Word Order

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0. Introduction

One of the primary ways in which languages differ from one another is in the order of constituents, or, as it is most commonly termed, their word order. When people refer to the word order of a language, they often are referring specifically to the order of subject, object, and verb with respect to each other, but word order refers more generally to the order of any set of elements, either at the clause level, or within phrases, such as the order of elements within a noun phrase. When examining the word order of a language, there are two kinds of questions one can ask. The first question is simply that of what the order of elements is in the language. The second question is that of how the word order in the language conforms to crosslinguistic universals and tendencies. Our discussion in this chapter will interweave these two kinds of questions.

1. Some basic word order correlations

1.1. Verb-final languages

We will begin by examining a few of the word order characteristics of three verb-final languages, languages in which the verb normally follows the subject and object. Consider first Lezgian, a Nakh-Daghestanian language spoken in the Caucasus mountains, in an area straddling the border between Azerbaijan and Russia (Haspelmath 1993). The example in (1) illustrates the verb-final order in Lezgian.

(1)   Alfija-di   maqṇala kx̂e-na.
       Alfija-ERG   article   write-AORIST
             S   O   V
       'Alfija wrote an article'

The order in (1) is more specifically SOV (subject-object-verb), thus illustrating that not only do the subject and object both precede the verb, but the subject (occurring in the ergative case) precedes the object as well, if both are overtly expressed. Most verb-final languages are SOV, though there are reported instances of languages which are OSV, and other verb-final languages in which there is considerable freedom in the order of subject with respect to object. SOV languages are the most widespread word order type among the languages of the world.

Lezgian has a number of other word order characteristics which are typical of verb-final languages. Among these is the fact that manner adverbs (Adv), like objects, precede the verb, as in (2).

(2)   Mirzebeg-a   k'ewi-z   haraj-na: " ... "
       Mirzebeg-ERG   strong-ADV   shout-AOR
                              Adv   V
       'Mirzebeg shouted loudly: " ... "

Lezgian employs postpositions (Po), which follow the noun phrase they combine with, rather than prepositions (which would precede), as in (3).

(3)   duxtur-rin   patariw
       doctor-GEN.PL   to
              NP   Po
       'to doctors'

Genitive noun phrases (G), noun phrases modifying a noun and expressing possession or a relation like a kinship relation, precede the noun, as in (4).

(4)   Farid-an   wax
        Farid-GEN   sister
          G   N
        'Farid's sister'

Another characteristic of Lezgian that is typical of verb-final languages is that in comparative constructions, the order is standard of comparison (St) followed by the marker of comparison (M) followed by the adjective, as in (5).

(5)   sad   müküda-laj   žizwi   ask'an-zawa
        one   other-SUPEREL   a.little   low-IMPERF
                St   M   Adj
        'one is a little shorter than the other one'

The standard is a noun phrase to which something is being compared, in (5) the noun phrase *müküda* 'the other'. The adjective is *ask'an* 'low'. The marker is a morpheme combining with the standard and indicating that the standard is being compared with something; in (5), the marker is the superelative case suffix *-laj* on the noun *müküda* 'other'. The marker is realized in different languages in various ways, by affixes or by separate words, and if a separate word, by various parts of speech.

Finally, the example in (6) illustrates how adverbial subordinators, markers of adverbial subordinate clauses, occur at the end of the subordinate clause in Lezgian, as a suffix on the verb, illustrated here by the subordinator *-wiläj* 'because'.

(6)   ruš-az   regü   x̂ana k'an tuš-ir   -wiläj
        girl-DAT ashamed be   want be.NEG-PARTIC-because
                     Clause   Subord
        'because he did not want the girl to be embarrassed'

When we examine two other verb-final languages from different parts of the world, we find that they resemble Lezgian in each of the characteristics noted above. The first of these languages is Slave, an Athapaskan language spoken in northern Canada (Rice 1989). As in Lezgian, the normal order is SOV, as in (7).

(7)   t'eere l̨i   ráreyi̧ht'u
        girl   dog 3.hit
        S   O   V
        'the girl hit the dog'

The examples in (8) illustrate how Slave resembles Lezgian in each of the other characteristics observed.

(8)   a.   dzá   dahehłe   b.   dene   hé
             bad   1.dance   man   with
             Adv   V   NP   Po
             'I dance badly'   'with the man'

        c.   ʔabá   gok'eríʔeé
             father   jacket
               G   N
             'father's jacket'

d. sǫdee nǫdee ts'ę?óné hįshá
1SG.older.brother 2SG.older.brother than 3.big
     St M Adj
'my brother is bigger than your brother'

e. [kǫ́ seghǫ húle] t'áh
match 1SG.for 3.be.none because
    Clause Subord
'because I had no matches'

    Siroi, a Madang language spoken in Papua New Guinea is also SOV (Wells 1979), as illustrated in (9).

(9) fe-nge tango make-te
    taipan-SPEC man bit-3SG.PRES
     S O V
    'a taipan bites a man'

The examples in (10) illustrate how it exhibits the same characteristics as Lezgian and Slave:

(10) a. nu pitik kin-it   b. mbanduwaŋ mbi
       he quickly go-3SG.PRES   bow INSTR
         Adv V   NP Po
       'he is going quickly'   'with a bow'

       c. tisa tuku age   d. [ne kuayar-at] tukunu
       teacher of dog   you steal-2SG.PAST because
         G N   Clause Subord
       'the teacher's dog'   'because you stole it'

(We do not have information on how comparative meanings are expressed in Siroi.)

1.2. Verb-initial languages

    Let us turn now to three instances of verb-initial languages, languages in which the verb normally precedes both the subject and the object. Such languages are much less common than verb-final languages. What we will see is that these languages exhibit the opposite characteristics from those that we saw in the three verb-final languages discussed above. The first verb-initial language we will look at is Fijian, an Austronesian language spoken on the island of Fiji in the Pacific Ocean (Dixon 1988). Both the subject and the object follow the verb in Fijian, though they can occur in either order with respect to each other. Thus, the sentence in (11) can be interpreted either as "the old person saw the child" (VOS) or as "the child saw the old person" (VSO), and both orders are common in usage.

(11) e rai-ca a gone a qase
    3SG see-TRANS ART child ART old.person
     V S/O S/O
    'the old person saw the child' or 'the child saw the old person'

Note that a third person clitic agreeing in person and number with the subject precedes the verb.

The following examples illustrate how Fijian has the reverse characteristics from those we have observed for verb-final languages. Manner adverbs follow the verb, rather than preceding:

(12) bau   'ada va'a-.totolo noo
  somewhat run ADV-quick ASP
       V Adv
  'try and run more quickly'

The language employs prepositions rather than postpositions:

(13) mai Wairi'i
  from Wairi'i
  Pr NP
  'from Wairi'i'

The genitive follows the possessed noun, rather than preceding.

(14) a liga-i   Jone
  ART hand-POSS John
    N   G
  'John's hand'

Note that the possessed noun *liga* 'hand' in (14) bears a suffix *-i* indicating that it is possessed by someone. The order in comparative constructions is adjective-marker-standard, the opposite from what we saw in the verb-final languages:

(15) e vina'a ca'e o Waitabu mai Suva
  3SG good more ART Waitabu from Suva
   Adj   M St
  'Waitabu is better than Suva'

Note that the subject intervenes between the adjective and the marker + standard in (15). And adverbial subordinators occur at the beginning of the subordinate clause, as in (16), where the first singular subject pronoun *u* of the subordinate clause cliticizes onto the subordinator *ni*.

(16) ni-[u   sa daga.daga va'a-levu]
  when-1SG ASP tired   ADV-great
  Subord   Clause
  'when I'm very tired'

The two other verb-initial languages we will examine resemble Fijian in exhibiting the opposite characteristics from those we saw in the three verb-final languages. The first of these is Turkana, in the Nilotic subfamily of Nilo-Saharan and spoken in Kenya (Dimmendaal 1983). Turkana is VSO, as in (17).

(17) ɛ̀-sàk-ɪ̀ apà   akìmuj
  3-want-ASP father.NOM food
   V   S   O
  'father wants food'

(Most of the nouns in the Turkana examples cited in this chapter contain gender prefixes that are not indicated in the glosses, since Dimmendaal does not gloss them, and it is not always clear what gender is involved. A number of other affixes in nouns and verbs are not glossed

and are treated here as if they were part of the stems. Nominative case, used for subjects, is indicated by tone.)

The examples in (18) illustrate how other word order characteristics of Turkana are the same as those in Fijian.

(18) a. ὲ-à-gṳm-ɪˋ   nilèmṳ   b. ὲ-à-gṳm-ɪˋ   à   atɔmὲ
          3-PAST-fire-ASP   blindly   3-PAST-fire-ASP   PREP   gun
             V   Adv   Pr   NP
          'he fired blindly'   'he fired with a gun'

      c. itòò   keŋˋ   à   [èdyaˋ   loˋ]
          mother   his   of   boy   this
             N   G
          'the mother of this boy'

      d. lò-gerɪ̧   [lo-e-putuk-ɪ̧-o   e-rotˋ]
          because   REL-3-muddy-ASP-VERB   road.NOM
          Subord   Clause
          'because the road is muddy'

The expression involving comparison involves the use of a verb meaning 'surpass' or 'supercede', as in (19).

(19) ὲ-jɔkˋ   erotˋ   loˋ   ak-ɪ̧dwaŋ   ŋolˋ
      3-good   road.NOM   this   INF-supercede   that
      'this road is better than that one'

While one might treat the verb *akidwaŋ* 'supercede' as a marker, this is really the verb of a separate clause, and hence *akidwaŋ ŋolˋ* is not modifying the adjective in the same way as marker plus standard in true comparative constructions. The expression of equative comparison, however, employs the order AdjMSt, using a construction involving a single clause, as in (20).

(20) a-wòs   ayɔ̧ŋ   à   ni-konɪ̧
      1SG-clever 1SG.NOM   PREP   LOC-your
        Adj   M   St
      'I am as clever as you'

      Lealao Chinantec, an Oto-Manguean language spoken in Mexico (Rupp 1989), is also verb-initial, except that it is VOS rather than VSO:

(21) ka^L-kiú?^{M} mi^{VH}-zii̵^{L}-i   [za^M ni̵^{M}]
      PAST-strike.COMPL.3   CLSFR-head-1SG   person   that
           V   O   S
      'that person struck my head'

(The superscript capital letters in (21) indicate tones, which play a major grammatical role in Chinantec languages. The form of the verb *kiú?^{M}*, including its tone, indicates that it is a transitive verb, with an inanimate object, that the aspect is completive and that the subject is third person. The low tone on the noun *zii̵^{L}* (along with the suffix *-i*) indicates that its possessor is first person singular.)

The following examples illustrate how Lealao Chinantec displays the same word order properties we have seen in Fijian and Turkana, and the opposite of what we saw in the three verb-final languages:

(22) a.   ʔi^{H}-ṵ:^{LH}-i   ziú^{L} b.   he:^{LH} nu:^{M}
           INTENTIVE-wash-1SG   well   among   weeds
           V   Adv   Pr   NP
           'I will wash it well'   'among the weeds'

      c.   siá:^{VH} [diá^{ʔL} sïï^{M}iṵ:^{M}i]
          mother.3   PLUR   baby
            N   G
          'the mother of the babies'

      d.   gá:^{M}i   gï?^{VH} tï:^{VH}i   niu^{M} lia?^{M} sïï^{M} ké^{L} hniá^{M}
          big.3   more   foot.2SG   2SG   like   as   of.1SG   1SG
           Adj   M   St
          'your foot is bigger than mine'

      e.   kia:?^{VH} [?a^{L}?e^{M} na^{M}fá?^{L}i   hŋi:^{LH}-a^{L}]
          because   not   significant   pay-1SG
          Subord   Clause
          'because my wages aren't sufficient'

1.3. SVO languages

Finally, consider three instances of SVO languages, which are neither verb-final nor verb-initial, since the subject precedes the verb while the object follows the verb. SVO languages are the second most widespread word order type among the languages of the world, more common than verb-initial, but less widespread than verb-final languages. What we will see is that these SVO languages strongly resemble the verb-initial languages rather than the verb-final languages with respect to the word order characteristics examined. Consider first English, which is SVO:

(23) The woman saw the dog.
           S   V   O

As in the verb-initial languages we examined, English employs prepositions:

(24) on the table
      Pr   NP

The order in comparative constructions is AdjMSt:

(25) Nancy is more intelligent than Jeff.
                     Adj   M   St

Note that the marker of comparison is the word *than,* rather than the word *more.* Most languages do not employ a word meaning 'more' in comparative constructions, using expressions that literally translate more like 'Nancy is intelligent than Jeff', although the marker of comparison in such languages might be considered to mean 'more than' rather than just 'than'.

Adverbial subordinators occur at the beginning of the subordinate clause, as illustrated by the adverbial subordinator *because* in (26).

(26) because it was raining
      Subord   Clause

In each of the above characteristics, English resembles the three verb-initial languages rather than the three verb-final languages.

When we look at the order of genitive and noun in English, we find two constructions, one in which the genitive precedes the noun, as in (27a), the other in which the genitive follows the noun, as in (27b).

(27)   a.   the box's cover   b.   the cover of the box
                  G   N   N   G

We discuss in section 2 below the general problem of dealing with cases in which both orders of a pair of elements occur in a language. The general strategy is to try to identify one of the two orders as in some sense more basic. We will assume that in the case of genitive and noun in English, neither order is basic relative to the other and that English should thus be classified as GN/NG, as a language in which both orders of genitive and noun occur and in which there are no strong arguments for treating one of these orders as basic. Note that the GN construction in (27a) employs the order typically associated with verb-final languages while the NG construction in (27b) employs the order associated with verb-initial languages.

In the case of manner adverbs, English again exhibits both orders, as in (28).

(28) a.   John slowly walked into the room.   b. John walked into the room slowly.
                  Adv   V   V   Adv

Here, there are arguments that the order VAdv is the basic order. Among these arguments is the fact that in other contexts, the order VAdv is strongly preferred, as illustrated by (29).

(29)   a.   ?*John is slowly walking.   b.   John is walking slowly.

If we can assume that the second order is basic, then we can say that English is VAdv.

In summary, we see that English resembles the verb-initial languages in all respects but one: it has both GN and NG word order for the order of genitive and noun. It turns out that English is not atypical as an SVO language in this respect: while in most SVO languages one order can be identified as basic, in some SVO languages the order we find is GN, while in others it is NG. The two other SVO languages we will look at also resemble verb-initial languages in their word order characteristics.

Hmong Njua, Miao-Yao language spoken in China (Harriehausen 1990), is a second example of an SVO language:

(30) Peter   muab   pob khuum   rua   Maria
     Peter   give   gift   to   Maria
       S   V   O
     'Peter gave a gift to Maria'

The example in (30) also illustrates that Hmong Njua is prepositional, the preposition *rua* 'to' preceding its object. The examples in (31) illustrate how Hmong Njua resembles English and the verb-initial languages we examined in other word order characteristics.

(31) a. Moob   lab   has lug   txawv luag
         Hmoob   red   speaks   strangely
                              V   Adv
         'Red Hmoob speaks strangely'

b. tsuv luj dula miv   c.   lub   thawv   saab sau
     tiger big than cat   CLSFR box   cover
           Adj M St   G   N
     'a tiger is bigger than a cat'   'the box's cover'

The example in (31c) illustrates GN order in Hmong Ngua, like the construction in English *the man's hat* and like the verb-final languages we examined rather than the verb-initial languages, but, as noted above, this order is as common as NG order among SVO languages.

