternatives on the paragraph level. The Tbody paragraph in Diagram VII (Doris Porter, in Longacre 1968:I.97) is an apt illustration.

Diagram VII '*If*' clauses expressing alternatives on the paragraph level

Margin	Nucleus	
	A well-loved person they put in a coffin so that his relatives can visit him.	Thesis
If they make it long	the coffin stays in the house for 29 days.	Alternative step 1
If they make it short	it is only seven so that those who loved him can visit him.	Alternative step 2

In this example, the 'if' clauses in the margins express, along with the following nuclei, alternatives relative to the topic, 'viewing the dead in a coffin' that is expressed in the first sentence.

Such examples are not at all difficult to multiply for English, as in the following:

- (125) a. *If you want to eat downtown*, I'll meet you at Perkins Restaurant at 5:00.
 b. *If you want to eat at home as usual*, then we'd better delay supper until 6:30.

Still another use of 'if' clauses on the paragraph level is to encode some kind of counter-consideration. The example from Atta Negrito (Claudia Whittle, in Longacre 1968:I.120) is apt.

- (126) A counterfactual *if* clause
 a. Domi, the nephew of Uncle Inggie, he also came to visit. (Thesis)
 b. *If Domi hadn't (come)*, they wouldn't have known about the coming serenade.
 (Counter-consideration)

This paragraph in some ways appears to be an extrapolation of a counterfactual sentence on the paragraph level. In the first sentence the information is given that Domi came to visit. This is put counterfactually in the second sentence, 'If Domi hadn't come', with the consequence stated

‘they wouldn’t have known about the coming serenade’. It is evident that ‘if’ clauses are rather versatile in their functions on the paragraph level in many languages.

4.1.5 *Adverbial clauses in purpose margins*

Adverbial clauses with *in order to* (or its equivalent *lest* in a negative clause) in a purpose margin may occur in sentence_i and be paraphrased in the nucleus of sentence_j thus providing a further variant of the thesis-reason structure which is illustrated above in respect to other sorts of sentence margins (see Thompson 1985 and Hwang 1995 for further discussions on purpose clauses in English and Korean respectively). This presents another instance of a reason paragraph of the sort shown in Diagram IV. The following example from Schaeffer (1968:129) is illustrative.

(127) Thesis-reason structure in a hortatory discourse

- a. It is unpleasant to be submerged by an avalanche, but we must allow the person to undergo this experience *in order that he realize that his system has no answer to the crucial questions of life.* (Thesis)
- b. He must come to know that his roof is a false protection from the storm of what is, and then we can talk to him of the storm of the Judgement of God. (Reason)

In this example the purpose margin is quite carefully paraphrased in the first base of the second sentence. Thus, we have in the purpose margin *that he realize* which is parallel to *He must come to know*. We have also the stretch *that his system has no answer* which is parallel to *that his roof is a false protection*, and finally the stretch *to the crucial questions of life* which is parallel to *from the storm of what is*. The coordinate sentence, which is the second sentence of this paragraph, goes on to add a further clause which brings in new material. This is a typical function of coordinate sentences, i.e., to attach an additional but parallel element to some systematic paraphrase which occurs in the regular development of a paragraph.

4.1.6 *Adverbial clauses in concessive margins*

The role of *although/though* clauses in paragraph structure is not clear at the present time. Two examples, however, in our present data have to do with incidental back-reference in the course of bringing paragraphs to a close. Perhaps some sort of summary or outcome is expressed. Perhaps all that is intended is a reiteration of the main topic of the paragraph.

Note the following example (again from the medical text, Garn 1961):

- (128) a. Mediterranean Fever is a ‘periodic’ disease.
- b. Once the symptoms, the fever and malaise, have begun, they recur sporadically and unpredictably during the individual’s lifetime.
 - c. At the least there is fever, lasting a day or two, joint pains, and chest and abdominal pain.
 - d. In advanced cases, there is a joint involvement, decalcification of the bone and kidney insufficiency.
 - e. *Though most of the affected individuals are not permanently or seriously disabled*, about 10% of cases studied to date succumbed to renal complications.

It appears in the above paragraph that the purpose of the first sentence is to introduce the topic *Mediterranean Fever*. The next sentence sounds somewhat like a fresh beginning in that the words *Once the symptoms, the fever and malaise, have begun* begin that sentence. Sentences (c-d) express the course of the disease from light to heavy cases. Sentence (e) begins with the adverbial clause *Though most of the affected individuals are not permanently or seriously disabled*. This sentence seems to hark back two sentences to the sentence which says *At the least there is fever, lasting a day or two, joint pains, and chest and abdominal pain*. The remaining part of the last sentence of the paragraph, i.e., *about 10% of the cases studied to date succumbed to renal complications*, seems to take off from the preceding sentence, i.e., *In advanced cases, there is a joint involvement, decalcification of the bone and kidney insufficiency*. It appears, therefore, that this last sentence is some sort of summary which expresses the possible outcomes of the disease.

We now cite here the whole paragraph from the Mexican travelogue discourse which is cited in part in section 4.1.2 of this part.

(129) *As you prowl up and down the narrow streets*, you must not fail to see the public washing basin, which looks more like a small outdoor swimming pool than anything else. Here the women and girls of the village come to wash their family clothing on the concrete washboards built along the basin's four sides. *As they dip the water from the basin in their colorfully painted gourd bowls*, these native housewives chatter among themselves combining their gossip with their work. *Even though you cannot understand a word that is said*, you will find the public washing place a fascinating spot.

It is evident that the last sentence is a reiteration of the topic which is stated in the first sentence as the *public washing basin*, referred to briefly as *basin* in the next two sentences and now referred to as the *public washing place*. Also note that the word *you* occurs in the first and in the last sentence of this paragraph, but does not occur in the two intervening sentences. There is a return in the last sentence to the viewpoint of the reader as observer. It is, then, not unexpected that this last sentence begins with the adverbial clause, *Even though you cannot understand a word that is said*. This clause obviously refers back to the previous sentence, *these native housewives chatter among themselves combining their gossip with their work*. Apparently we have here an incidental reminder that the housewives are talking in a foreign language and the tourist (whose viewpoint is adopted here) cannot expect to understand them. In spite of the handicap, he will still find the public washing place a fascinating spot.