    As a third example of an SVO language, consider Tetelcingo Nahuatl, a Uto-Aztecan language spoken in Mexico (Tuggy 1977):

(32) [sen-te   tlɔkatl]   (Ø-)kɪ-pɪya-ya   [sen-te   puro]
     one-NUM man   he-it-have-IMPERF   one-NUM burro
            S   V   O
     'a man had a donkey'

The examples in (33) illustrate how Tetelcingo Nahuatl resembles the verb-initial and the other two SVO languages we have examined, though we do not have an example with a manner adverb:

(33) a. i-pa   i-čɔ   b.   i-čɔ   mali
     3SG-at his-home   3SG-home Mary
      Pr   NP   N   G
     'at his house'   'Mary's home'

   c. yaha kačɪ wieyɪ ke   taha
     he   more big   than   you
                   Adj   M   St
     'he is bigger than you'

   d. [kwɔk walɔ-s]   nɪ-tla-cɪlini-s
     when   come-FUT   1SG-UNSPEC.OBJ-clang-FUT
     Subord   Clause
     'when he comes, I will ring the bells'

    We see that apart from the order of genitive and noun, SVO languages tend to be like verb-initial languages rather than like verb-final languages. Because SVO languages share with verb-initial languages the fact that the object follows the verb, we can say that it is the order of object and verb (rather than subject and verb) that is crucial in predicting other word order characteristics. For this reason, it is common to refer to the two types of languages as OV languages and VO languages. We will see below that there are a variety of other characteristics that are predictable from whether a language is OV or VO, though in a few instances the order of subject and verb is relevant as well.

1.4. Object-initial languages

    The discussion above illustrates the most common word orders, SOV, SVO, and verb-initial (which includes both VSO and VOS). The two remaining orders are OVS and OSV,

both quite rare but both claimed to exist. The clearest example of an OVS language is Hixkaryana, a Carib language spoken in Brazil (Derbyshire 1979), illustrated in (34).

(34)   toto   y-ahosɨ-ye   kamara
         man   3.3-grab-DISTANT.PAST   jaguar
         O   V   S
         'the jaguar grabbed the man'

While a number of languages have been claimed to be OSV, the evidence so far presented for these languages is less than convincing.

What word order characteristics are typical of object-initial languages? Unfortunately, the number of clear cases of such languages is sufficiently small that we can not really answer this question with any confidence. The fact that the characteristics in other languages pattern with the order of object and verb would lead us to expect both OVS and OSV languages to pattern with SOV languages. In so far as we have evidence, this prediction seems to be true. For example, Hixkaryana is postpositional and GN, as illustrated in (35).

(35) a.   maryeya   ke   b.   Waraka   kanawa-rɨ
           knife   with   Waraka   canoe-POSSD
           NP   Po   G   N
           'with a knife'   'Waraka's canoe'

There are a number of languages in which the basic or most frequent order in transitive clauses containing a lexical subject and a lexical object is OVS, but in which the basic or most frequent order in intransitive clauses in SV. A clear case of such a language is Parï, a Nilotic language spoken in Sudan (Andersen 1988):

(36) a.   ùbúr   á-pùot   dháag-ɛ̀   b.   dháagɔ   á-míɛl`
          Ubur   COMPLET-beat   woman-ERG   woman   COMPLET-dance
          O   V   S   S   V
          'the woman beat Ubur'   'the woman danced'

Characterizing such languages as OVS is somewhat misleading in that the word order really follows an ergative pattern Abs-V-(Erg). Note that Parï has an ergative case marking system as well, with an overt ergative case marker illustrated on the subject in (36a) and a zero absolutive case.

1.5. Interim summary

We can summarize the patterns we have observed so far as follows:

<u>SOV</u>	<u>SVO</u>	<u>Verb-initial</u>
AdvV	VAdv	VAdv
NP Po	Pr NP	Pr NP
GN	GN or NG	NG
StMAdj	AdjMSt	AdjMSt
ClauseSubord	SubordClause	SubordClause

As noted above, SVO and verb-initial languages pattern the same way, except for the order of genitive and noun: SVO languages are sometimes GN and sometimes NG, whereas verb-initial languages are generally NG. If we collapse SVO and verb-initial into VO and assume that OVS and OSV pattern with SOV, then the patterns can be described in terms of a contrast between OV and VO. Note that all of the characteristics we have discussed involve pairs of elements, except for the order in comparative constructions, where three elements are involved.

However, the order in comparative constructions can be thought of as two pairs of elements, the order of standard and marker and the order of standard and adjective. There are in fact a few languages which show that these two pairs of elements need to be distinguished, where the order is MStAdj or AdjStM. For example, the order in Mandarin Chinese is MStAdj, as in (37).

(37) Zhāngsan   bī   tā   pàng
     Zhangsan   COMPAR 3SG fat
                  M   St   Adj
     'Zhangsan is fatter than her/him'

Mandarin is MSt, the order associated with VO languages, but StAdj, the order associated with OV languages. Since the normal order in Mandarin is SVO, the StAdj order is atypical.

The question of what underlies these word order correlations is one on which there is an extensive literature (see references listed at the end of this chapter) and is a topic that we will not discuss here. But it should be noted that a common view is that the characteristics associated with OV order are head-last or head-final, while those associated with VO order are head-first or head-initial. But Dryer (1992) argues that there are serious empirical problems with this view. For example, the notion that OV languages tend to be head-final and VO languages head-initial would lead us to expect modifiers of nouns to precede the noun in OV languages and follow the noun in VO languages. But as is discussed in section 7 below, this is not true for adjectives, demonstratives or numerals: none of these three elements correlates in order with the order of object and verb, preceding and following the noun with similar frequency in OV and VO languages. And articles exhibit the opposite correlation, preceding the noun more often in VO languages than they do in OV languages.

1.6. Conclusion

Before examining other word order characteristics, there are two general problems that we must address that arise in attempting to identify word order characteristics of a language. The first of these problems is that of identifying a basic order for two or more elements when more than one order exists in a language. The second problem is that of identifying instances of particular constructions in different languages. We discuss each of these topics in the next two sections.

2. Identifying basic word order

In most of the languages we have examined, we were able to classify the languages according to each of the various characteristics examined. In instances in which only one order of a pair of elements is possible in a language, this classification is straightforward. But many languages exhibit more than one order for at least some pairs of elements, and questions arise as to how to classify the language according to the characteristic in question. There is some variation in the practice of linguists on this question, both in terms of what criteria to employ in these instances and in terms of whether to classify a language at all when the criteria do not yield an obvious answer. These issues have been most widely discussed in the context of identifying a basic order of subject, object, and verb, but they apply to all pairs of elements.

One of the criteria that have been appealed to in such instances is that of frequency of usage. Considering first an extreme example, English allows OV order, as in *Paul, I like,* but this order is quite obviously much less frequent than the order VO. Where languages allow alternative orders, one order is often overwhelmingly more frequent. But in other instances, the differences in frequency may be much less extreme. For example, Payne (1990) reports

that in a count of texts in Yagua, a language spoken in Peru, the order SV occurred 114 times while the order VS occurred 257 times. In this case, both orders are relatively frequent, but VS outnumbers SV by just over 2 to 1. Is this a valid reason for considering VS basic? Linguists answer this question in different ways. A number of reasons have been offered for not treating VS as basic in such instances. One argument is simply that frequency should not be used as a criterion because it is not part of the grammar of the language. Another possible argument is that such differences in frequency might be an artifact of a particular set of texts, and that one might find very different frequencies in a different set of texts. A further argument is that even if the set of texts can be considered sufficiently varied that the difference in frequency can be considered typical, the fact that both orders are relatively common is more important than the fact that one order happens to be more common than the other.

In defence of frequency, it can be argued that differences in frequency often provide a more reliable test than other tests in that where the difference is large enough, it will be intuitively obvious to the linguist working on the language, and often to speakers of the language as well, that one order is the "normal" order. And frequency is a clear operational test; if one order is consistently more common across large enough samples of texts, then anybody examining such texts will arrive at the same conclusion. Finally, many of the conclusions in word order typology are based on grammatical descriptions in which there is flexibility of word order but in which one order is described as normal. In other words, in practice, frequency has been the primary criterion in word order typology. Furthermore, the universal tendencies associated with OV versus VO order are found in languages in which there is considerable flexibility of word order, even among languages in which one order outnumbers the other by a frequency of only 2 to 1. It should be noted, however, that frequency counts of some languages do not reveal one order as noticeably more frequent than the other. In the Auk dialect of Tlingit, for example, a text count (Dryer 1985) for the order of subject and verb revealed VS outnumbering SV by 177 to 156. In a case like this, the difference in frequency is sufficiently small that it does not seem reasonable to say that VS is more frequent than SV or that VS is basic.

A number of criteria other than relative frequency have been appealed to in determining basic order. If one order is in some way more restricted in its distribution, then that can be used as an argument that the other order is basic. Note the argument in section 1.3 above for treating VAdv order as basic in English because there are in environments in which the order AdvV is not used (*?*John is slowly walking*). The restriction in distribution might be over syntactic contexts, as in the preceding example, or it might be over lexical items. In Korowai (Van Enk and De Vries 1997), an Awju language spoken in Irian Jaya on New Guinea, all adjectives can precede the noun, as in (38a), but a few, like the one meaning 'big', can also follow the noun, as in (38b).

(38)   a.   lembul   nggulun
                 bad   teacher
                 'a bad teacher'

         b.   yanop   khonggél-khayan
                 man   big-very
                 'a very big person'

We can say that AN order is basic because it has a less restricted distribution.

Some languages have both preposition and postpositions, but there are often more of one than the other. For example, in Taba (Bowden 1997), an Austronesian language of Halmahera in Indonesia, there are five prepositions and one postposition. The example in (39a) illustrates one of the five prepositions (*ada* 'with'), the example in (39b) the one postposition (*li* 'locative').

(39)   a.   n-pun   bobay   ada   ni   sandal do

               3SG-kill   mosquito   with   3SG.POSS   sandal REALIS

               'he killed the mosquito with his sandal'

      b.   n-battalon   kurusi   li

               3SG-sit   chair   LOC

               'he's sitting on the chair'

Because there is only one postposition in the language, we can say that Taba is basically a prepositional language, and hence (since it is SVO) that it conforms to the expectation of an SVO language being prepositional. Having even one postposition is somewhat unexpected of an SVO language, though not as unusual as SVO languages that are basically postpositional. Even English has a few words that can be analysed as postpositions, such as *ago*(as in *three years ago*) and *notwithstanding*(as in *I have decided to run for re-election, my family's opposition notwithstanding*).

A further distributional criterion is based on simplicity. In English, adjective phrases sometimes precede the noun, as in (40), and sometimes follow the noun, as in (41).

(40)   a.   the tall woman
       b.   the very tall woman

(41)   a.   the woman taller than John
       b.   the woman angry at John

Nor can these be reversed; the adjective phrases in (40) cannot follow the noun (**the woman tall, *the woman very tall*) nor can the adjective phrases in (41) precede the noun (**the taller than John woman, *the angry at John woman*). Hence we cannot use a distributional test based on one position being more restricted than the other. But the adjective phrases that follow the noun in (41) are clearly more complex: they contain entire phrasal modifiers of the adjective and these phrasal modifiers can easily be rendered more complex, as in (42).

(42)   the woman taller than the man who John was talking to

In contrast, the simplest adjective phrases, those consisting of just the adjective, must precede the noun, as in (40a). By this criterion, we can say that the basic order of adjective phrase and noun in English is for the adjective phrase to precede the noun.

A third type of criterion, beyond frequency and distributional criteria, is one based on pragmatics. It can often be argued that one order in a language is pragmatically neutral while the other has some added pragmatic effect. In English, for example, the OV order in (43a) and the VS order in (44a) both apparently add a special effect that is absent in the neutral orders in (43b) and (44b).

(43)   a.   Mary, I saw.
       b.   I saw Mary.

(44)   a.   Into the room came the Prime Minister.
       b.   The Prime Minister came into the room.

In Ilocano, an Austronesian language spoken in the Philippines, adjectives can either precede or follow the noun, but postnominal position is contrastive (Rubino 1998: 40). The more neutral order is given in (45a), the more contrastive order in (45b). (The difference in the form

of the linking morpheme *(ng)a* in (45) simply reflects a phonologically conditioned alternation: *nga* before vowels, *a* before consonants.)

(45) a.   ti   nalaíng   nga   ubíng
            ART   smart   LINK   child
            'the smart child'

      b.   ti   ubíng   a   nalaíng
            ART   child   LINK   smart
            'the smart child (as opposed to the others)'

It is often, however, not obvious that one order involves adding an additional element of meaning, rather than the two orders simply having a difference in meaning. For example, in Papago, a Uto-Aztecan language spoken along the U.S.-Mexican border, OV order is associated with indefinite objects while VO order is associated with definite ones (Payne 1987). It does not seem right to say that VO order involves the addition of definiteness or that OV order involves the addition of indefiniteness, so in this case there is little basis for describing one order as pragmatically neutral.

Descriptions of languages often describe an order in which an element that occurs at the beginning of a sentence as involving topicalization, but it is often extremely difficult to give objective criteria for identifying the actual pragmatic effect of the topicalization, and it is often not clear that the label is being used in anything more than a syntactic sense, to say that an element is in initial position in the clause. In practice, it is usually difficult to justify claims that one order is pragmatically nonneutral, except in cases like OV and VS order in English, where other criteria point to the nonbasic nature of these orders.

Over the history of generative grammar, various arguments have been offered for some order being the underlying or deep structure order. Often, these arguments are based on the overall grammar being somewhat simpler if one order is treated as the underlying order. The arguments often depend on the assumptions of a particular version of generative grammar at a particular point in time and no longer apply under later assumptions. And even under a given set of assumptions, there are often competing arguments for which order is basic. And while the notion of underlying order is sometimes assumed to be the same as basic order, and hence the arguments for one order being underlying are treated as arguments for that order being basic, it is not at all clear that the notions are the same.

In cases in which there is some doubt as to what order of a pair of elements in a language might be called basic, for example when different criteria conflict, it is probably best not to force the language into one category or another, but simply to classify it as a language in which neither order is clearly basic. And when there is such doubt, what is most important in describing a language is not the determination of the basic order, but the more detailed facts that lead to there being some doubt.

This chapter cites examples from a large number of languages and identifies one order as basic, usually without further discussion or elaboration as to what criteria were used. In many of these cases, either the word order is rigid or there seems to be little question as to which order is basic, regardless of one's criteria. In some cases, however, this may not be so. Most of the characterizations of languages in this chapter are based on characterizations in grammatical descriptions of the language and we follow the grammarians' characterization of orders, though this may mean in some cases that different criteria are assumed for different languages. In practice, this means that frequency is treated as the major criterion, since grammars most often contains descriptions like "the normal order is for the adjective to precede the noun", and rarely do grammars discuss other possible criteria. Since in most cases,

frequency coincides with other criteria, this means that most characterizations in this chapter are consistent with other criteria as well.

It should be stressed that it is not clear that issues of what order is basic are relevant to actually describing languages, as opposed to deciding whether the language conforms to crosslinguistic expectations. One can describe Taba as having five prepositions and one postposition and there is no need for any further comment on prepositions being basic. Similarly, one can describe the position of attributive adjectives in Ilocano as normally prenominal with postnominal position contrastive, without also including in one's description the idea that AN order is basic. The question of whether these orders are basic only arises if one wants to ask whether then language conforms to crosslinguistic generalizations about word order.

3. Identifying constructions crosslinguistically

A variety of different problems arise in classifying languages according to various characteristics because of problems in deciding whether a construction in a given language should be considered an instance of a particular crosslinguistic type. Our discussion so far has assumed that we can identify instances of subjects, objects, genitives, postpositions, manner adverbs, standards of comparison, markers of comparison and subordinators, but in practice there is considerable variation in what linguists count as instances of each of these, and problems one can face describing a language in deciding whether a particular construction in the language counts as an instance of the crosslinguistic category. In this section we discuss some of these problems and attempt to briefly characterize what are generally understood in the literature as instances of these categories, discussing some of the more frequent problems that arise.

3.1. Identifying the order of subject, object, and verb

3.1.1. Identifying subjects

Classifying a language as SV or VS seems to assume that the language has a clear instance of the category subject. There is an extensive literature discussing a variety of different possible problems with this assumption, and for various problematic cases, different linguists have taken different positions as to what, if anything, should be counted as the subject. To some extent, one's decision to classify a particular language will depend on one's assumptions as to what is an instance of a subject.

Consider briefly the case of Tagalog. Schachter (1976, 1977, 1996), for example, argues that Tagalog lacks the category subject, that the properties that characterize subjects in other languages fail to isolate a single category in Tagalog. Let us suppose for the sake of argument that we accept Schachter's conclusion. How are we then to classify Tagalog in terms of the order of subject, object, and verb? Under the assumption that the category subject doesn't apply in Tagalog, there is a clear sense in which it would seem mistaken to classify the language as, for example, VOS (as is sometimes done). On the other hand, it is clearly the case that the single argument of intransitive verbs and the two arguments of transitive verbs normally follow the verb in Tagalog, despite issues as to how to classify them. What this means is that there is a clear sense in which Tagalog is a verb-initial language, regardless of what if anything we call a subject.

3.1.2. The order of subject, object, and verb

The difficulty in classifying Tagalog as VOS or VSO reflects a more general problem in that there are many instances in which it is difficult to classify a language according to the six-way typology of SOV, SVO, VSO, VOS, OVS, and OSV. These problems arise, either because of difficulties deciding what if anything is subject or object, or, more commonly, because the flexibility of the language is sufficiently great that it is difficult to say that a single one of these orders is basic.

In many cases, however, such languages are more easily classifiable as SV or VS, or as OV or VO. One of the reasons for this is that transitive clauses containing a noun subject and a noun object do not occur very often in most languages, but clauses with just a noun subject or just a noun object are much more common. In many languages with flexible word order, frequency criteria will point to a classification of the language as, say SV and OV, in that subjects and objects more often precede the verb, but frequency criteria will leave the classification of the language as SOV more questionable. Descriptions of clause order in grammars of various languages often dwell too long on the problem of classifying the language as SOV or SVO, etc., and never even address questions of whether the language is OV or VO, even though the latter sort of question is often answered more easily. In addition, questions about the order of subject and verb in intransitive clauses are often ignored. But even if a language can be justifiably classified as SVO, it does not follow from this that the language is SV for intransitive clauses. Spanish is an example of a language which can be classified fairly uncontroversially as SVO, but whose classification as SV is more problematic due to the large number of situations in which VS order is employed in intransitive clauses. What this means is that one needs to ask, not only if the language is SV or VS, but whether there is a difference between transitive subjects and intransitive subjects in terms of their position with respect to the verb. (See Dryer 1997 for further discussion of these issues.)

Identifying the order of subject, object, and verb involves identifying three different things: the order of subject and verb, the order of object and verb, and the order of subject and object. The arguments in the preceding paragraph argue that the first two of these are often easier to identify, while the third one is often more difficult to identify. If a language allows both orders of subject and object, answering this question is often fairly difficult. The question of identifying the basic order of subject, object, and verb in a language is often associated with the question of what role the order of subject and object plays in distinguishing which is subject and which is object in clauses containing a nonpronominal lexical subject and object. It should be noted, however, that in verb-final and verb-initial languages in which pronominal arguments are expressed by verbal affixes, word order will not suffice for identifying the grammatical role of a single lexical noun phrase in a transitive clause.

3.1.3. Lexical noun phrases versus pronouns

The normal understanding of what we mean when we talk about the basic order of subject, object, and verb, or of just subject and verb, or of just object and verb, is that of the order when the subject or object is a noun, rather than a pronoun, or more accurately, a lexical noun phrase, i.e. a noun phrase headed by a noun, rather than a noun phrase consisting of just a pronoun. In some languages, like English, pronouns exhibit a distribution that differs very little from that of lexical noun phrases, so that it makes little difference whether one includes pronouns or not in discussing the position of subjects and objects. But in many other languages, pronouns exhibit word order properties that differ considerably from lexical noun phrases, either because the syntactic rules of the language treat them differently, or because the pragmatic rules are such that their distribution is rather different. In Barasano, for example, a Tucanoan language spoken in Colombia (Jones and Jones 1991), both preverbal and postverbal position are common for lexical subjects but pronominal subjects normally follow the verb, as in (46).

(46) yɨ   -re   tudi-bɨ   sa-a-bã   ĩdã
      1SG-OBJ   scold-a.lot-PRES-3PL   3PL
      'they scolded me a lot'

The effect of this difference between lexical subject and pronominal subjects is that if one considers *all* subjects, both lexical and pronominal, then the most common order in Barasano is apparently OVS, but if one restricts attention to lexical subjects, the order is indeterminately SOV/OVS.

It should be emphasized that although the position of lexical subjects and objects is crucial in determining basic order at the clause level, the position of pronominal subjects and objects, if different from that of lexical subjects and objects, is just as important in giving a complete description of word order in the language.

3.2. Identification of manner adverbs

With many pairs of elements, a pervasive problem is that of to what extent one should use purely semantic criteria in identifying constructions and to what extent specific syntactic properties of the construction in the language are relevant. Many linguists have used purely semantic criteria in identifying constructions, but the semantic criteria employed are often strongly influenced by English translations and there is the danger of imposing English categories on languages to which they do not apply. Consider, for example, the fact that verb-initial languages normally place manner adverbs after the verb. On the basis of purely semantic criteria, Jacaltec (Craig 1977) would appear to be an exception to this, as in (47).

(47) c'ul   xu   scañ   alwi   naj
      good   did   dance   he
      'he danced well'

However, closer examination of the Jacaltec construction reveals that the word *c'ul* 'good' that translates into English as a manner adverb is not a modifier of the verb, but is actually itself the main verb in Jacaltec, while the verb that is the main verb in the English translation, *scañ alwi* 'dance' is actually a subordinate verb. Classifying Jacaltec as AdvV would thus be very misleading: the word order in (47) actually reflects the fact that the main verb normally occurs first in Jacaltec and thus the order conforms to the general principles of word order in the language. In identifying something as a manner adverb in a language, there ought to be reason to believe that it is actually modifying the verb.

Otherwise, the identification of manner adverbs tends to be relatively unproblematic crosslinguistically. We have restricted discussion specifically to manner adverbs rather than other sorts of adverbs because in many languages other sorts of adverbs exhibit greater flexibility in their position with respect to the verb and thus the correlation between the order of manner adverb and verb and the order of object and verb is stronger than it is with other adverbs. On the whole, however, other sorts of adverbs tend to exhibit a similar, though weaker, correlation. However, there are many languages in which temporal and locative adverbs defining the setting exhibit a tendency to occur in sentence-initial position, regardless of the order of object and verb.

Grammatical descriptions use the notion of manner adverb in different ways. Our assumption is that a manner adverb is an adverb modifying a verb denoting an event in which the manner adverb denotes *how* the event took place. Prototypical manner adverbs are words corresponding to English *well, badly, quickly,* and *slowly.* On our use of the term, it does not apply to words like *immediately* (which is really a kind of temporal adverb) or *very* (which is a kind of intensifier, discussed below in section 7.6).

3.3. Identification of prepositions and postpositions

A number of problems arise with identifying whether a language employs prepositions or postpositions. Again, the primary issue is that of to what extent semantic criteria are sufficient. Prototypical instances of adpositions are words that combine with noun phrases and that indicate the semantic relationship of that noun phrase to the verb, as exemplified by the English word *with* in *He opened the door with a key.*

3.3.1. Adpositions versus case affixes

Perhaps the largest issue is whether the term ought to be applied to semantically similar morphemes which are affixes rather than separate words. For example, in Martuthunira, a Pama-Nyungan language spoken in western Australia (Dench 1995), the meaning of the English preposition *towards* is expressed by a suffix on nouns, as in (48).

(48) ngayu pamararri-lha ngurra-wurrini
      1SG call.out-PAST camp-towards
      'I called out towards the camp'

In the history of word order typology, such affixes have often been treated as adpositions; many of the languages classified as postpositional by Greenberg (1963) and Hawkins (1983) only have postpositions in the sense of having noun suffixes as in (48). One reason that the distinction between affixes like that in (48) and adpositional words is ignored by some is that such affixes often derive historically from separate adpositional words, and thus that while the distinction may be valid synchronically, it is less important diachronically. A more common view is that such morphemes should not be considered adpositions, since their position is defined in the morphology of the language in terms of their position with respect to the noun stem, rather than in the syntax in terms of their position with respect to the noun *phrase.*

3.3.2. Case affixes versus adpositional clitics

While it is probably best not to view case affixes as adpositions, it is also important, to distinguish case affixes from adpositional clitics. Consider the object morpheme *-ga* in the example in (49), from Kanuri, a Nilo-Saharan language spoken in Nigeria (Hutchison 1976).

(49) kâm-ga rúskəna
      man-OBJ 1SG.saw
      'I saw the man'

The morpheme *-ga* is attached to the noun in (49), and in such examples looks like a case suffix. However, when the noun is followed by a modifier, as in (50), it attachs to the modifier instead of the noun.

(50) [kâm kúrà]-ga rúskəna
      man big-OBJ I.saw
      'I saw the big man'

The general rule, in fact, is that it attaches to whatever is the last word in the noun phrase. Its position is thus defined, not in the morphology, but in the syntax. It is exactly like postpositional words, except that it attaches phonologically to the word that precedes it. For this reason, it is best viewed, not as a case suffix, but as a type of postposition, namely a postpositional clitic. If the last element in the noun phrase happens itself to be a postposition, then we end up with a sequence of two postpositions, as in (51).

(51) [fátò   [kâm   kúrà]-ve]-ga   rúskəna
      compound   man   big-GEN-OBJ   I.saw
      'I saw the big man's compound'

The reason that two postpositions occur adjacent to each other in (51) is that the genitive postposition -*ve* is combining with the noun phrase *kâm kúrà* 'the big man' to indicate that it bears the genitive relation to the noun *fátò* 'compound', and the resultant noun phrase *fátò kâm kúràve* 'the big man's compound', is functioning as object of the clause and thus takes the object postposition -*ga*.

One can think of clitics like these postpositional clitics in Kanuri as morphemes which are syntactically separate words but phonologically like affixes in being attached to other words. They are syntactically separate words in that their position cannot be described in terms of the morphology of the language, but must refer to the syntax, in terms of their position relative to syntactic phrases. All evidence suggests that clitics behave the same as clear instances of words as far as word order correlations are concerned. Note that the English genitive clitic (*the Queen of England's crown, the woman I spoke to's hat*) counts as a postpositional clitic as well, and is quite parallel in various respects to the Kanuri object clitic.

Other examples of languages with postpositional clitics are illustrated in (52). The example in (52a) illustrates a locative postpositional clitic in Autuw, a Sepik language of Papua New Guinea (Feldman 1986), and the example in (52b) an ergative postpositional clitic in Thaayore, a Pama-Nyungan language of northeastern Australia (Hall 1972).

(52) a.   [wutyæn   dæni]-ke
           basket   INDEF-LOC
           'into a basket'

      b.   [Pa:th nhaŋn]-man   tha·th-iř   ru:ř   mant
           fire   his-ERG   burn-PUNCT   insect   small
           'his fire scorched the small grub'

In both cases, these markers are clitics rather than affixes, since they attach to whatever is the last word in the noun phrase.

Unfortunately, it is often unclear from many grammatical descriptions whether a morpheme that is called a case suffix is really a case suffix or a postpositional clitic. Descriptions often refer to a morpheme as a case suffix and include it in the discussion of noun morphology, and it is only brief mention elsewhere in the grammar, or sometimes only isolated examples elsewhere in the grammar, that reveal that it actually attaches to the last constituent of the noun phrase and thus is not a case suffix at all, but a postpositional clitic. This occasionally has ramifications for other aspects of the description of the language. For example, the fact that the clitic can appear on adjectives following the noun can lead some analysts to conclude from that that adjectives in the language are really nouns, when in fact no such conclusion is warranted. Note that applying this logic to the genitive clitic -*'s* in English would lead us to the bizarre conclusion that *singing* is a noun in examples like *the man that was singing's car* or that *to* is a noun in *the woman I spoke to's hat*. Unfortunately, a number of the papers in Planck (1995) apply the term *suffixaufnahme* (or "double case") both to instances of multiple case affixes and to a number of instances of multiple postpositional clitics of the sort illustrated in the Kanuri example in (50) and (51) above. The two kinds of phenomena are really quite distinct, since the former is due to the nature of the morphology of the language, while the latter arises due to the coincidence of the syntax allowing two adpositions to occur adjacent to each other.

It is not always easy to distinguish adpositional clitics from case affixes. The most difficult instances are those in which noun phrases in the language are rigidly noun-final, in which all modifiers precede the noun, as in the Korean example in (53).

(53)　na-nun　　　ku　　khun　kay-lul　　po-ass-ta
　　　 1SG-TOPIC　 that　big　 dog-ACC　see-PAST-DECL
　　　 'I saw that big dog'

The morpheme -*lul* 'accusative' in (53), like a variety of other 'case' morphemes in Korean, attaches to the noun, but since the noun is always the final element in the noun phrase, it is difficult to decide, on the basis of superficial evidence, between analysing the morpheme as a case suffix on nouns or as a postpositional clitic that always attaches to the last element of the noun phrase: in such a language, the last element of the noun phrase will always be the noun, so more sophisticated arguments may be necessary to choose between the two analyses. In the case of Korean, one piece of evidence that supports the postpositional clitic analysis is the fact that when the object involves a conjoined noun phrase, the accusative morpheme can only occur once, at end of the second noun phrase, as in (54).

(54)　na-nun　　　 cakun　　kay-wa　　khun　　koyangi-lul　　po-ass-ta.
　　　 1SG-TOPIC　small　　dog-and　big　　 cat-ACC　　　 see-PAST-DECL
　　　 'I saw a small dog and a big cat'

3.3.3. Adpositions and relational nouns

The distinction between case affixes on the one hand, and postpositional words and postpositional clitics on the other, is only one of a number of possible problems identifying adpositions. A second common problem arises in many languages, in which some if not all of the words that translate as prepositions or postpositions are arguably really nouns. For example, England's (1983) description of Mam (a Mayan language spoken in Guatemala) identifies a class of words she calls "relational nouns", illustrated in (55).

(55)　ma　　　　　b'aj　　t-aq'na-7n　　　　　Cheep　　t-jaq'　　kjo7n
　　　 REC.PAST　 DIR　　3SG.ERG-work-DIR　José　　 3SG-in　 cornfield
　　　　　 t-uuk'　　　Xwaan　　t-e　　　　xjaal
　　　　　 3SG-with　 Juan　　 3SG-for　person
　　　 'José worked in the cornfield with Juan for the person'

The three Mam words corresponding to the English prepositions *in, with,* and *for* are all instances of what England calls relational nouns. She describes them this way since their morphology and the structure of the phrase consisting of the relational noun and the noun phrase that they combine with (e.g. *tuuk' Xwaan* 'with Juan') is identical to that of a noun phrase modified by a genitive, as in (56).