4.2 *Balanced or parallel clauses in successive sentences*

When clauses in prior-time margins may be balanced in successive sentences to make a contrast paragraph. In the medical text from which we have been quoting, the author quotes from someone else as follows (Garn 1961):

(130) To quote Beutlar, Robson, and Bittenweiser, 57: *'When Primaquine was administered to non-sensitive subjects there was no change in their red cell GSH (reduced glutathione) level. When Primaquine was administered to a sensitive subject, there was an abrupt fall in the GSH content of the red blood cell to about one half of the original already abnormal value.'*

The two sentences within this quotation clearly contrast with each other. An initial *but* or *however* (the overt sign of a contrast paragraph) would clearly fit in the second sentence. In the parallel *when* clauses the administration of Primaquine to *non-sensitive subjects* is balanced over against its administration to *sensitive subjects*. In the accompanying nuclei of the sentences, *no changes* in the GSH content of red blood cells is balanced against *an abrupt fall* in the GSH content. This is the two-pronged contrast that is typical of many ‘but’ structures in various parts of the world (cf. Longacre 1996, Ch. 3).

In the Mexican travelogue text there is a paragraph, the first two sentences of which begin with concessive margins. Presumably, the occurrence of the concessive margins - initial in both sentences - and the similarity in content of the nuclei of the two sentences as well, establishes these two sentences as items in a coordinate paragraph. There are no elements of contrast as in the above example. Rather, the first and second sentences simply assert that the caverns are believed to be as marvelous as Carlsbad Caverns, and that they are very large. What is germane to our present discussion, however, is the role of the proposed concessive clauses in establishing this balancing and coordination:

- (131) a. *Although these caves have not yet been properly explored*, many people believe that they are as marvelous as our own Carlsbad Caverns in the State of New Mexico.
 b. *Even though nobody can be sure of their size and quality*, it is known that they are large, for they have been found to connect with another system of caves nearly twenty miles away.
 c. They are the largest known caverns in all Mexico.

4.3 Adverbial clauses for local background

Before closing this subsection it needs to be emphasized that all the above constructions involving adverbial clauses in intraparagraph cohesion involve some sort of paraphrase relation of the adverbial clause with something else in the paragraph, i.e., they involve lexical overlap. Otherwise, an adverbial clause simply contributes local background to the sentence in which it occurs. In all the texts which we have been drawing examples from, there are numerous examples of adverbial clauses in such localized intrasentential function which have no relevance to any information outside the sentence itself. Thus, we have, for example, adverbial clauses which function as asides to the reader, those similar to ‘speech act’ adverbial clauses discussed in Part I, section 4. In the medical text just cited the writer says in one place, *As the reader of this book undoubtedly knows . . .* Similar to these asides are bibliographical references such as, *As X (date) has shown* or *As X and Y (date) have observed*. It is hardly necessary to multiply examples on this point. We content ourselves with the following paragraph in the Mexican travelogue text:

- (132) a. It was Cortes who discovered the silver and started the mines going which made this village thrive and still keep it going.
 b. *While prospecting for tin and copper to use in making cannon*, he made his rich discovery.
 c. Later, *when he thought that the King of Spain might come to visit him in Mexico*, Cortes had a tunnel built through one of his mines near the plaza of the village *so that the king might see for himself how rich the region was*.

- d. *So that his visitor might be comfortable during his trip through the mines*, Cortes had the tunnel made deep enough for a man to ride through it on horseback!

Notice that sentence (b) begins with an adverbial clause (in concurrent-time margin), *While prospecting for tin and copper to use in making cannon*. The rest of the sentence, i.e., *he made his rich discovery*, is a paraphrase of the first part of sentence (a). The initial adverbial clause of sentence (b) is, however, paraphrased nowhere in the paragraph; it brings in new and relevant information but serves no cohesive function. Notice also that sentence (c) has a preposed *when* clause in prior-time margin and has a postposed *so that* clause in the purpose margin. Both of these items have information of relevance mainly to the sentence itself. Likewise, the last sentence of the paragraph begins with a purpose clause *so that his visitor might be comfortable during his trip through the mines*. There is no other reference anywhere in the preceding sentences to Cortes' concern for the comfort of this royal visitor. Presumably, then, this purpose clause also is of relevance mainly to the sentence in which it occurs - although the last two sentences are united by references to the expected visit of the king of Spain.

4.4 Lexical overlap as conjunctival element with generic verb

We have tried in the above section to establish the thesis that lexical overlap is the primary mode of intersentential connection. A corollary of that thesis is that a lexical overlap - especially when it is a back-reference - can become stylized and reduced until it becomes similar to a conjunction. Thus, instead of the specific repetition of a verb in back-reference the subsequent allusion may be by virtue of a verb of highly generic meaning such as 'do', 'be', or 'say'. In the parts of South America where this stylized conjunctival back-reference is encountered, the verb is often combined with a demonstrative stem. The verb is either uninflected or minimally inflected, resulting in what has sometimes been called a mini-clause.

Thus, in Cayapa (Wiebe 1977) narrative, forms consisting of a demonstrative plus 'be' plus a few inflectional elements form the most common conjunctival element: *Tsej-tu* (with *tu* indicating same subject in the verb of the preceding sentence as in the verb to follow in the sentence being introduced); *Tsen-nu* (with different subject indicated); *Tsen-nu-ren* (with *-ren* indicating that the main verb of the sentence will be an important event; and *Tsen-bala-n* (with *bala* 'when' and *-n* indicating role reversal or frustration). All these forms sum up a previous sentence 'So being then . . .' but contribute bits of information such as might be found in any dependent Cayapa verb. Often they are best translated simply as 'and then'.