(56)　t-kamb'　　meeb'a
　　　 3SG-prize　orphan
　　　 'the orphan's prize'

If the words in question are really nouns, and if the construction is really an instance of a genitive construction, then classifying the language as prepositional may be an artifact of the English translation.

There are a number of other considerations, however, which make it less clear that it is a mistake to classify words like these relational nouns in Mam as prepositions. First, the fact that they are nouns does not entail that they are not prepositions. There might be language-internal criteria for distinguishing them as a subclass of nouns, in which case, we might say

that there is a class of nominals in the language, two subclasses of which are prepositions and nouns. Even if the morphology and internal syntax of "relational noun phrases" is like that of genitive noun phrases, there might be differences in their external syntax; it might be necessary, for example, to distinguish them from other noun phrases in describing the syntax of clauses.

A further consideration is that words that translate as prepositions in English often start out as nouns, but by processes of grammaticization gradually take on properties distinct from other nouns, even if they retain certain properties, such as the morphological properties of nouns, that reflect their historical origin as nouns. The general moral is that just because words in a language exhibit morphological properties of nouns, it does not follow that they are not prepositions, for they may have acquired syntactic properties distinct from other nouns that reflect the relational functions associated with adpositions in other languages.

The processes of grammaticization whereby locational nouns become adpositions may eventually lead to loss of some nominal morphology. For example, in Kham (Watters 2002), a Tibeto-Burman language spoken in Nepal, the normal genitive construction involves simultaneous genitive case marking on the genitive noun and pronominal possessive marking on the possessed noun, as in (57).

(57) baza-e   o-kər
      bird-GEN   3SG.POSS-wing
      'a bird's wing'

There is a class of locational nouns which occur with both possessive prefixes and nominal case suffixes, as in (58).

(58) a. nə-chĩ:-kə   b. o-ŋah-tə
          2SG-behind-at   3SG-front-on
          'behind you'   'ahead of it'

However, when they occur with a dependent noun, they do not occur with the possessive prefix, nor does the dependent noun occur in the genitive, as in (59).

(59) a. hã: khĩ:-kə   b. juhr   dũ:h-lə
          cliff foot-at   boulder beneath-in
          'at the foot of the cliff' 'under the boulder'

Thus, despite their retaining some morphological characteristics as nouns, their lack of nominal morphology in some contexts reflects their partial grammaticization as postpositions. Synchronically, we can say that these words form a subclass of nouns, which we can call postpositions.

3.3.4. Languages without adpositions

While the majority of languages of the world appear to have adpositions, there are many languages that do not have words of this sort. In many Australian languages, this function is served by case affixes, as in the Martuthunira example cited above in (48). Such languages are not exceptions to the claim that OV languages tend to have postpositions. This claim is intended to be interpreted as saying that if a language is OV and if it has adpositions, then it will normally have postpositions rather than prepositions.

3.4. Identification of genitives

3.4.1. Alienable versus inalienable possession

There is relatively little crosslinguistic difficulty in identifying genitive constructions. One observation that must be made, however, is that some languages employ distinct constructions for alienable and inalienable possession (see Chapter ?? [Noun Phrase Structure]) and in a subset of these languages, the order of genitive and noun is different. For example, in Mallakmallak (Birk 1976), a Daly language of north Australia, inalienable genitives employ GN order, as in (60a), while alienable genitives employ NG order, as in (60b).

(60) a. yinʸa   puntu   b. muyinʸ yinʸa-nö
          man   head   dog   man-GEN
          'the man's head'   'the man's dog'

3.4.2. Lexical genitives versus possessive pronouns

Just as it is the case that discussions of the order of subject and verb are understood to refer to the order of lexical subject and verb, so too when we refer to the order of genitive and noun in a language, it is assumed that what is meant is a lexical genitive, one headed by a noun, rather than a pronominal genitive (also known as a possessive pronoun). In the majority of languages, the order is the same for lexical genitives and possessive pronouns (Poss), but in some languages their order is different. In French, for example, the order of lexical genitive and noun is NG, as expected of it as a VO language and as is illustrated in (61a), while the order of possessive pronoun and noun is PossN, as in (61b).

(61) a. le   livre   de   Jean   b. son   livre
          the book   of   Jean   3SG.POSS book
               N   G   Poss   N
          'Jean's book'   'his/her book'

Maranungku, a Daly language of north Australia (Tryon 1970b), exhibits the opposite pattern, with the lexical genitive preceding the noun (at least for inalienable possession), as in (62a), and the possessive pronoun following the noun, as in (62b).

(62) a. Micky   piyamerr   b. piya   ngany
          Micky   hair   head   my
            G   N   N   Poss
          'Micky's hair'   'my head'

4. Exceptions to word order generalizations

It must be stressed that the generalizations we discuss in this chapter are tendencies, and that there exist exceptions to most of them. For example, there are OV languages with prepositions, such as Kurdish (Abdulla and McCarus 1967). The example in (63a) illustrates the OV order, while that in (63b) illustrates the use of prepositions.

(63) a. ʔəm   pyaw-ə   xənjər   ʔə-froše
          this   man-this   dagger   IMPERF-sell
                 S   O   V
          'this man sells daggers'

b. bï   ra-kə́-m   lə   d'ï   tróyt   dà?əniše.
  brother-the-my   in   Detroit   lives
              Pr   NP
  'my brother lives in Detroit'

And there are verb-initial languages with postpositions, such as Northern Tepehuan, a Uto-Aztecan language spoken in Mexico (Bascom 1982). The example in (64a) illustrates the VSO word order, and (64b) illustrates the use of postpositions.

(64) a. takávo   sav̂ïli   [piidyúru ïïmádu ándïriši]   múi   ïïkoli ...
      yesterday bought   Peter   with   Andrew   many   orange
            V   S   O
      'yesterday, Peter and Andrew bought many oranges ...'

    b. sav̂ïili   ááni   váík   ímai   giñ--ooñí-ga   vïïtári
      bought   I   three   squash   my-wife-possd   for
                             NP   Po
      'I bought three squash for my wife'

There are also OV languages in which the genitive follows the noun, such as Arbore, a Cushitic language spoken in Ethiopia (Hayward 1984). The example in (65a) illustrates the SOV word order of Arbore; the second word in (65a) is a nonverbal auxiliary particle varying for aspect and for the person and number of the subject, while (65b) illustrates the NG order.

(65) a. mo   ?íy   ḳor   ḳúur-e   b. gaydan-ti   géer
      man   3SG.DEF   tree   cut-PERF   hoe-POSSD   old.man
      S   O   V   N   G
      'the man cut the tree'   'the old man's hoe'

Conversely, there are verb-initial languages with GN order, such as Yagua (Payne & Payne 1990), as illustrated in (66).

(66) a. s-iimyiy   Alchíco-níí   quiivạ   b. Tomáása   rooriy
      3SG-eat   Alchíco-DEF.OBJ   fish   Tom   house
      V   S   O   G   N
      'Alchico is eating the fish'   'Tom's house'

(The morpheme *níí* on the subject in (66a) is a pronominal clitic coreferencing the object.)

5. Other word order characteristics that correlate with the order of object and verb bidirectionally

In section 1, we saw five sets of elements whose order correlates with the order of verb and object. These sets of elements correlate *bidirectionally* in a sense that can be illustrated with adposition type. The correlation between OV order and postpositions is a strong tendency that can be stated by means of a bidirectional implicational universal: OV <=> Po, or 'A language is OV if and only if it is postpositional'. This is equivalent to saying 'If a language is OV, then it is postpositional, and if it is postpositional, then it is OV'. And by principles of logic, these also imply that if a language is VO, then it is prepositional, and if it is prepositional then it is VO. In this section we will examine a number of other pairs of elements whose order correlates bidirectionally with the order of object and verb. In section 6 below, we will examine some pairs of elements whose order correlates in a way I will characterize as

unidirectional (rather than bidirectional), and in section 7 below, we will examine some pairs of elements whose order does not correlate with the order of verb and object at all.

5.1. Verb and adpositional phrase

The order of verb and adpositional phrase is usually the same as the order of verb and object. Thus the OV languages discussed above in section 1 generally place the adpositional phrase before the verb, as in Lezgian and Slave, as illustrated in (67).

(67) a.   [duxtur-r-in   patariw] fe-na
            doctor-PLUR-GEN   to   go-AOR
                         PP   V
            'she went to doctors'

      b.   Mary [Joe gha] ke   ehtsi̧
            Mary Joe for   slippers 3.is.making
                     PP   V
            'Mary is making slippers for Joe'

Conversely, VO languages, both verb-initial and SVO, normally place adpositional phrases *after* the verb, as in the examples in (68) from English and Fijian.

(68) a.   Mary cut the fish [with the knife].
            V   PP

      b.   au   na   talai Elia [i 'Orovou]
            1SG FUT send Elia to 'Orovou
                         V   PP
            'I'll send Elia to 'Orovou'

5.2. Verb and non-argument noun phrases

Noun phrases that are not marked with an adposition but which are not syntactic arguments of the verb exhibit the same pattern in languages without adpositions in that they tend to occur on the same side of the verb as the object. For example, in Anguthimri, a Pama-Nyungan language of northeast Australia (Crowley 1981), not only does the object normally precede the verb, but so do noun phrases that are not syntactic arguments. The example in (69) illustrates both the object and an instrumental NP preceding the verb. We use the symbol X to denote a nonargument NP, an NP that is not part of the lexical structure of the verb.

(69)   ʔwa-ra   bwaʔa   ba-gu   t̪a-na.
        dog-ERG   meat   teeth-INSTR bite-PAST
               O   X   V
        'the dog bit the meat with his teeth'

5.3. Main verb and auxiliary verb

In OV languages, auxiliary verbs normally follow the main verb, while in VO languages they normally precede. We saw above that Slave and Siroi are OV languages. The examples in (70) illustrate auxiliary verbs following the main verb in these languages.

(70) a. bets'ę́ wohse   wolé   b. pasa min-geŋ
          3.to   1SG.shout.OPT be.OPT   talk be-1PL.PAST
                  V   Aux   V   Aux
          'I will shout to him/her'   'we were talking'

In contrast, English and Turkana are VO and AuxV, as in (71).

(71) a. She is sleeping.   b. kì-pon-i`   atɔ-mat-à
              Aux V   1PL-go-ASP   1PL-drink-PL
                                       Aux   V
                                       'we shall drink'

The Turkana example in (71b) illustrates a verb *pon* 'go' functioning as a future auxiliary and preceding the main verb.

The expression 'auxiliary verb' is often used in describing different languages to denote a wide variety of verbs that combine with main verbs, where the main verb conveys the lexical meaning while the auxiliary verb conveys meaning of a more grammatical sort. The tendency for auxiliary verbs to occur on the opposite side of the verb from the object extends to such auxiliary verbs. The example from Lezgian (OV) in (72) illustrates a modal auxiliary expressing ability following the main verb.

(72) za-way   a   bejaburčiwal ex-iz   že-zwa-č-ir
      1SG-ADESS   that   shame   bear-INF   can-IMPERF-NEG-PAST
                                        V   ModAux
      'I could not bear that shame'

The example in (73) from Moro, an SVO Kordofanian language spoken in Sudan (Black and Black 1971), illustrates a modal auxiliary preceding the main verb.

(73) ña-gaməlu   ña-gaber   ña-gaɽəwad   aṭa   ña-gasa   eḑ   e
      2PL-not.yet   2PL-not   2PL-able   2PL-eat   meat.PL
                     NegAux   ModAux   V
      'you are still not able to eat meat'

The example in (73) from Moro also illustrates how in languages in which negation is expressed by an auxiliary verb, such words exhibit the same tendency, following the verb in OV languages and preceding in VO languages.

The expression 'auxiliary' is sometimes used to denote nonverbal particles which convey tense or aspect. The position of such particles does not correlate with the order of verb and object, as is discussed below in section 7.5.

5.4. Copula verb and predicate

In many but not all languages, clauses with nonverbal predicates require that a copula verb be used. The order of copula and predicate correlates with the order of verb and object, the copula generally following the predicate in OV languages, but preceding in VO languages. The order CopPred in a VO language is illustrated for English in (74a), while PredCop order in an OV language is illustrated in (74b) for Slave.

(74) a.   Susan is a doctor.   b.   ʔeyá   hįłį
             Cop Pred   sick   3SG.be
                                                Pred   Cop
                                                'she is sick'

5.5. Question particles

Many languages distinguish polar (or "yes/no") questions from corresponding declarative sentences solely by means of intonation. A few languages, like English, have syntactically different forms to signal such questions (e.g. *Is the dog barking?*). But many languages employ morphemes in polar questions to distinguish them from declarative sentences. While in some languages these are affixes, in other languages they are particles. There are a number of positions in which such question particles occur. In some languages, their position is variable, depending on the focus of the question. In Turkish, for example, the question particle immediately follows the word that is the focus of the question, as illustrated in (75).

(75) a.   Sen   kitap-lar-ı   al-dı-n   mı?
          2SG   book-PL-ACC   take-PAST-2SG   Q
          'did you TAKE the books?'

     b.   Sen   kitap-lar-ı   mı   al-dı-n?
          2SG   book-PLUR-ACC   Q   take-PAST-2SG
          'did you take THE BOOKS?'

In (75a), the focus of the question is the verb *aldın* 'take', while in (75b), it is the object *kitapları* 'books'

There are many languages in which the question particle occurs in second position, after the first constituent in the clause, as in !Xu, a Khoisan language spoken in southern Africa (Snyman 1970). In (76a), the question particle occurs after the subject; but in (76b), in which there is an adverb preceding the subject, the question particle follows this adverb and precedes the subject.

(76) a.   da'ama   re   ho   n!eng?
          child   Q   see   eland
          'does the child see the eland?'

     b.   ‖e'ike   re   da'ama   ho   n!eng?
          today   Q   child   see   eland
          'does the child see the eland today?'

There are many other languages, however, in which the question particle occurs either at the beginning of the sentence or at the end of the sentence, and these two types correlate with the order of major clausal constituents. In OV languages, they most often occur at the end of the sentence, as in the example in (77) from Dolakha Newari, a Tibeto-Burman language spoken in Nepal (Genetti 1994).

(77) Dolakhā   khā   tuŋ   lā-eu   rā
     Dolakha   talk   EMPH   speak-3SG.FUT   Q
                   S   Q
     'will she speak the Dolakha language?'

In verb-initial languages, they most often occur at the beginning of the sentence, as in the Lealao Chinantec example in (78).

(78)   sïï^H ma^M-zá^L ka?^{M}ti^{LM} ku:^{H} kia:^{LH}a^H
         Q   PAST-run.out.3   completely   money   POSS.1PL
         Q   S
         'has our money completely run out?'

While SVO languages pattern with verb-initial languages for most word order characteristics, they exhibit a pattern intermediate between OV languages and verb-initial languages with respect to question particles. Namely, SVO languages with initial question particles and SVO languages with final question particles are both common. The example in (79a), from Bagirimi, a Nilo-Saharan language spoken in Chad (Stevenson 1969), illustrates an SVO language with a final question particle, while the example in (79b) is from Moro, illustrating an SVO language with an initial question particle.

(79)   a.   i   ak   ŋʷon-ʉ   m   kau   lɛ?
              2SG   see   son-1SG   at:all   Q
                        S   Q
              'did you see my son at all?'

       b.   an   ña-gabəṭə   nə-suk
             Q   2PL-go   to-Suk
             Q   S
             'are you going to the Suk?'

We use the expression 'question particle' here to denote particles in polar questions that are neutral with respect to what the answer might be. Many languages employ particles that occur in *leading questions*, in which the speaker makes an assumption as to what the answer will be, with a function analogous to the tag in English questions like *Mary is here, isn't she?* Such markers of leading questions appear to exhibit a tendency to occur at the end of sentences, regardless of the order of object and verb. For example, in Lealao Chinantec, illustrated above in (78) with a neutral polar question particle *sïï^H* at the beginning of the sentence, a question where a positive response is expected can be formed by means of the same particle at the *end* of the sentence accompanied by the negative word, as in (80).

(80)   na^M-ba^H ŋiú^H sïï^H ?á:^{H}
         STAT-hit.3   house   Q   not
              S   Tag
         'the house was hit, was it not?'

It is important not to confuse question particles with interrogative expressions in content questions, words corresponding to English words like *who* and *what.* The position of these is discussed below in section 8.1.

5.6. Complementizer and clause

Somewhat parallel to the case of adverbial subordinators is the order of complementizer and clause, where a complementizer is a word that signals the beginning or end of a complement clause, a clause functioning as object (or subject) of the verb in a higher clause. In English, for example, the complementizer *that* occurs at the beginning of the clause, as in (81), illustrating the pattern that is typical for VO languages.

(81) The teacher knows [that Billy ate the cookies].

This contrasts with the Slave example in (82), in which the complementizer *nį* occurs at the end of the clause, typical of OV languages.

(82) [ʔelá   táhła   nį̀]   kodeyihshá   yíle
      boat   3.land COMP   1SG.know   not
         Clause   Comp
      'I didn't know that the boat came in'

5.7. Article and noun

The order of article and noun exhibits a correlation with the order of verb and object, although the correlation is weaker than most of the other correlations discussed in this chapter. In particular, it is more common for the article to precede the noun in VO languages, as in English (*the dog*) and the Fijian example in (83a), but to follow the noun in OV languages, as illustrated in (83b) by the indefinite article in Kobon, an East New Guinea Highlands language (Davies 1981).

(83) a. 'eirau   'auta   a   pua'a
          1EXCL.DUAL   bring   ART   pig
                                  Art   N
          'we (two) brought the pig'

      b. ñi   ap   wañib   i   ud   ar-nim   Dusin   laŋ
          boy   INDEF   string.bag this   take   go-should.3SG   Dusin   above
          N   Art
          'a boy should take this string bag up to Dusin'

In European languages, the term 'article' is used to denote words that code definiteness or indefiniteness and which in some languages vary with respect to other grammatical features of the noun phrase as well, such as case, gender, or number. Some languages elsewhere in the world employ words that do not vary for definiteness but which resemble articles in European languages in that they are words that are very common in noun phrases and which vary for grammatical features of the noun phrase (including number, case, gender), even if this does not include definiteness (see Chapter ?? [Noun Phrase Structure] for further discussion). If we include such words in our understanding of the term "article", i.e. if we treat definiteness, not as a defining characteristic of articles, but simply as a characteristic of articles in European languages, then words that introduce noun phrases in Cebuano, as in (84), count as articles.

(84) a. gi-palit   sa   babayi   ang   saging.
          OBJ.FOCUS-buy   NONTOPIC   woman   TOPIC   banana
                            [Art   N]   [Art   N]
          'the woman bought the bananas'

      b. gi-sulat-an   ni   Maria   si   Dudung   ug   isturya.
          LOC.FOC-write-LOC.FOC   GEN   Maria   TOPIC   Dodong   INDEF   story
                                   [Art   N]   [Art   N]   [Art   N]
          'Maria wrote a story for Dodong'

Except for the indefinite object article *ug* in (84b), these articles in Cebuano do not vary for definiteness, but vary for a distinction between grammatical topic and various sorts of nontopics and for common versus proper noun. (The nontopic actor Maria in (84) is marked with the same marker that marks genitive modifiers of nouns, hence the gloss 'GEN'.) Such

articles appear to exhibit the same correlation with the order of verb and object that we have observed for articles coding definiteness or indefiniteness.

Many traditions categorize articles as a type of determiner, this class including as well such words as demonstrative modifiers of nouns (as in English *this book*). However, languages differ in whether articles and demonstratives belong to the same word class. In English, they do, appearing in the same determiner position at the beginning of noun phrases; in English, one cannot have both an article and a demonstrative (**the this book*). But in many other languages, articles and demonstratives are separate word classes. In Fijian, for example, the article precedes the noun while the demonstrative follows, as in (85).

(85)   a   gone   yai
           ART child this
           Art   N   Dem
           'this child'

In addition, unlike articles, demonstratives do not exhibit a correlation in their position with the order of object and verb, as discussed in section 7.2 below.

Some types of words, like demonstratives, are ones that are apparently found in all languages. Articles are a type of word where this is not so. While languages with articles are common, languages without articles are at least equally common, probably more so. But in addition to the weak correlation between the order of article and noun and the order of verb and object, there appears to be as well a weak correlation between the order of verb and object and *whether* the language employs articles. Namely, articles appear to be somewhat more common in VO languages than they are in OV languages. A clear majority of OV languages appear not to have articles. Hence, when we say that OV languages tend to NArt, what we really mean is that if a language is OV and *if* it has articles, then it will tend to be NArt.

5.8. Subordinate and main clause

The order of subordinate clause with respect to the main clause correlates with the order of object and verb, more often preceding the main clause in OV languages, and following in VO languages, although many languages exhibit considerable freedom in the position of subordinate clauses. English, for example, allows such clauses both before and after the main clause, as in (86), and it is not clear that one of these orders can be called basic.

(86)   a.   Because it was raining, the children came into the house.
                  Sub   Main
        b.   The children came into the house because it was raining.
                Main   Sub

There is also some variation among different types of subordinate clauses. As Greenberg (1963) observed, conditional clauses exhibit a universal tendency to precede the main clause.

6. Word order characteristics that correlate with the order of object and verb unidirectionally

The pairs of elements discussed in the preceding sections are ones whose order correlates bidirectionally with the order of object and verb. What this means in effect is that given the order of object and verb, one can predict that the language will probably have the other characteristics noted, and as well, given one of these other characteristics, one can predict the order of object and verb. For example, given the order OV, we predict VAux, and given

VAux, we predict OV. The pairs of elements discussed in this section are not this way. We illustrate with the first case we discuss, the order of relative clause and noun.

6.1. Noun and relative clause

Almost all VO languages place the relative clause after the noun, as illustrated in (87) for English, Fijian, and Tetelcingo Nahuatl.

(87) a.   the boy [that the dog bit]
            N   Rel

     b.   a   pua'a   ['eirau   'auta]
         ART pig   1EX.DU bring
                N   Rel
         'the pig which we (two) bought'

     c.   inu   ɔcintlı [tli   k-omwika-k]
         that water   REL it-bring-PERF
              N   Rel
         'that water which he had brought'

However, among OV languages, both orders are about equally common. Examples of OV languages with RelN order are given in (88) from Lezgian and Autuw. The Autuw example in (88b) illustrates both the OV and the RelN order.

(88) a.   [gada   k'wal-iz   raq̃ur-aj]   ruš
         boy   house-DAT send-PTCPL girl
              Rel   N
         'the girl who sent the boy home'

     b.   [ɾey   æye dɘk-ra-y-re]   rame-re   wan d-uwp-o.
         NONFEM,SG food ASP-eat-ASP-OBJ man-OBJ 1SG ASP-see-PAST
                       Rel   N
         'I saw the man who is eating food'

The examples in (89) illustrate two OV languages with NRel order, Slave and Siroi.

(89) a.   tthik'íhí [neyaa   yet'ah   golǫ   thehk'é   síi]
         gun   2SG.son it.with moose 3.shot   COMP
          N   Rel
         'the gun that your son shot the moose with'

     b.   am [ruga-nge   ŋayong-ina]   ta
         eye   mud-SPEC ruin-3SG.PAST that
         N   Rel
         'the eye which the mud had injured'

We see therefore that three out of the four logical possibilities are common and that only one of the four is uncommon: OV&RelN, OV&NRel, VO&NRel are common, while VO&RelN is uncommon. We can describe this by means of a unidirectional implicational statement 'If VO, then NRel', or in its logically equivalent form 'If RelN, then OV'. What we *cannot* say is anything of the form 'If OV, then ...' since given that the order is OV, the two possibilities RelN and NRel are equally likely. Similarly, we cannot say anything of the form 'If NRel, then ...' since among NRel languages, many are OV and many are VO. In other words, the prediction goes in only one direction.

Contrast this with the situation with the sort of bidirectional implicational generalizations that are possible, for example, with adposition type. In this case, only two of the four logical possibilities are common: OV&Po and VO&Pr. The other two possibilities are uncommon: OV&Pr and VO&Po. In this situation, the prediction goes in both directions: 'if OV, then Po' and 'if Po, then OV', as well as 'if VO, then Pr' and 'if Pr, then VO'.

In both types of situations, there is a correlation. It is clear that there is a correlation in the bidirectional case. In the unidirectional case, there is a correlation in the weaker sense that one order is significantly more common among OV languages than it is among VO languages. This contrasts with the cases we will look at in section 7 below in which there is no correlation at all, where all four types are common and the two orders are as common among OV languages as they are among VO languages.

The discussion above restricts attention to externally-headed relative clauses, where the head is outside the relative clause and where it makes sense to talk about the order of the noun with respect to the relative clause. Slave employs both NRel externally-headed relative clauses, as in (89a) above, but also internally-head relative clauses, as in (90).

(90) [lį   gah   hedéhfe i]   gháyeyidá
     dog   rabbit   chased   COMP   1SG.saw
     'I saw the dog that chased the rabbit'
     or 'I saw the rabbit that the dog chased'

Most languages with internally-headed relative clauses are OV, as is Slave.

6.2. Plural word and noun

While the most common way to indicate plurality in a noun phrase is by means of an affix on the noun, a number of languages employ separate words to perform this function. Among VO languages with such plural words, both orders with respect to the noun are common, as illustrated in (91): (91a) illustrates PlurN order in Tahitian, an Austronesian language spoken on the island of Tahiti in the Pacific (Tryon 1970a), and (91b) illustrates NPlur order in Tetun (Van Klinken 1997), also an Austronesian language, but one spoken in Indonesia.

(91)   a.   te   mau   fare   b.   hotu   kakehe   sia
            the   PLUR   house   all   fan   PLUR
                   Plur   N   N   Plur
            'the houses'   'all the fans'

Among the VO languages which place the plural word after the noun are some where the plural word is a clitic which attaches to whatever is the last word in the noun phrases, as in the examples in (92): (92a) is from Bagirmi and (92b) from Margi (Hoffman 1963), a Chadic language spoken in Nigeria.

(92)   a.   [bɨs   an   ama]-ge   b.   dàrà   dɔ̀zɔ̀-'yàr
            dog   of   1SG-PLUR   cap   red-PLUR
            N   Plur   N   Plur
            'my dogs' (p. 29)   'red caps' (Hoffman 1963: 59)

In contrast, all of the instances of OV languages with such plural words that we are aware of place the plural word after the noun, as in the Siroi example in (93).

(93)   kulim   kat   nuŋe
            sister   plur   his
            'his sisters' (p. 24)

We can summarize this distribution with the unidirectional implicational universal "If a language is OV, then it will be NPlur".

6.3. Intermediate unidirectional and bidirectional cases

6.3.1. Subordinator and clause

We have distinguished between two types of correlations, bidirectional ones, where two of the four types are common and the other two types less common, from unidirectional ones, in which three of the four types are common and the fourth type less common. Because of the vagueness of what it means to be common, there are in fact some cases which might be classified either way. For example, we have treated the order of adverbial subordinator and clause as a bidirectional correlation, since two of the types, OV languages with final subordinators and VO languages with initial subordinators, are more common than the other two possibilities. However, of these two other possibilities, one is much rarer than the other. Namely, OV languages with initial subordinators are much more common than VO languages with final subordinators.

An example of an SOV language in which subordinators occur at the beginning of the clause is Latin, as in (94).

(94)   ubi   [puella-m   audī-v-ī]
            when   girl-acc   hear-perf-1sg
            Subord   Clause
            'when I heard the girl'

An example of a VO language with clause-final subordinators is Buduma, a Chadic language spoken in Sudan (Lukas 1939). The SVO order of Buduma is illustrated in (95a), the clause-final subordinator in (95b).

(95)   a.   kugúį   a-táį   ámbaį
                 hen   3sg.masc.pres-lay   egg
                 S   V   O
                 'the hen lays eggs'
                 die Henne legt Eier

        b.   [dōmo   hǎmera   ná-ci-n]   ga
                 1sg   cold   3sg.masc.past-grip-1sg.obj   since
                            Clause   Subord
                 'since I am cold'
                 da mich Kälte ergriffen hat

OV languages like Latin are not uncommon: the implicational universal 'If OV, then final subordinator' is true for approximately 75% of OV languages. In contrast the implication 'If VO, then initial subordinator' is apparently true for over 95% of VO languages. Treating a case like this as a birectional correlation obscures the fact that one of the two less frequent types is much more common than the other, while treating it as a unidirectional correlation obscures the fact that two of the types are more common than the other two types.

6.3.2. Complementizer and clause

The order of complementizer and clause is similarly an intermediate case: of the two less frequent types, OV&CompS is not uncommon (found in over 20% of OV languages), while we are aware of no instances of VO&SComp languages. The example in (96), from Harar Oromo, a Cushitic language spoken in Ethiopia (Owens 1985), illustrates an instance of an OV language with an initial complementizer.

(96) [akká-n   d'ufé-n]   beexa
      comp-1sg   came-1sg   know
      Comp   Clause
      'I know that I came'

Harar Oromo is somewhat atypical among OV&CompS languages in that the complement clause occurs in normal object position before the verb, as in (96). More commonly in such languages, complement clauses follow the verb, contrary to the normal OV word order, as in the example in (97) from Hindi.

(97) aurat   ne   kahaa   [ki   aadmii   ne   patthar   maaraa]
      woman   erg   said   comp   man   erg   rock   threw
                            Comp   Clause
      'the woman said that the man threw the rock'

In both of these cases, the implication is bidirectional, but it is much stronger in one direction than in the other direction, meaning that there is an asymmetry that resembles the unidirectional implications.

7. Word order characteristics that do not correlate with the order of object and verb

There are a number of word order characteristics that do not correlate crosslinguistically with the order of verb and object, where both orders are common in both OV and VO languages, or at least where there is no difference between OV and VO languages with respect to the frequency of the two orders of these other pairs of elements. The existence of such word order characteristics has often been overlooked in much of the literature. We discuss six such pairs of elements in this section.

7.1. Adjective and noun

7.1.1 The absence of a correlation with the order of object and verb

It is often mistakenly thought that the order of adjective and noun correlates with the order of object and verb, but it is now known that this is not the case (see Dryer 1992). It is often thought that OV languages tend to be AN and that VO languages tend to be NA, but it turns out in fact that this is not so, that NA is somewhat more common than AN among both OV and VO languages. Part of the source of this problem is that the languages in the sample used by Greenberg (1963) suggested that verb-initial languages tend to be NA, but in fact this turns out to be an accidental property of the six verb-initial languages in his sample, and AN order is as common in verb-initial languages as it is in SVO and OV languages. Another source of the mistaken impression many linguists had about AN order in OV languages is that among the OV languages of Europe and Asia, AN order is much more common than NA order. This turns out, however, to be an idiosyncracy of Eurasia: outside of Eurasia, NA is clearly more common than AN among OV languages. The examples in (98) illustrate OV&AN and OV&NA order in Lezgian and Slave respectively.

(98) a. i   güzel   cükw-er   b.   tlį   nechá

	this	beautiful	flower-plur		dog	big
		A	N		N	A

'these beautiful flowers'   'big dog'

Turning to verb-initial languages, the examples in (99) illustrate NA order in Fijian and Lealao Chinantec.