Cayapa also uses forms of demonstrative plus 'do' as in *Tsangue'* (with - ' marking same subject), 'having done this', or again simply 'and then', or 'next . . .'; and forms of demonstrative plus 'say' as in *Tsandi'* (with - ') meaning 'on so saying, then . . .'

The situation is not greatly different in several other Chibchan languages (Paez, Guambiano, and Colorado) as well as in Tucanoan languages, where the 'mini-clause' is the commonest conjunctival element. As such, in its various forms the mini-clause is a reduction and stylization of the adverbial clause.

4.5 Lexical overlap as conjunction (particle)

As a second corollary of the main thesis, it remains to note that initial back-references to a preceding sentence, or a stylized and reduced reference, can be substituted for (in many languages) by a true conjunction, i.e., an element that is a particle or a particle complex.

Then picture a sentence such as *Tom mowed the grass* followed by another sentence *He put the lawnmower away*. The second sentence could begin with an explicit back-reference *After mowing the grass, he . . .* or with a stylized back-reference (much like Cayapa) *After doing that, he . . .* or simply with *Then he . . .* On this basis it could be argued that adverbial clauses exemplify the basic mood of intersentential cohesion, while such a reference can become stylized and conjunctival (as in Cayapa), or be simply substituted for by a conjunction.

This is true of other types of back-reference in English as well. Thus, consider the following two pairs of sentences:

- (133) a. He's sick. *Since he's sick*, I won't bother him
 b. He's sick. *Therefore/so*, I won't bother him
- (134) a. He's sick. *Even though he's sick*, I've got to see him about this matter
 b. He's sick. *Nevertheless*, I've got to see him about this matter

In (133b) above, the back-reference *since he's sick* is substituted for by *therefore* or *so*. Similarly, in (134b) the back reference *even though he's sick* is substituted for by *nevertheless*.

However, it was not from a consideration of English but from a germinal comment of Maryott's (1967) regarding Sangir (Philippines) that it first became clear that many if not all intersentential conjunctions could be considered to be substitutes for adverbial clauses in the same function. For example, Maryott posited three temporal margins: a prior-time margin with a conjunction meaning 'after', a concurrent-time margin with a conjunction meaning 'while', and a subsequent-time margin with a conjunction meaning 'until'. He then went on to observe that the Sangir conjunction *tangu* 'then' could substitute for any of the temporal margins. He also posited three margins in logical function: a cause margin with adverbial introducer 'because', a concurrent logical margin with an introducer meaning 'since', and a result margin with an introducer which means 'with the result that'. He then suggested that any of these margins can be substituted for simply by the word *diadi* meaning 'therefore'.

4.6 Adverbial clauses as topics

At the level of the individual sentence, we can say that an adverbial clause whose role is to maintain cohesion within the discourse as a whole is functioning as a *topic* with respect to the sentence to which it is attached.⁸ Let us look briefly at some of the grammatical ramifications of the topicality of adverbial clauses which are serving this linkage function.

Some of the general characteristics of topics are: (1) they appear in sentence-initial position, (2) they are discourse dependent, (3) they need not be arguments of the main predication, (4) they are definite, and (5) they set a 'spatial, temporal or individual framework within which the main predication holds' (Chafe 1976:50 and Li and Thompson 1976b).

Now, as we have seen in Part II of this chapter, it is extremely common to find adverbial clauses functioning as topics in every language. But in some, this function is explicitly marked.

In several languages, conditional clauses are marked as topics, and in some, the marking they share also appears on interrogatives. In Hua, a Papuan language, for example, conditionals, topics, and interrogatives can all be marked with *ve* (Haiman 1978):

- (135) a. E-si-*ve* baigu-e

come-3SG FUT-*ve* stay(FUT)-1SG

(i) *Conditional*

If he comes, I will stay

(ii) *Interrogative*

Will he come? I will stay

b. *Topic*

Dgai-mo-*ve* baigu-e

I-CONNECTOR-*ve* stay(FUT)-1SG

‘As for me, I will stay’

In Turkish the conditional suffix *-se* also marks topics (Eser Ergovanti, personal communication):

(136) a. *Conditional*

Istanbul-a gid-er-*se*-n, Topkapi müze-sin-i

Istanbul-DAT go-AORIST-COND-2SG Topkapi museum-POSS-ACC

muhakkak gez

for sure visit

‘If you go to Istanbul, be sure to visit the Topkapi museum’

b. *Topic*

Ahmed-i-*se* çok mesgul

Ahmed-be very busy

‘As for Ahmed, he’s very busy’

The reason why conditionals, topics, and questions in many languages may share the same morphology is that conditional clauses, like topics, can be presupposed parts of their sentences. Both of them may be thought of as establishing a framework within which to proceed with the discourse, much as a question might. Thus, (135a) is semantically similar to a ‘mini-conversation’ in (137a), and (136b) is similar to the ‘mini-conversation’ in (137b):

(137) a. A: Is he coming?

B: (Yes)

A: Well, then, I’ll stay

b. A: You know Ahmed?

B: (Yes)

A: Well, he’s very busy

(For further discussion, see Haiman 1978; Keenan and Schieffelin 1976a,b; Li and Thompson 1976b; and Marchese 1987.)

But conditionals are not the only adverbial clauses which may be marked as topics: in many languages, a variety of clause types may be so marked.

Chao (1968:81, 113) points out that clauses of concession, reason, time, and condition may all occur with the four topic/interrogative particles in Chinese. Here is just one example, showing a concessive clause, a question, and a topic sentence with the final particle *a*:

(138) a. *Concessive*

Suiran wo xiang qu *a*, keshi ni bu rang wo
 although I want go but you NEG allow I
 ‘Although I want to go, you won’t let me’

b. *Interrogative*

Ta shi nali-de ren *a*?
 he is where-GEN person
 ‘Where is he from?’

c. *Topic*

Zheige ren *a*, ta yiding shi yige hao ren
 this person he certainly is a good person
 ‘This person, he must be a good person’

In Godié, the Kru language of the Ivory Coast which we looked at earlier, the ‘non-final’ morpheme *nA* occurs at the ends of adverbial clauses functioning as topics (Marchese 1977, 1987):

(139) $\bar{\lambda}$ tA nɔ kaa nʌ $\bar{\lambda}$ yi ɔ ’ni
 I look for(COMPL) him long time and I POT him see

$\bar{\lambda}$ ni ɔ nA nʌ ɔ yii ku bulu
 I see(COMPL) him and he (POT)me up take
 ‘I looked for him until I found him . . . *When I had found him*, he took me . . .’

The italicized clause in the above section of a narrative is an example of what we discussed above as an ‘absolute clause’. Notice that it ends with the marker *nA*, and that it has all the characteristics of topics that we listed above: it occurs sentence initially and does not function as an argument of the main clause predicate; its discourse role is to link the preceding clause with the clause to which it is attached and, at the same time, it sets a temporal framework within which the following predication holds; finally, in recapitulating already-mentioned material, it is definite. Further evidence that *nA* is a topic marker comes from a dialect of Godié in which single nouns which function as topics may be followed by the *nA* marker:

(140) Zozii *nA*, ɔ yAMAM guu cicici
 Jesus he healed sickness of all kinds
 ‘Jesus, he healed all kinds of diseases’

In Isthmus Zapotec, adverbial clauses may take an optional final particle *la* (which one language consultant calls a ‘comma’). It is found only on those clauses which are initial and definite:

- (141) Kumu wara be *la*, naa uyaa’
 since sick he (COMPL)go I
 ‘Since he was sick, I went’
- (142) Laga kayuni be nga *la*, bedanda hnaa be
 while (PROG)do he that (COMPL)arrive mother his
 ‘While he was doing that, his mother arrived’

A clause which represents new information, such as the result clause in (143), cannot take *la*, then, because it is not the topic:

- (143) Dede ma ke ganda saya’ (**la*), tantu ja ndaane’
 till I not (POT)can walk so much full my belly
 ‘I am so full I can’t walk’

la can also be found with initial noun phrases which are functioning as topics, but, as expected, never with focused initial noun phrases:

- (144) Ngiiu-ke *la*, bigapa ba’du-ke
 man-that hit child-that
 ‘That man, he hit the child’
- (145) Tu bi’ni ni? Betu (**la*) bi’ni ni
 ‘Who did it? Betu did it’

In Lisu, a Tibeto-Burman language, adverbial clauses functioning as topics are marked with the same marker *nya* which is used for NP topics (see Hope 1974:64; and Li and Thompson 1976b):

- (146) Ame thæ nwu patsi-a dye-ą ɲu bæ-ą nya nwu nya asa ma mu-a
 yesterday TIME you plain-to go-DECLAR FACT say-DECLAR TOP you TOP Asa not see-Q
 ‘When you went to the plain yesterday, didn’t you see Asa?’
 (‘Assuming that it is a fact that you went to the plain yesterday, . . . didn’t you see Asa?’)

Thus, we see that in some languages, the discourse-cohesion role played by certain adverbial clauses is signaled explicitly by marking them as topics.

5 Preposed versus postposed adverbial clauses

So far we have seen the cohesive function of mostly preposed adverbial clauses linking paragraphs together (section 3) and sentences together (section 4). Apparently, all languages, regardless of their basic word order, have preposed adverbial clauses. However, the distributional

pattern is not the same for postposed clauses among the world's languages. Strongly verb-final languages, such as Korean and Japanese, tend to use very few postposed clauses; they are severely restricted only to conversational data. Functional differences according to the position of the adverbial clause are described in section 5.1, and section 5.2 suggests functional equivalents to postposed clauses that a strongly head-final language might exploit.

5.1 Functional differences between preposed and postposed adverbial clauses

Using English data, several studies report that there are functional differences for adverbial clauses according to their position relative to the main clause (Chafe 1984, Thompson 1985, Ramsay 1987, Givón 1990, Ford 1993, Hwang 1990 and 1994). Thompson (1985) shows how drastically different the scope and function of initial and final purpose clauses are in written English, referring to them as 'two quite different constructions' sharing the same morphology. The initial purpose clause states a problem raised by the preceding discourse, while the final one states a purpose for the action named in the main clause.

The thesis that the preposed clause has a textual function of wider scope than the postposed clause has been supported by subsequent research by others. In sections 2-4 above, we have shown how the cohesive function of preposed adverbial clauses may work at different levels, from the whole discourse to interparagraph and intersentential levels, not only in English but also in other languages. The intersentential function can be considered a local back-referencing function of tying two sentences closely together, as compared to the higher level function of marking the episode boundary or thematic discontinuity. Whether local or global, their function is bidirectional, linking what has gone before to what is to come. Semantic information encoded in preposed clauses tends to be less significant, often repeating or giving predictable information from what has been already stated.

The postposed adverbial clause, on the other hand, is often unidirectional, primarily relating to its main clause already stated. It conveys more integrated information with the main clause at the local level, and it tends to 'appear at *paragraph medial* positions, i.e. in the middle of a tightly-coherent thematic chain' (Givón 1990:847, his emphasis). Semantically, the information encoded in it may be significant, closely parallel to that encoded in clauses in coordination. The two passages below are from English texts, the first about a snake and an Indian youth, and the second the three little pigs.