(99) a. a   'olii loa   b. mïVH-kuï:M   tia:M

	art	dog	black		clsfr-corn	white
		N	A		N	A

'black dog'   'white corn'

Rukai, spoken in Taiwan (Li 1973), is like Fijian in being a verb-initial Austronesian language, but differs in being AN; (100a) illustrates the verb-initial order, while (100b) illustrates the AN order.

(100) a. wauŋul   sa   acilay kay   maruḍaŋ

	drank	indef.acc	water	this.nom	old.man
	V		O		S

'this old man drank water'

b.   kayvay maḍaw daan

	this	big	house
		A	N

'this big house'

Mezquital Otomi, an Oto-Manguean language spoken in Mexico (Hess 1968), is a second example of a verb-initial language with AN order; (101a) illustrates the verb-initial order, while (101b) illustrates the AN order.

(101) a. pě?ca ?na   ra   ngŭ   nú?ạ ra   rĭko

	has	one	ART	house	that	ART	rich.man
	V			O			S

'that rich man has a house'

b.   ra   zí   zụ?wę́

	ART	little	animal
		A	N

'the little animal'

7.1.2. Identifying adjectives

    In characterizing the order of noun and adjective in a language, it is important to understand that what is at issue is the order of a noun and an adjective that is *modifying* the noun, in an attributive function within the same noun phrase, and not the order of a noun (phrase) functioning as subject and an adjective functioning as predicate. Thus (99a) above illustrates the NA order of Fijian, while (102) does not illustrate the order AN, but rather the fact that in a clause in which the adjective is predicate, the predicate precedes the subject.

(102) e   loa.loa a   'olii ɣai

	3SG	big	ART	dog	this
		Pred		Subj	

'this dog is big'

Characterizing the order of noun and adjective in a language would seem to assume that one can identify a class of words that can be described as adjectives. There are a number of problems with this that arise in different languages. First, in the broadest sense of the word, adjectives include demonstrative "adjectives" and numerals. However, the term "adjective" is usually understood to denote what are sometimes called "descriptive adjectives", words modifying nouns that denote properties of the referent of the noun phrase, the prototypical properties being ones with meanings like 'big', 'small', 'good', 'bad', 'old', 'new', and colours (cf. Dixon 1977). Apart from demonstratives and numerals, this excludes meanings like 'other', 'same', and 'such', which in some languages exhibit different word order properties from descriptive adjectives.

Another problem that arises in identifying adjectives in some languages is that in many languages the meanings in question are expressed by words that belong either to the class of verbs in the language or to the class of nouns (see Chapter ?? [Noun Phrase Structurre] for further discussion). We thus encounter again the question of to what extent the categories assumed in word order typology are semantic and to what extent they are motivated as categories within each language. We follow here the general practice in word order typology of assuming a semantic notion of adjective, so that we include words that in some languages belong to the class of nouns, in others to the class of verbs

In some languages, although adjectives are a subclass of verbs, they may exhibit differences from other verbs in terms of their position relative to the noun. In Hanis Coos, for example, adjectival verbs modifying a noun normally precede the noun, as in (103a), while other verbs modifying a noun normally follow the noun, as in (103b).

(103) a.   tsä´yux^u   tcîcī´mîł
               small   spruce.tree
                V   N
               'a small spruce tree'

      b.   tᴇ   to´qmas   k!a´wat
              the   woodpecker peck
                    N   V
               'the woodpecker who was pecking at it'

What this means is that it does not follow from the fact that adjectives are verbs in a language that their position relative to the noun is necessarily governed by the same principles as that of other verbs. In fact, the positional properties of the words with adjectival meaning could be the basis for saying that they are a distinct word class, and call them adjectives.

Finally, it should be noted that there are languages which can superficially be characterized as NA or AN, but in which such a characterization is highly misleading because the relation of the noun and adjective does not involve one in which the adjective is modifying the noun, in attributive function. The Kutenai example in (104a), for example, appears to illustrate AN order, with the adjective *kwiłqa* 'big' preceding the noun *ȼawu* 'gun'. However, the structure of the noun phrase in (104a) is actually that of an internally-headed relative clause, in which the adjective is a verb functioning as the predicate in the relative clause and the noun as the subject of that predicate. The apparent AN order in (104a) thus reflects the more general fact that the normal order of clauses in Kutenai is VS, as in (104b).

(104) a.   k-wiłqa   ȼawu   b.   qa·naxi   skinkuȼ
           SUBORD-big gun   go-INDIC   coyote
             V   S   V   S
           'the big gun'   'Coyote went along'

In other words, the noun in (104a) is not the head, with the adjective as modifier, but the so-called adjective is the head (assuming the verb is head of the clause) and it is the noun which is a dependent, more specifically the subject. If we restrict classification of the order of noun and adjective to cases in which the adjective is modifying the noun, then cases like Kutenai should be excluded. It is possible that there are other languages which have been described as AN or NA in which the structures in question are really internally-headed relative clauses.

7.2. Demonstrative and noun

Demonstrative modifiers of nouns, like adjectives, are common either before the noun or after the noun among both OV and VO languages, though in both types of languages DemN order is slightly more common. The example in (105) illustrates DemN order for Lezgian.

```
(105)        a       insan-ar
             that    human-PLUR
             Dem     N
             'those people'
```

The examples in (106) illustrate NDem order in Canela Krahô, a Je language spoken in Brazil; (106a) illustrates the OV order, while (106b) illustrates the NDem order.

```
(106)  a.   wa     ha     pĩxô    jũhkà          b.    rop    ita
            1SG    FUT    fruit   buy                  dog    this
            S              O       V                   N      Dem
            'I will buy fruit'                         'this dog'
```

The examples in (107) illustrate two verb-initial Oceanic languages with DemN and NDem order respectively, namely Tahitian and Fijian.

```
(107)  a.   'Ua      ti'i    'outou    'i       tēra    tiare.
            COMPL    pick    2PL       PREP     that    flower
                                                Dem     N
            'you (pl) picked that flower'

       b.   a      gone    yai
            ART    child   this
                   N       Dem
            'this child'
```

7.3. Numeral and noun

Both NumN and NNum order are common among OV and VO languages, the examples in (108) illustrating this for two OV languages, Lezgian and Slave, the examples in (109) for two verb-initial languages, Lealao Chinantec and Turkana.

```
(108)  a.   i       wad    cük            b.    dene      nákee
            this    five   flower               person    two
            Num     N                           N         Num
            'these five flowers'                'two people'
```

(109) a.   tṳːᴸ   ʔɨ̱ⱽᴴ   b.   ŋa-kine-i`    ŋa-arey`
          two   place   PL-goat-PL   PL-two
          Num N   N   Num
          'two places'   'two goats'

Note that in describing the order of numeral and noun, it is the order of *cardinal* numeral (e.g. English *two, three*) and noun that is intended, rather than the order of *ordinal* numeral (e.g. *second, third*) and noun. In some languages, the position of cardinal numeral and ordinal numeral are different. For example, in Gude, a Chadic language spoken in Nigeria (Hoskison 1983), the cardinal numeral follows the noun, as in (110a), while the ordinal numeral precedes the noun, as in (110b).

(110) a.   mbusə   pu'   b.   tufə-nə   nga   tihinə
          pumpkin   ten   five-ORD   of   horse
             N   Num   Ord   N
          'ten pumpkins'   'fifth horse'

7.4. Negative particle and verb

We restrict attention here to negative morphemes that are neither affixes on verbs, nor negative auxiliaries, discussed above in section 5.3. While both orders of negative particle and verb are found in both OV and VO languages, preverbal position is more common. The examples in (111) from Slave and Waskia, a Trans-New Guinea language (Ross and Paol 1978), illustrate the two orders of negative particle and verb in OV languages.

(111) a.   dene   gháyeyídá   yíle
          person   1PL.see   not
                     V   Neg
          'we didn't see anyone'

       b.   ane   yu   me   nala   bage-sam
          1SG   water   not   drink   stay-PRES.1SG
                            Neg   V
          'I never drink water'

The examples in (112) illustrate the two orders in two SVO languages, Bagirmi and Tetelcingo Nahuatl.

(112) a.   deb-ge   tol   tobio li
          person-PL   kill   lion   not
                     V   Neg
          'the people did not kill the lion'

       b.   amo   nɪ-k-matɪ koš   ok   om-pa-ka ...
          not   I-it-know whether still MED-at-be
          Neg   V
          'I don't know if he's still there ...'

Note that negative particles preceding the verb most often occur immediately before the verb, while negative particles following the verb in SVO languages often occur in clause-final position, as in (112a).

Although the order of negative particle and verb does not correlate with the order of object and verb, it does actually correlate weakly with the order of subject and verb, in that the

preverbal preference is particularly strong in verb-initial languages, and there are very few known verb-initial languages with postverbal negative particles. The examples in (113) from Lealao Chinantec and Yagua illustrate two verb-initial languages with preverbal negative particles. (Payne 1990: 65)

(113) a.   ʔaᴸʔeᴹ   maʔᴸ-líʔᴸi   b.   néé   ra-vyạata   buyạa
            not   ASP-remember.1SG   not   1SG-want   manioc.beer
            Neg   V   Neg   V
            'I no longer remember'   'I don't want manioc beer'

7.5. Tense-aspect particle and verb

By tense-aspect particles we mean uninflected words that indicate tense or aspect, similar to auxiliary verbs, but nonverbal. Such words are sometimes referred to as auxiliaries, particularly in languages in which they are clitics, or clitic clusters, that occur in second position in the clause. In languages in which their position is defined relative to the verb (as opposed to second position), they tend to precede the verb in both OV and VO languages. They do follow the verb slightly more often in OV languages, but this difference is sufficiently weak that we treat them here as not correlating with the order of object and verb. The examples in (114) illustrate the two orders in two OV languages spoken near the mouth of the Amazon River in Brazil, Urubu-Kaapor (Kakumasu 1986) and Canela Krahô.

(114) a.   kase   a-'u   ta   b.   wa   ha   pĩxô   jũhkà
            coffee   1SG-drink   FUT   1SG   FUT   fruit   buy
                     V   T/A   T/A   V
            'I will drink coffee'   'I will buy fruit'

Note that the future particle in the Canela Krahô example in (114b) does not occur adjacent to the verb, but immediately after the subject. The examples in (115) illustrate the two orders in two VO languages, preverbal position in Mam and postverbal position in Bagirmi.

(115) a.   ma   kub'   ky-tzyu7n   xiinaq   cheej
            REC.PAST   DIR   3PL.ERG-grab   man   horse
            T/A   V
            'the men grabbed the horse'

       b.   bɨs   sa   ja   ga
            dog   eat   meat   COMPLETIVE
                    V   T/A
            'the dog has eaten the meat'

Note that the postverbal completive particle in the Bagirmi example in (115b) occurs not only after the verb, but after the object, at the end of the clause.

7.6. Intensifier and adjective

A final pair of elements whose order does not correlate with the order of verb and object is that of what are variously called intensifiers, degree words, or adverbs, words modifying adjectives that are analogous in meaning to English words like *very, more, rather, somewhat,* and *slightly.* Again, this is another point on which Greenberg's 30-language sample was misleading, since the verb-initial languages in his sample were primarily AdjIntens. In fact, both orders are common among verb-initial languages, and, if anything, the order IntensAdj is slightly more common among verb-initial languages. The examples in

(116) illustrate two verb-initial languages of each sort, Lealao Chinantec with IntensAdj order, and Ocotepec Mixtec (Alexander 1988) with AdjIntens order.

(116) a. dí?^VH   li:?^H   b. káhnú   ndāsi
           very   pretty   big   very
           Intens   Adj   Adj   Intens
           'very pretty'   'very big'

Both orders are also common among SVO and OV languages.

It should be mentioned that in many languages, intensifiers do not behave as a grammatically well-defined class, and often some intensifiers precede the adjective while others follow, within the same language. The examples in (117) from Chrau, a Mon-Khmer language spoken in Vietnam (Thomas 1971), illustrate two different intensifiers with different positions relative to the adjective.

(117) a. mo'yăh   măq   b. măq   trôq
           very   big   big   extremely
           Intens   Adj   Adj   Intens
           'very big'   'extremely big'

8. Other typological characteristics correlating with the order of object and verb

The correlations with the order of object and verb discussed in sections 1, 5 and 6 above all involve pairs of elements where one order is more common than the other order in OV languages as compared with VO languages. In this section, we discuss a number of typological characteristics that do not involve the order of two elements but that do appear to correlate with the order of object and verb. First, however, we should mention two such characteristics that we discussed briefly above. One of these is that internally-headed relative clauses rarely occur outside of OV languages. The other is that articles are apparently used more often in VO languages than they are in OV languages.

8.1. Position of interrogative expressions in content questions

In section 5.4 above, we discussed the position of question particles, words signalling polar questions. These need to be distinguished from interrogative words or expressions that occur in content (or "wh") questions. The examples in (118) from Otomi illustrate a question particle in a polar question and an interrogative expression in a content question respectively.

(118) a. ha   mă   gixɔ̌   nú   ra   boxą́
           Q   going.to you.will.take.it that   the   money
           'Are you going to take the money?'

       b. té   gíhoní   wa
           what you.seek.it here
           'What are you looking for here?'

We saw in section 5.4 that question particles can occur in various positions, with initial position correlating with verb-initial languages and final position correlating with OV languages. The position of interrogative expressions in content questions also correlates with the order of object and verb: in verb-initial languages, such expressions most commonly occur at the beginning of sentences (and thus the verb is not initial in such sentences), while in OV

languages, they tend most often to occur *in situ,* the same position in which a corresponding noninterrogative expression would occur. The example in (118b) from Otomi illustrates this initial position in a verb-initial language. The example in (119) from Slave illustrates *in situ* position in an SOV language: the interrogative expression is functioning as object and thus occurs after the subject and before the verb, where objects normally occur in Slave.

(119)   David   ?ayíi   ehtsi
        David   what   3.make
        'what did David make?'

It should be stressed that this correlation is not as strong as some of those we have discussed and there are many exceptions. Fijian, which we have used to exemplify many characteristics typical of verb-initial languages, is exceptional in this respect. In (120), the interrogative occurs in subject position, in VOS order.

(120)   e   sabici   i'o   o   cei
        3SG   hit   2SG.OBJ ART   who
        'who hit you?

Unlike most of the word order characteristics we have discussed, in which SVO languages pattern like verb-initial languages, both types of content questions are common among SVO languages. English is an example of an SVO language in which the interrogative expression occurs at the beginning of the sentence. Hmong Ngua is an example of a language in which the interrogative expression occurs *in situ,* as in (121).

(121)   nwg   moog   ghov twg
        3SG   go   where
        'where is he going to?'

Note that the interrogative expression is often an entire phrase, and in languages in which the interrogative expression occurs in initial position, the interrogative word may occur later in the phrase, so that the interrogative word itself is not initial, although the phrase is. For example, in (122) from Songhai, a Nilo-Saharan language spoken in west Africa (Prost 1956), the interrogative phrase in initial position is *koyra foyan ga* 'in which village', literally 'village which in', in which the interrogative word *foyan* 'which' follows the noun (the general position for most noun modifiers in Songhai) and the entire postpositional phrase occurs in initial position.

(122)   koyra   fo-yan   ga   n   ga   bisa
        village   which-PLUR   in   2SG   INCOMPL   pass
        'by which villages did you pass?'

8.2. Affix position

Although there are many differences among affixes of different sorts, there is overall a tendency for suffixes to be associated with OV languages, prefixes with VO languages. This is a unidirectional correlation, however, in that three of the four types are common, suffixes in OV languages, suffixes in VO languages, and prefixes in VO languages. In other words, we can say that OV languages more commonly have suffixes, but we cannot say that VO languages more commonly have prefixes. However, if a language is exclusively suffixing, if all affixes in the language are suffixes, the language is more likely to be OV. This correlation is not a strong one, and prefixes in OV languages are not at all rare.