- (147) a. The youth resisted awhile, but this was a very persuasive snake with beautiful markings.
 b. At last the youth tucked it under his shirt and carried it down to the valley.
 c. There he laid it gently on the grass, *when suddenly the snake coiled, rattled and leapt, biting him on the leg.*
 d. "But you promised . . .," cried the youth.
 e. "You knew what I was *when you picked me up,*" said the snake *as it slithered away.*
- (148) a. Next morning the little pig set off at four o'clock.
 b. He found the apple tree.
 c. He was up in the tree, picking apples, *when the wolf came along.*

In both texts there occur the cohesive preposed adverbial clauses in other parts of the texts; but why are those above postposed? While the two postposed clauses in (147e) exemplify the

integrated function, those in (147c) and (148c) are more detached from the main clause, as shown by the comma. They encode information of greater significance than that in the respective main clause, which states the routine sequential action or condition expected from the previous sentence. We suggest the following functions of the postposed clauses in (147c) and (148c):

- 1 To maintain the agent line (thematic participant) intact
- 2 To reflect iconic time sequence in the order of clauses
- 3 To create a dramatic surprise by hiding in some sense the significant event in the *when* clause, which occurs after the noneventful information given in the main clause
- 4 To convey globally crucial information and mark a turning point or peak

Thus, some postposed clauses function not only to integrate information stated in the two clauses (main and adverbial) together, but also to mark a turning point at some critical point globally in discourse.

Ford's study (1993) of temporal, conditional, and causal clauses in English conversational data reveals a higher frequency of postposed clauses than preposed ones (135 vs. 48 tokens), a distributional pattern certainly due to the oral style. She even claims that the postposed, final position is the default location for adverbial clauses in conversational data. Much more crosslinguistic work on the use of adverbial clauses in conversation are needed to conclude whether the functional difference between the preposed and postposed clauses is parallel to that in written and monologue data. Similar studies can be done even for strongly head-final languages that normally do not tolerate postposed adverbial clauses, where the postposed position is usually allowed only in conversation.

5.2 Functional equivalents to postposed clauses in head-final languages

If some strongly head-final languages do not tolerate postposed adverbial clauses, at least in their written style, what other structures are used to take over the functions that are generally relegated to the postposed clause? The assumption behind this question, of course, is that all languages have some means of expression to accommodate communicative needs that arise in human interaction. This kind of question is especially essential in translation across typologically distinct languages.

Looking at the data from Korean and Japanese, Hwang (1994) reports that the position of the main clause subject and the choice of the nominative and topic particle interact with each other to create an effect equivalent to the effect of a postposed adverbial clause in another language. Example (149) is taken from a well-known Korean short story (where MOD=Modifying ending; a literal translation is done to reflect the Korean structure, with the implied information in parentheses):

(149) Sim Pongsa-nun, *Sim Chengi-ka* *payt salam-tul-ul* *ttala*
 Shim Bongsan-TOP Shim Chung-NOM sea person-PL-ACC follow

cip-ul *ttena-l.ttay-ey-ya,* *pilose cwukum-uy* *kil-lo*
 house-ACC leave-when-at-only finally death-GEN way-to

ttenanta-nun *kes-ul* *alkey toyessupnita*

leave-MOD fact-ACC came to know
 ‘Shim Bongsu, when Shim Chung was leaving home with the seamen, finally realized that (she) was going to die’

The intervening temporal clause placed between the subject and the rest of the main clause is functionally equivalent to the postposed clause in a language like English. The temporal clause has its own subject marked nominative by *-ka*, while the main clause subject at the beginning of the sentence is marked by the topic particle *-nun*, clearly indicating that it is the topic of the whole sentence as the subject of the main clause.

Another functional equivalent to the postposed clause, especially when the two clauses are causally connected, is found in an equational sentence in which two clauses are joined by a copula. For the English sentence taken from a story, *I daren't open the door because I thought you'd come for the rent*, a roughly equivalent Korean sentence would be: ‘That (I) didn't dare to open the door was because (I) thought you'd come for the rent.’ The equational structure might actually be in two sentences in Korean, as in (150):

- (150) a. Sunim-un tanghwang haytta
 monk-TOP was embarrassed
 ‘The monk was embarrassed’
- b. Suto-ha-nun mom-ulo kyelhon hal swu-ka ep-ki ttaymun ita
 asceticism-do-MOD body-as can marry-NOM not exist-NZR reason is
 ‘(It) is because (he) cannot marry (her) as a person who is practicing asceticism’

Instead of stating the reason for his embarrassment in an adverbial clause, a separate sentence is used in (150b) to keep the natural information flow in this context.

The more global function of creating a dramatic surprise in postposed clauses in VO languages like English represents skewing from the normal pattern of encoding events in main clauses and nonevents in dependent clauses. No skewing of this kind is necessary in OV languages like Korean, where conjunctions (like ‘when’ and ‘as’) occur at the end of the clause. Clause-final conjunctions do not give the sense of setting like clause-initial conjunctions in English. The Korean equivalent to the English sentence (147c) would be: ‘*On the grass (he) put (it) gently-when*, the snake suddenly coil-and, rattle-and, leap-and, bit his leg’. The order of clauses is iconic to the chronological order of events as in English, but the status of the main and adverbial clause is reversed in Korean. As expected in a regular coding pattern, the event reported in the final clause is the most crucial information, while the preceding events are stated in medial clauses in the chain (whose verbs are not usually inflected for tense and mode). Thus, there might be several structures in strongly head-final languages that are functionally equivalent to the postposed adverbial clauses.

6 Conclusion

We have tried to show in this part of the chapter that adverbial clauses may be of relevance to a stretch greater than the sentence in which they occur, that they may provide cohesion for an entire discourse, or they may provide cohesion for some paragraph within it. The data and evidence

that we have accumulated appear to be sufficient to suggest that the fundamental device of intersentential connection is lexical overlap which involves grammatically definable parts of the sentence. The thesis is that one grammatically definable part of a sentence (sentence margin or a clause within the nucleus of a sentence) refers in some way to all or part of another sentence in the surrounding context. Such references are systematic, can be codified, and be used to implement a theory of the structure of discourse and paragraph. Taking lexical overlap in grammatically definable parts of sentences as a fundamental device of intersentential cohesion, it can further be shown that in some languages conjunctions are essentially a combination of verbal and demonstrative elements that have developed from such an overlap. Finally, even in languages where such a development cannot be traced, conjunctions can often be shown to be a substitute for the use of such overlap. Adverbial clauses are a frequent grammatical codification of such overlap and are therefore crucial to the understanding of cohesion in discourse.

NOTES

- ¹ *Denn* clauses are exceptional: they appear to be subordinate, but they exhibit ‘normal’ verb-second word order. Compare (a) and (b):

Er musste bezahlen (a) *denn* er war da
he had to pay because he was there

(b) *weil* er da war
 because he there was

‘He had to pay because he was there’

- ² Adverbial clauses of comparison, degree, and extent form a topic worthy of crosslinguistic research. They are not treated in this chapter.

³ We are grateful to Matthew Dryer for his valuable help in clarifying this issue.

- ⁴ The term ‘absolute’ comes from traditional Latin grammar, *absolutus*, meaning ‘free’ or ‘unconnected’. In traditional Latin grammar, however, its usage is restricted to clauses of the second type described in this section, exemplified by (108), whose subject bears no grammatical or semantic relation to the main verb. Our use of ‘absolute’ here is more general. For a plea that absolute constructions in Indo-European be regarded as a type of subordinate clause, see Berent (1973). Givón (1990:Ch.19) refers to these clauses as participial adverbial clauses, and Haspelmath (1995:3) uses the term ‘converb’ for the verb in such clauses: “A converb is defined here as *a nonfinite verb form whose main function is to mark adverbial subordination.*”

- ⁵ Overlap linkage may also be via a part of the sentence nucleus itself. Thus, the first part of a coordinate sentence may repeat or allude to part of a previous sentence, as in the following example:

(a) With Eugene the first sign of trouble is usually smouldering resentment. He cherishes some real or imaginary hurt for several days, and then . . .

Likewise, the first base of an antithetical sentence may embody a back-reference to the preceding sentence:

(b) Johnnie has made some progress in social relations recently. He apparently is adjusting somewhat better to his peer group, but . . .

The second base of a reason sentence (i.e., the part of the sentence introduced by *for*) may have a similar function:

(c) Mac was tired, bone tired from the experiences of the past 48 hours. He slept the clock around for he was completely exhausted.

⁶ In previous work (Longacre 1968:1.56-63), Longacre has summarized some of the variety of grammatical linkage found in Philippine languages - devices which embody sequential back-reference of this sort.

⁷ See Longacre 1996, Ch. 3, in which he suggests seven varieties of paraphrase, one of which, amplification paraphrase, adds new information while repeating information already given.

⁸ This discussion owes much to input from Russell Schuh, Velma Pickett, Robert Hetzron, Lynell Marchese, and John Haiman. See also Marchese (1977, 1987) and Haiman (1978).

Suggestions for Further Reading

Interest in adverbial clauses has grown with regards to syntax and discourse along with more research on clause combining in general. Two edited volumes include articles on adverbial clauses: Haiman and Thompson (1988) and Tomlin (1987). Corum *et al.* (1973) and Brugman and Macaulay (1984) contain many papers presented at parasessions on subordination at Chicago Linguistic Society and Berkeley Linguistics Society respectively. Books on syntax and typology (e.g., Payne 1997, Whaley 1997) often include a chapter or section on adverbial clauses. See Givón's (1990) chapter called "Interclausal coherence," which provides a good discussion of a variety of clause combining devices on the continuum from coordination to subordination.

For information on the ordering of adverbial clauses relative to the main clause, see Thompson (1985), Ramsay (1987), and Diessel (2001). You can also see papers dealing with specific types of adverbial clauses, often in relation to their functions in discourse context, e.g., temporal (Declerck 1996, Hwang 2000), conditional (Haiman 1978, 1983; Traugott *et al.* 1996), concessive (Thompson and Mann 1987), and purpose (Thompson 1985, Hwang 1997). For adverbial constructions in the languages of Europe, see Kortmann (1997) and van der Auwera (1998). For interactional functions of adverbial clauses in English conversations, see Ford (1993)

which deals with three commonly used adverbial clauses (*when*, *if*, and *because* clauses) in terms of their prosody and positions, initial vs. final.

REFERENCES

- Andersson, L. G. 1975. *Form and function of subordinate clauses*. Gothenburg, University of Göteborg, Department of Linguistics. (Gothenburg Monographs in Linguistics, 1)
- Bagari, D. 1976. Subordinate adverbial clauses in Hausa. Unpublished Ph.D. dissertation, University of California, Los Angeles
- Bartholomew, D. 1973. Otomi dependent clauses. In Corum *et al.* 1973:1-8
- Berent, G. P. 1973. Absolute constructions as 'subordinate clauses'. In Corum *et al.* 1973:147-54
- Boyle, D. 1973. *Ach* and *agus* as coordinate and subordinate conjunctions in Gaelic. In Corum *et al.* 1973:220-8
- Brugman, C. and M. Macaulay, eds. 1984. *Proceedings of the tenth annual meeting of the Berkeley Linguistics Society*. Berkeley, Berkeley Linguistics Society
- Buechel, E. 1939. *A grammar of Lakota*. Saint Francis, S. Dakota, Rosebud Educational Society
- Byarushengo, E. R., A. Duranti and L. M. Hyman, eds. 1977. *Haya grammatical structures*. Southern California Occasional Papers in Linguistics, 6
- Castillo, Carlos. 1939. *Mexico*. Ed. by Burton Holmes. Chicago, Wheeler
- Chafe, W. L. 1976. Givenness, contrastiveness, definiteness, subjects, topics, and point of view. In Li 1976:25-55
- Chafe, W. L. 1984. How people use adverbial clauses. In Brugman and Macaulay 1984:437-49
- Chao, Y-R. 1968. *A grammar of spoken Chinese*. Berkeley, University of California Press
- Corum, C., T. C. Smith-Stark and A. Weiser, eds. 1973. *You take the high node and I'll take the low node*. Chicago, Chicago Linguistic Society
- Davis, J. F. 1973. A partial grammar of simplex and complex sentences in Luiseño. Unpublished Ph.D. dissertation, University of California, Los Angeles
- de Chene, B. 1976. 'Even' and the meaning of conditionals. Unpublished manuscript, University of California, Los Angeles