8.3. Case distinguishing transitive arguments

Languages employ a variety of means for distinguishing the two arguments in a transitive clause. One means is to mark one or both of them with a case affix or adposition. There appears to be a weak correlation by which OV languages employ such case markers more often than VO languages, more specifically one can say that they are most common in OV languages, next most common in verb-initial languages, and least common in SVO languages.

9. Other sorts of implicational generalizations

The best-known generalizations in word order typology have been ones relating the order of certain pairs of elements to the order of object and verb. With bidirectional correlations, this also means that pairs of elements whose order correlates with the order of verb and object correlate with each other. For example, languages which are postpositional tend to be GN and vice versa. But there are also correlations between pairs of elements neither of which, or only one of which, correlates with the order of object and verb. For example, when we consider the order of adjective and noun and the order of demonstrative and noun, there are four logically possible combinations: DemN&AN, DemN&NA, NDem&NA, and NDem&AN. However, of these four types, the first three are common while the last one is uncommon. This can be described in terms of the unidirectional implicational universal 'If NDem, then NA' (or equivalently 'If AN, then DemN').

Greenberg (1963) and Hawkins (1983) discuss other possible universals that refer to three or more elements. For example, Greenberg's Universal 5 states 'If a language has dominant order SOV and the genitive follows the noun, then the adjective likewise follows the noun'. Note that the set of languages defined by the antecedent clause here is already somewhat small, since the genitive normally precedes the noun in SOV languages. Most of the universals of this form that have been proposed do appear to have some exceptions. Tigre (Raz 1983), a Semitic language spoken in Eritrea, is an apparent exception to Greenberg's Universal 5. Examples illustrating these properties are given in (123): (123a) illustrates the SOV word order; (123b) illustrates the NG order; and (123c) illustrates the AN order.

(123)   a.   ...   ḥatte   ʔǝssit   walat-ʔǝsrael   ḥǝṣān   waldat
            one   woman   Israelite   boy   begot
                 S   O   V
      ' ... an Israelite woman begot a boy'

      b.   walat   farʕon
          daughter   Pharaoh
           N   G
         'the daughter of the Pharaoh'

      c.   la-gǝndāb   ʔǝnās
          the-old   man
           A   N
         'the old man'

10. Order among elements at the same level

We have discussed above the order of the noun relative to various modifiers, but questions also arise about the order among modifiers. And while noun phrases containing three or more modifiers are likely to be rather unnatural (though languages appear to differ in

how tolerant they are of multiple modifiers), questions about the order of single pairs of elements can usually be answered. In other words, it may be unnatural in a language to express a noun phrase with three modifiers, as in English *these three brown books,* but the order Dem-Num-A-N can be determined by examining one pair at a time (*these three books, these brown books, three brown books*). And as with other pairs of elements, languages vary as to whether the order is rigid, and if it is flexible, whether one order is preferred or not, and what might determine the order. While the order is quite rigid in English, for example, it is more flexible in Japanese.

One crosslinguistic generalization governing the order of Dem, Num, and A is that when all three appear on the same side of a noun and one order is preferred, the demonstrative typically is furthest from the noun and the adjective closest, with either Dem-Num-A-N or N-A-Num-Dem order. Compare the English example in (124a) with the example in (124b) from Ambai (Silzer 1983), an Austronesian language spoken in Irian Jaya in Indonesia.

(124) a.   these three brown books
             Dem Num   A   N

       b.   dian   katui   siri   nani
             fish   small   one   that
             N   A   Num   Dem
             'that one small fish'

The same generalization applies to any pair of these elements if two occur on one side of the noun. Thus if a language places both the demonstrative and the numeral before the noun and the adjective after the noun and if there is a preferred order for the Dem and Num, that order will typically be Dem before Num. Greenberg (1963) noted the existence of some languages which violate this in which all three of these elements follow the noun, but in the opposite of the expected order, namely N-Dem-Num-A, but such languages do not appear to be much more common (if at all) than other types of exceptions. The example in (125) from Moro illustrates a language of this sort.

(125) maj-anda   ildi   iɾəjin   l-amənu   l-oɾra
       man-PL   this.NC_{10}.PL   three.NC_{10}.PL NC_{10}.PL-black NC_{10}.PL-big
          N   Dem   Num   A   A
       'these three big black men'

An example of an another type of exception is Nkore-Kiga, a Bantu language spoken in Uganda (Taylor 1985), in which the order is N-Poss-Dem-A-Num, as illustrated in (126).

(126) ekitabo   kyawe   ekyo   ekihango   ekimwe   …
       book   your   that   large   one
       N   Poss   Dem   A   Num
       'that one large book of yours ....'

Questions about the order of elements at the same level also apply at the clause or verb phrase level. Thus, identifying a language as OV and PP-V (or XV) leaves open the question of the possible order of the object with respect to other elements before the verb. In some languages, their order is flexible, in others the preferred order is XO, while in others the preferred order is OX. For example, the preferred order in Sanuma, a Yanomam language of Brazil (Borgman 1990), is SXOV, as in (127a), while the preferred order in West Greenlandic Eskimo (Fortescue 1984) is SOXV, as in (127b).

(127) a.   pata   töpö-no   sokopi   a-nö   wale   kökö   sepalöma
              old   3PL-ERG lance   3SG-INSTR peccary 3DU   killed
              S   X   O   V
              'the old people killed the peccary with lances'

      b.   imaallaat filmi   taanna Nuum-mi   taku-ara
              luckily   film   that   Nuuk-LOC see-1SG.3SG.INDIC
                                 O   X   V
              'luckily, I saw that film in Nuuk'

A similar three-way typology of flexible, OX, and XO, applies to VO languages, except here, languages of the type OX (and thus VOX) are overwhelmingly the most common, and no language with basic order VXO is known to us.

11. Languages with flexible word order

      In section 2, we discussed the problem of identifying a basic order for elements in languages in which more than one order is possible. It is sometimes mistakenly thought that word order typology is not relevant to languages with flexible word order. We have discussed one reason why this view is mistaken, namely that often, despite the flexibility, arguments can be given for treating one order as basic by one or more of the criteria. But there are additional reasons why word order typology is relevant to such languages. First, in many languages in which word order is flexible for some elements, it is less flexible for others. For example, in Tiwi, a language of northern Australia (Osborne 1974), the order of elements at the clause level is quite flexible, but within the noun phrase, the order of modifiers with respect to the noun is fairly rigid.

      Second, languages with highly flexible word order are themselves a linguistic type. There are many questions, largely still unanswered, about what generalizations can be made about such languages. It appears to be the case that word order flexibility is more common at the clause level than at the phrase level, that we can say that if a language has flexible word order at the phrase level, then it will have flexible order at the clause level. There is also some reason to believe that there is some correlation between polysynthesis and word order flexibility, but the exact nature of this correlation remains to be investigated. And it may be the case that languages with highly flexible word order tend more often to exhibit word order characteristics associated with OV languages rather than those associated with VO languages.

      Third, a largely unexplored area of word order typology is what subtypes may exist among languages with flexible word order. To what extent is word order in such languages determined by pragmatic principles? And what factors other than pragmatic principles determine word order in such languages? And in so far as word order is determined by pragmatic principles, to what extent do the pragmatic principles vary among such languages, to what extent can we identify a further typology of the ways in which pragmatic principles determine word order?

      Perhaps the most important observation to be made is that in describing a language with flexible word order, one should identify minimally just where the word order is flexible and where it is not, if possible what orders are more common, and ideally what factors govern the choice between alternative word orders. The latter task is usually very difficult, and there is considerable terminological confusion and vagueness in the literature discussing notions that may be relevant in different languages.

12. Typological versus language-particular description of word order

The various word order characteristics discussed in this chapter provide a basis for minimally characterizing word order in a language, but there is usually much more to be said about word order in a language beyond simply identifying a language with respect to these characteristics. For one thing, most languages allow both orders for some pairs of elements, and often the full description of the various factors relevant will be quite complex. The following examples from English illustrate just some of the complexity surrounding the position of adjectives and adjective phrases relative to the noun: *the interesting man, *the man interesting, the only interesting man, the only man interesting, *the afraid man, *the man afraid, the only man afraid, a man more interesting than the mayor, *a more interesting than the mayor man, a more interesting man than the mayor,* etc.

Second, there are many more fine-tuned questions that can be asked with respect to certain categories of words that are found widely among languages in the world that do not always fall cleanly into the categories we have discussed. At the level of noun modification, for example, one can ask about the position of interrogative modifiers with meanings such as 'which', 'what sort of', 'how many', and 'whose'. In most languages, such elements occur in the same place in the noun phrase as corresponding noninterrogative words, but there are exceptions. For example in Ocotepec Mixtec, most modifiers, including demonstratives and adjectives, follow the noun, as in (128a), but the interrogative modifier meaning 'which' or 'what' precedes the noun, as in (128b).

(128) a.   ñūu   lūlí   ñúkwán   b.   na   teē
            town   little   this   what   man
            N   A   Dem   Int   N
            'this little town'   'what man?'

And third, most languages have some words whose position is different from that of other words in the language and which simply require special description. For example, Mam (verb-initial) employs directional particles which precede the verb, like the particle *jaw* 'up' in (129); its behaviour is unlike that of adverbs, for example, which follow the verb in Mam.

(129)   ma   jaw   b'iit'j
         REC.PAST   up   explode
         'it exploded'

Ngalakan, a Gunwinyguan language of northern Australia (Merlan 1983), exhibits considerable freedom of word order, but one particle *ŋara* 'perhaps' normally occurs at the end of the sentence, as in (130).

(130)   ŋiñ-ganammup   ŋara
         2SG-deaf   perhaps
         'perhaps you are deaf'

And in Lezgian, although modifiers of nouns otherwise precede the noun, the word *kwaz* 'even' follows the noun when it is modifying a noun, as in (131).

(131)   či   Qabustanba-dikaj   sew-er-iz-ni   kwaz   kič'e-da
         1PL,GEN   Qabustanba-CASE   bear-PL-DAT-also   even   afraid-FUT
         'even bears are afraid of our Qabustan-ba!'

13. Examples of summaries of word order properties

In this section, we will briefly summarize the word order properties of two languages, illustrating how these languages conform or don't conform to the word order tendencies discussed in this chapter.

13.1 Siyin Chin

Consider first Siyin Chin, a Tibeto-Burman language spoken in Myanmar (Burma) (Naylor 1925). The basic order at the clause level is SOV, as in (132).

(132) tuazawkchīangina [Mētē   mīhing-te]   [Kawlpī hkua] a shim kik hī
      after.that   Manipuri person-PLUR Kawlpi   village 3 attack   INDIC
                           S   O   V
      'after that, the Manipuri people attacked Kawlpi village'

The word *a* '3' ('third person') immediately preceding the verb in (132) is a subject clitic pronoun inflecting for the person of the subject, like an agreement affix, but a separate word. It always immediately precedes the verb and is obligatory in all clauses, except in certain well-defined cases, like imperative clauses. In fact, it is not entirely clear that these pronominal morphemes are not prefixes rather than separate words; they are written as separate words by Naylor (1925), but the date and nature of the description make this questionable. Clauses in which the subject is represented entirely by this clitic pronoun have the appearance of being OSV, as in (133).

(133) suang   atam   ke dē   hī
       stone   many   1   want   INDIC
         O   "S"   V
       'I want many stones'

However, the subject clitic *ke* '1' ('first person') does not occur in subject position, but forms a tight constituent with the verb. When independent pronouns occur, they occur in subject position, before the object, and co-occur with a subject clitic immediately preceding the verb, as in (134).

(134) amā   ching hkat   a   hpūk yō   hī
       3SG   tree   one   3   fell   PAST INDIC
       S   O   V
       'he felled a tree'

Siyin exhibits a large number of characteristics expected of it as an OV language. It employs postpositions, as in (135). This example also illustrates how adpositional phrases precede the verb in Siyin.

(135) dimlō   a   ke tām   tu   hī
       Dimlo   LOC   1   halt   FUT   INDIC
        NP   Po
       'I shall halt at Dimlo'

The genitive precedes the possessed noun, as in (136).

(136) [hī   shīa   ching]   haw   a   vum   hī
     this   tree   bark   3   black   INDIC
       Gen   N
     'the bark of this tree is black'

The same is true for pronominal genitives (possessives), as in (137).

(137) kēma   laikūng   tūng   in
     1SG   pencil   pick.up   IMPER
     Poss   N
     'pick up my pencil'

Relative clauses also precede the noun, as in (138).

(138) [zām   ngā]   pā   ke   mū   hī
     gong   steal   man   1   see   INDIC
      Rel   N
     'I saw the man who stole the gong'

The order in the comparative construction is Standard-Marker-Adjective, as in (139).

(139) [hīashīa   in]   sāng   hīshīa   a   līen   zaw   hī
     that   house   than   this   3   large   more   INDIC
      St   M   Adj
     'this [house] is larger than that house'

Manner adverbs precede the verb, as in (140).

(140) ama   amunlangina   hong   pai   bale
     3SG   quickly   to.here   go   if.not
      Adv   V
     'if he does not come quickly, ...'

The example in (140) also illustrates how adverbial subordinators come at the end of the subordinate clause, as does the example in (141).

(141) ka   anasep   ke   man   hāngina,   ke   kī kom   hī
     1SG   work   1   finish   because   1   free   INDIC
      Clause   Subord
     'because I have finished my work, I am free'

This example also illustrates how adverbial clauses normally precede the main clause. In addition, nonverbal predicates precede the copula, as in (142), the first example with a nominal predicate, the second with a locative predicate.

(142) a.   ama   hkuābuīte   a   hī   hī
        3SG   villager   3   be   INDIC
         Pred   Copula
       'he is a villager'

      b.   amā   in   sunga   a   om   hī
        3SG   house   in   3   be   INDIC
         Pred   Copula
       'he is in the house'

Siyin employs a question particle which occurs at the end of the sentence, as in (143).

(143) sai   na   kāp   yō   zīam?
       elephant   2   shoot   PAST   Q
       'did you shoot an elephant?'

Because of the general lack of morphology in Siyin, it is difficult to say whether it is predominantly suffixing or not. There are a few suffixes, however. There is a plural suffix, illustrated above in (132), and there is a derivational suffix *-ina* used for forming adverbs: *damnoina* 'slowly (cf. *damno* 'slow'). On the other hand, there is at least one element that can be analysed as a prefix: causatives are formed by aspirating the initial consonant of the verb: *kīem* 'to decrease, to become less' vs. *hkīem* 'to cause to become less'. We can at least say that Siyin is not inconsistent with the correlation of OV with suffixes in that it is not predominantly prefixing.

One characteristic that is common among OV languages that Siyin lacks is case marking distinguishing the two arguments in transitive clauses (see example (132) above). As noted in 8.3., however, this correlation is a weak one.

Because of the lack of verbal morphology in Siyin, it is difficult to determine whether various words are verbs. If the past tense marker *yō* in (144) is a verb, then this conforms to the tendency for auxiliary verbs to follow the main verb in OV languages.

(144) kōma   ke   vawt   yō   hī
       1PL   1   work   PAST   INDIC
                     V   Aux
       'we worked'

The same is true of the negative word *ngawl* in (145):

(145) kema   ke   ngak   ngawl   tu   hī
       1SG   1   wait   not   FUT   INDIC
                     V   Neg
       'I will not wait'

A final characteristic of OV languages exhibited by Siyin is that interrogative phrases in content questions occur in situ rather than at the beginning of sentences, as illustrated in (146).