- Declerck, R. 1996. A functional typology of English *when*-clauses. *Functions of Language* 3:185-234
- Diessel, H. 2001. The ordering distribution of main and adverbial clauses: a typological study. *Language* 77:433-55
- Ebert, R. P. 1973. On the notion 'subordinate clause' in standard German. In Corum *et al.* 1973:164-77
- Ford, C. E. 1993. *Grammar in interaction: adverbial clauses in American English conversations*. Cambridge, Cambridge University Press
- Foreman, V. 1974. *Grammar of Yessan-Mayo*. Santa Ana, Calif., Summer Institute of Linguistics. (Language Data, Asian-Pacific Series, 4)
- Fraser, B. 1969. An analysis of concessive conditions. *Chicago Linguistic Society* 5:66-75
- Furbee, N. L. 1973. Subordinate clauses in Tojolabal-Maya. In Corum *et al.* 1973:9-22
- Garn, S. M. 1961. *Human races*. Springfield, Ill., Bannerstone House
- George, I. 1975. A grammar of Kwa-type verb serialization: its nature and significance in current generative theory. Unpublished Ph.D. dissertation, University of California, Los Angeles
- Givón, T. 1990. *Syntax: a functional-typological introduction*, Vol. II. Amsterdam, Benjamins
- Greenough, G. B. *et al.*, eds. 1903. *Allen and Greenough's new Latin grammar*. Boston, Ginn
- Haiman, J. 1974. Concessives, conditionals, and verbs of volition. *Foundations of Language* 11:341-59
- Haiman, J. 1978. Conditionals are topics. *Language* 54:564-89
- Haiman, J. 1983. Paratactic *if*-clauses. *Journal of Pragmatics* 7:263-81
- Haiman, J. 1988. Inconsequential clauses in Hua and the typology of clauses. In Haiman and Thompson 1988:49-69
- Haiman, J. and S. A. Thompson, eds. 1988. *Clause combining in grammar and discourse*. Amsterdam, Benjamins

- Hale, K. L. 1976. The adjoined relative clause in Australia. In R. M. W. Dixon, ed. *Grammatical categories in Australian languages*. Canberra, Australian Institute of Aboriginal Studies: 78-105
- Hardy, H. K. 1977. Temporality, conditionality, counterfactuality, and contrast. Unpublished manuscript, University of California, Los Angeles
- Haspelmath, M. 1989. From purposive to infinitive: a universal path of grammaticization. *Folia linguistica historica* 10.1-2:287-310
- Haspelmath, M. 1995. The converb as a cross-linguistically valid category. In M. Haspelmath and E. König, eds. *Converbs in cross-linguistic perspective*. Berlin, Mouton de Gruyter: 1-53
- Healey, P. M. 1966. *Levels and chaining in Telefol sentences*. Canberra, Australian National University, Research School of Pacific Studies, Department of Linguistics. (Pacific Linguistics, B.5)
- Heine, B., U. Claudi, and F. Hünemeyer. 1991. *Grammaticalization*. Chicago, Chicago University Press
- Hetzron, R. 1969. *The verbal system of Southern Agaw*. Berkeley, University of California Press
- Hetzron, R. 1977. *The Gannan-Gurage languages*. Naples, Istituto Orientale di Napoli
- Hope, E. R. 1974. *The deep syntax of Lisu sentences: a transformational case grammar*. Canberra, Australian National University, Research School of Pacific Studies, Department of Linguistics. (Pacific Linguistics, B.34)
- Hopper, P. J. 1979. Aspect and foregrounding in discourse. In T. Givón, ed. *Syntax and semantics 12: Discourse and syntax*. New York, Academic Press: 213-42
- Hopper, P. J. and S. A. Thompson. 1980. Transitivity in grammar and discourse. *Language* 56:251-99
- Hutchison, J. P. 1976. Aspects of Kanuri syntax. Unpublished Ph.D. dissertation, Indiana University
- Hwang, S. J. J. 1990. Foreground information in narrative. *Southwest Journal of Linguistics* 9.2:63-90
- Hwang, S. J. J. 1994. Relative clauses, adverbial clauses, and information flow in discourse. *Language Research* 30:673-705

- Hwang, S. J. J. 1995. Purpose clauses in Korean and iconicity. In C. Lee, ed. *Interfaces in Korean linguistics*. Seoul, Taehaksa: 125-42
- Hwang, S. J. J. 1997. Purpose clauses in English and Korean. *LACUS Forum* 23:495-508
- Hwang, S. J. J. 2000. Multiple functions of *when*-clauses in discourse. *LACUS Forum* 26:455-66
- Hyman, L. and D. J. Magaji. 1970. *Essentials of Gwari grammar*. University of Ibadan, Institute of African Studies. (Occasional Publications, 27)
- Kac, M. B. 1972. Clauses of saying and the interpretation of *because*. *Language* 48:626-32
- Keenan, E. O. and B. Schieffelin. 1976a. Foregrounding referents, a reconsideration of left dislocation in discourse. *Berkeley Linguistics Society* 2:240-57
- Keenan, E. O. and B. Schieffelin. 1976b. Topic as discourse notion: a study of topics in the conversations of children and adults. In Li 1976:335-84
- Kimenyi, A. 1976. Topics in the relational grammar of Kinyarwanda. Ph.D. dissertation, University of California, Los Angeles. (Published in 1980 as *A relational grammar of Kinyarwanda*. Berkeley, University of California Press. University of California Publications in Linguistics, 91)
- Kortmann, B. 1998. *Adverbial subordination: a typology of adverbial subordinators based on European languages*. Berlin, Mouton de Gruyter
- Lehmann, C. 1988. Towards a typology of clause linkage. In Haiman and Thompson 1988:181-225
- Li, C. N. ed. 1976. *Subject and topic*. New York, Academic Press
- Li, C. N. and S. A. Thompson. 1976. Subject and topic: a new typology of language. In Li 1976:457-89
- Lindenfeld, J. 1973. *Yaqui syntax*. Berkeley, University of California Press
- Longacre, R. E. 1966. Trique clause and sentence: a study in contrast, variation, and distribution. *International Journal of American Linguistics* 32:242-52
- Longacre, R. E. 1968. *Philippine languages: discourse, paragraph and sentence structure*. Santa Ana, Calif., Summer Institute of Linguistics. (Publications in Linguistics and Related Fields, 21)

- Longacre, R. E. 1972. *Hierarchy and universality of discourse constituents in New Guinea languages: discussion*. Washington, Georgetown University Press
- Longacre, R. E. 1996. *The grammar of discourse*. 2nd ed. New York, Plenum
- Longacre, R. E. and F. Woods, eds. 1976-7. *Discourse grammar: studies in languages of Colombia, Panama and Ecuador*. 3 vols. Dallas, Summer Institute of Linguistics. (Publications in Linguistics and Related Fields, 52)
- MacDonald, L. 1988. Subordination in Tauya. In Haiman and Thompson 1988:227-45
- Mann, W. C. and S. A. Thompson. 1986. Relational propositions in discourse. *Discourse Processes* 9:57-90
- Marchese, L. 1976. Subordination in Godié. Unpublished M.A. thesis, University of California, Los Angeles
- Marchese, L. 1987. On the role of conditionals in Godié procedural discourse. In Tomlin 1987:263-80
- Maryott, K. 1967. Sangir sentence structure. Unpublished manuscript, Summer Institute of Linguistics
- Matthiessen, C. and S. A. Thompson. 1988. The structure of discourse and 'subordination'. In Haiman and Thompson 1988:275-330
- McCarthy, J. 1965. Clause chaining in Kanite. *Anthropological Linguistics* 7:59-70
- Murane, E. 1974. *Daga grammar*. Norman, University of Oklahoma, Summer Institute of Linguistics
- Olson, M. L. 1973. *Barai sentence structure and embedding*. Santa Ana, Calif., Summer Institute of Linguistics. (Language Data, Asian-Pacific Series, 3)
- Payne, T. S. 1997. *Describing morphosyntax: a guide for field linguists*. Cambridge, Cambridge University Press
- Pickett, V. 1960. *The grammatical hierarchy of Isthmus Zapotec*. Baltimore, Linguistic Society of America. (Language Dissertation, 56)
- Ramsay, V. 1987. The functional distribution of preposed and postposed 'if' and 'when' clauses in written discourse. In Tomlin 1987:383-408

- Rutherford, W. E. 1970. Some observations concerning subordinate clauses in English. *Language* 46:96-115
- Saloné, S. 1977. Conditionals. In Byarushengo *et al.* 1977:149-60
- Scancarelli, J. 1992. Clause combining constructions. *International encyclopedia of linguistics*. Oxford, Oxford University Press, Vol. 1: 267-69
- Schachter, J. 1971. Presupposition and counterfactual sentences. Unpublished Ph.D. dissertation, University of California, Los Angeles
- Schachter, P. and F. T. Otones. 1972. *Tagalog reference grammar*. Berkeley, University of California Press
- Schaeffer, F. A. 1968. *The God who is there*. Downers Grove, Ill., Inter-Varsity Press
- Schaeffer, F. A. 1969. *Death in the city*. Downers Grove, Ill., Inter-Varsity Press
- Schuh, R. G. 1972. Aspects of Ngizim syntax. Unpublished Ph.D. dissertation, University of California, Los Angeles
- Thompson, S. A. 1972. *Instead of and rather than* clauses in English. *Journal of Linguistics* 8:237-49
- Thompson, S. A. 1985. Grammar and written discourse: initial vs. final purpose clauses in English. *Text* 5:55-84
- Thompson, S. A. 1987. 'Subordination' and narrative event structure. In Tomlin 1987:435-54
- Thompson, S. A. and W. C. Mann. 1987. A discourse view of concession in written English. In S. DeLancey and R. Tomlin, eds., *Proceedings of the Second Annual Meeting of the Pacific Linguistics Conference*, 435-47. Eugene, Department of Linguistics, University of Oregon
- Thurman, R. 1975. Chauve medial verbs. *Anthropological Linguistics* 17:342-52
- Tolkien, J. R. R. 1969. *Smith of Wootton Major*. New York, Ballantine
- Tomlin, R. S., ed. 1987. *Coherence and grounding in discourse*. Amsterdam, Benjamins
- Traugott, E. C., A. ter Meulen, J. S. Reilly, and C. A. Ferguson, eds. 1986. *On conditionals*. Cambridge, Cambridge University Press
- Van der Auwera, J, ed. 1998. *Adverbial constructions in the languages of Europe*. Berlin, Mouton de Gruyter

- Weber, D. 1978. Relativization in Huallage (Huánuco) Quechua. Unpublished M.A. thesis, University of California, Los Angeles
- Welmers, W. E. 1973. *African language structures*. Berkeley, University of California Press
- Welmers, W. E. 1976. *A grammar of Vai*. Berkeley, University of California Press
- Whaley, L. J. 1997. Introduction to typology: the unity and diversity of language. Thousand Oaks, Calif., Sage Publications
- Wiebe, N. 1977. The structure of events and participants in Cayapa narrative discourse. In Longacre and Woods 1977, Vol. 2:191-227