(146) ama   koi lai   a   teang   zīam
       3SG   where   3   live   Q
       'where does he live?'

In terms of word order characteristics which do not correlate with the order of verb and object, adjectives follow the noun as in (147).

(147) mīhing   hpā
       man   good
       'a good man'

Adjectival modifiers of nouns can also precede the noun, as in (148), however this structure is really a relative clause (as indicated by the pronominal subject clitic), in contrast to (147), where the adjective is directly modifying the noun.

(148)   a   hpā   mīhing
          3   good   man
          'a good man; a man who is good'

Numerals also follow the noun, as in (149).

(149)   mīhing   htum
          man   three
          'three men'

Demonstratives can precede or follow the noun, but more often precede, as in (150).

(150)   hīshīa   ching
          this   tree
          'this tree'

Finally, intensifiers follow adjectives, as in (151).

(151)   dū   mamā
          thirsty   very
          'very thirsty'

       There are various further details of word order in Siyin that can be described. For example, quantifiers meaning 'many' and 'all' are similar to numerals in following the noun, as in (149) above, and in (152).

(152)   mīhing   teampō
          man   all
          N   Quant
          'all the men'

Interrogative modifiers of nouns precede the noun, however, as in (153).

(153)   bangbang   nasep   na vawt zīam
          what.kind.of   work   2   do   Q
          'what kind of work are you doing?'

       There are also a variety of constructions involving two verbs that conform to patterns typical of OV languages, though we have not specifically discussed these above. For example, modal words for ability or obligation must follow the main verb, as in the two examples in (154).

(154)   a.   ama   vawt   htē   hī
                3SG   do   can   INDIC
                        V   Modal
              'he can do it'

          b.   ama   vawt   tu nī   hī
                3SG   do   must   INDIC
                        V   Modal
              'he must do it'

The word meaning 'want' follows the verb denoting what is wanted, as in (155).

(155) a   naupā   a   pai   nuap   hāngina,   …
     3   younger.brother   3   go   want   because   …
                                  V   Want
     'because his younger brother wanted to go, …'

And expressions of purpose precede the main verb, as in (156).

(156) [ngasā   shia   natu]   yingtung-tunga   ke   pai   nuam   hī
     fish   fish   PURP   early.in.morning   1   go   want   INDIC
          Purp   V
     'I want to go out early in the morning to fish'

13.2 Batad Ifugao

The second language whose word order we will give an overview of is Batad Ifugao, an Austronesian language spoken in the Philippines. Batad Ifugao is a verb-initial language, but before we can discuss the word order, it is necessary to discuss briefly some basic features of the grammar of this language. Batad Ifugao is like other Philippine languages (e.g. Tagalog, Cebuano) in having what is traditionally called a focus system, where one nominal in each clause has the privileged status of being the grammatical topic and the verb inflects for the semantic or grammatical relation of this nominal to the verb. Noun phrases occur with determiners which code a variety of grammatical properties and which interact with the focus system. The focus system in Batad Ifugao is in some respects more complex than that found in other Philippine languages, and because the primary concern here is to illustrate word order in this language, the glosses for most of the examples cited below do not include information about the focus form of the verb, and determiners are simply glossed 'DET'. The nature of the focus system in Batad Ifugao raises questions about what should be called 'subject' (cf. Schachter 1976, 1977 for discussion of the issues surrounding this question for Tagalog), and thus presents a question of how to classify the language according to the typology of SVO, VSO, etc. However, the verb normally precedes its arguments, regardless of the clause type, as in (157), so that even in the absence of identifying an element as subject, the language is clearly verb-initial.

(157) a.   ginumhob   hi   Manābung   hi   āyiw
         PAST.burn   DET   Manabung   DET   wood
         'Manabung burned some wood'

     b.   in-dat   Aligūyun   nan   dotag   ay   agī-na
         PAST-give   Aligūyun   DET   meat   DET   brother-3SG.POSS
         'Aligūyun gave the meat to his brother'

In fact, the actor nominal immediately follows the verb, regardless of whether it is topic, so that if we ignore the issue of topic, and assume that the actor is the subject, the language might be characterized as VSO.

As in most verb-initial languages, nonverbal predicates also occur at the beginning of the clause. This is illustrated for a nominal predicate in (158a) and for an adjectival predicate in (158b).

(158) a.   binabāi   nin   di   denngol-mu
         woman.PLUR   perhaps   DET   hear-2SG
         'perhaps those whom you heard were women'

b. adangyan   hi   Habbēleng
    rich   DET   Habbēleng
    'Habbeleng is rich'

Batad Ifugao conforms fairly closely to word order characteristics associated with verb-initial languages in particular and with VO languages in general. The genitive follows the noun, as in (159).

(159) di   payaw   Wīgan
    DET   pond.field   Wigan
           N   Gen
    'Wigan's pond field'

When the word preceding the genitive noun phrase ends in a consonant (as *payaw* 'pond field' does in (159)), there is no marker of the genitive relation. However, when the word preceding the genitive ends in a vowel, a linking morpheme -*n* is added to this word, as in (160).

(160) ulu-n   nan   ūlog
    head-LINK   DET   snake
    'the head of the snake'

Pronominal genitives (possessives) also follow the possessed noun, and are attached as enclitics, as in (161).

(161) han   imbaluy-'u
    DET   child-1SG.POSS
         N   Poss
    'my child'

Relative clauses also follow the noun, as in (162).

(162) nan   baluy   [an   iny-ammā-na]
    DET   house   LINK   PAST-make-3SG
        N   Rel
    'the house that he made'

Articles, in contrast, precede the noun, as illustrated by various instances of words glossed 'DET' in the examples, including the words *hi, nan, han, di,* and *ay.* As discussed above, we use the term 'article' in this chapter to denote words that commonly occur in noun phrases in a language and which code various grammatical or semantic features of the noun phrase, such as definiteness, but not necessarily coding a definite-indefinite distinction. The system of articles in Batad Ifugao is rather complex, and a number of the articles are used for a range of different functions, varying with the semantic case of the nominal, with whether it is grammatical topic or not, with whether the noun it goes with is a proper noun or a common noun, and in some cases with pragmatic features similar to definiteness. For example, the article *hi* can be used with a topic or with a nontopic object, but not with a nontopic actor. As a marker of topics, however, it only occurs with proper nouns, not with common nouns, while with nontopic objects, it only occurs with common nouns and in that use expresses something like indefiniteness. Example (157a) above illustrates both of these uses of *hi.*

The order in the comparative construction in Batad Ifugao is Adjective-Marker-Standard, as in (163).

(163) adukkoy han   āyiw   an   lengngoh   Gumman   ya un   nan   lengngoh   Lahhin
　　　 long   DET tree   LINK cut.down   Gumman   than   DET   cut.down   Lahhin
　　　 Adj   M   St
　　　 'the tree that Gunman cut down is longer than the one that Lahhin cut down'

Adverbial subordinators occur at the beginning of their clause, as in (164).

(164) ababāin   ahan   din   in-at   Immamata''on
　　　 shameful   very   DET   PAST-do   Immamata''on
　　　　　　　　　　　　　 ti   in-ihdā-na-y   imbaluy-na
　　　　　　　　　　　　　 because   PAST-eat-3SG-DET   child-3SG.POSS
　　　　　　　　　　　　　 Subord   Clause
　　　 'what Immamata''on did was very shameful because he ate his son'

The example in (164) also illustrates an adverbial subordinate clause following the main clause. Both orders of main and subordinate clause are in fact common in Batad Ifugao, depending in part on the type of clause; (165) illustrates an adverbial clause preceding the main clause.

(165) wa an tuma'dog hi   Pīlay   ya   in-lumdit   Pū'it di   hu'ī-na
　　　 when   stand.up DET   Pīlay   and.then PAST-tramp   Pū'it DET   foot-3SG.POSS
　　　 'when Pilay stood up, Pu'it tramped on his foot'

Batad Ifugao employs a particle for marking polar questions. While the short form of the particle can occur in various positions in a sentence, the long form *undan* occurs at the beginning of the sentence, as in (166), conforming to the typical pattern for verb-initial languages.

(166) undan   lumagalāga   hi   Bukkāhan   hi   ulbung
　　　 Q   weave.HABITUAL   DET   Bukkahan   DET   rice.basket
　　　 'does Bukkahan always weave rice baskets?'

Interrogative expressions in content questions in Batad Ifugao occur at the beginning of the sentence, as in (167).

(167) angnganggoh   di   pohdo-m   hi   ono-m
　　　 what   DET   want-2SG   DET   eat-2SG
　　　 'what do you want to eat?'
　　　 (literally 'what is that which you want to eat?')

Batad Ifugao does not have many adpositions, since the role played by adpositions in other languages is carried partly by the verb morphology that is involved in the focus system and partly by the form of determiners, and the adpositions that do exist do not appear to play a major role in the language, but what adpositions exist are prepositions rather than postpositions, as in (168), the one in (168a) meaning 'before', the one in (168b) meaning 'like'.

(168) a. mahhūna'   an   um-uy   ya un   he''a
　　　　　 be.first   LINK   go   before 2SG
　　　　　　　　　　　　　　　　　　 Pr   NP
　　　　　 'I will go before you'

　　　　 b. ay   ugāli-n   di   i-Batad   di   aton   nan   iy-Umbūlu
　　　　　　 like custom-LINK   DET   from-Batad DET   do   DET   from-Umbulu
　　　　　　 Pr   NP
　　　　　　 'what the people of Cambulo do is like the custom of the people of Batad'

Prepositional phrases normally follow the verb in Batad Ifugao, as in (168a). The prepositional phrase in (168b) occurs at the beginning of the clause because it is itself the predicate and is not modifying a verb. Its initial position reflects the position of predicates in general in Batad Ifugao, whether they are verbal or nonverbal.

In the preceding section on Siyin Chin, we noted that modal words for ability follow the main verb. In Batad Ifugao, we find the opposite order: the verb meaning 'be able' precedes the verb it goes with, as in (169).

(169)　mabalin-a'　　an　　　dalānon　　nan　adagwi-n　　kulha
　　　　able-1SG　　　LINK　walk　　　　DET　far-LINK　　road
　　　　Verb$_1$-Su　　Link　Verb$_2$
　　　　'I am able to walk far on a road'

The construction in (169), what we can call a 'verb chain construction', is one that is used for a wide range of meanings in Batad Ifugao: it consists of a pair of verbs, connected by the linking word *an*. Typically the subject will immediately follow the first verb. It is not clear that there is any sense in which one of the two verbs is grammatically the 'main verb', though semantically, the first verb is often one that one might loosely call an 'auxiliary verb', while the second verb is more like a main verb. Only a minority of verbs in the language can occur as the first verb in this construction, while apparently any verb can occur as the second verb. A few other examples are given in (170), where the first verbs mean 'want', 'begin', and 'delay until night'. (The example in (170a) is embedded with a nominal expression, and there is no overt subject.)

(170)　a.　di　　　[mamhod　　an　　　manāyaw]
　　　　　　DET　　want　　　　LINK　dance
　　　　　　　　　　Verb$_1$　　　Link　Verb$_2$
　　　　　　'the ones who want to dance are many'

　　　　b.　ente''an　　da　　Umāngob　　an　　　mumbā'i
　　　　　　begin　　　DET　Umangob　　LINK　recite.ritual.prayer
　　　　　　Verb$_1$　　　　　Su　　　　　Link　Verb$_2$
　　　　　　'Umāngob and others began reciting ritual prayers'

　　　　c.　iny-ahdom　　　　Tumāpang　an　　　iyanāmut　　din　　lāman ...
　　　　　　delay.until.night　Tumapang　LINK　bring.home　that　wild.pig
　　　　　　　Verb$_1$　　　　　　Su　　　　　Link　Verb$_2$
　　　　　　'Tumapang delayed until night bringing home that wild pig ...'

Batad Ifugao is typical among verb-initial languages in placing the expression of words meaning 'want' and 'begin' before the verb expressing what is wanted or what has begun.

This verb chain construction is also used to express a number of meanings that are often expressed in other languages by adverbs. For example, in (171), the first verb in the verb chain means 'to be first' and when combined with a verb, the resultant verb chain has the meaning 'to be the first to "verb"'.

(171)　mahhūn-a'　　　an　　　umuy　　ya un　　he''a
　　　　be.first-1SG　　LINK　go　　　before　　2SG
　　　　　Verb$_1$-Su　　Link　Verb$_2$
　　　　'I will go first before you'

Batad Ifugao uses this construction to express meanings that other languages express with manner adverbs, where the first verb is a verb expressing manner and the second verb is a verb expressing the action that is done in the manner expressed by the first verb, as in (172).

(172) a.
umulla'ullay	han	nundogoh	an	dumālan
do.slow.HABITUAL	DET	be.in.pain	LINK	walk
Verb$_1$		Su	Link	Verb$_2$

'the one who is in pain always walks slowly'

b.
imay'an-yu-n		uminum	hinan	bayah
do.moderately-2PL-LINK		drink	DET	homemade.beer
Verb$_1$	-Su-Link	Verb$_2$		

'drink rice beer moderately'

From a purely semantic point of view, we might say that Batad Ifugao places the manner adverb before the verb, contrary to the normal pattern for verb-initial languages. But this characterization would be misleading, since it is not at all clear that the verb expressing manner is *modifying* the other verb, rather than the two verbs simply forming a chain in which neither verb is modifying the other. The situation here is similar to the one discussed above for Jacaltec and illustrated in (47), where the manner expression is the main verb and the other verb is subordinate to it. While there is no evidence in Batad Ifugao that the other verb is subordinate to the verb expressing manner, there is no evidence that the verb expressing manner is in any sense modifying the other verb, and hence we can say that Batad Ifugao simply does not have manner adverbs that modify verbs, and hence the construction in (172) is not relevant to universals regarding the order of manner adverb and verb.

A version of the verb chain construction is used for expressions of purpose, as in (173).

(173)
immuy	hi	Bumallātung	hi ad	Bannāwol	an	mungngīna-h	bābuy
go	DET	Bumāllatung	DET	Bannāwol	LINK	buy-DET	pig
V						Purp	

'Bumallātung went to Bannāwol to buy a pig'

This construction differs from the verb chain construction in that the second verb follows a locative expression; in the verb chain construction, only the subject can occur between the two verbs. This example does illustrate the fact that purpose expressions normally follow the main verb in Batad Ifugao.

Let us turn now to the order of various elements whose order does not correlate with the order of verb and object and which we therefore have no expectations of what to find in Batad Ifugao on the basis of its being verb-initial. We saw earlier that genitives and relative clauses follow the noun in Batad Ifugao while articles precede. It turns out that various other modifiers of nouns, including demonstratives, numerals, and adjectives, precede the noun, as illustrated in (174).

(174) a.
din	apuy
that	fire
Dem	N

'that fire'

b.
nan	tulu-n	balāhang
DET	three-LINK	young.girl
	Num	N

'the three young ladies'

c.
hinan	ongol	an	batu
DET	large	LINK	stone
	Adj		N

'a large stone'

Note that in both (174b) and (174c), with a numeral and with an adjective modifying a noun, there is a linking morpheme, either the enclitic -*n* attached to the numeral in (174b) or the separate linking word *an* between the adjective and the noun in (174c). We have seen this same linking morpheme in various other constructions in this language, in the genitive construction in (160), introducing the relative clause construction in (162), preceding the second verb in the verb chain construction in (169) to (172) and preceding a purpose expression in (173).

While single adjectives modifying a noun precede the noun, as in (174c), adjective phrases containing an additional word modifying the noun normally follow the noun. Contrast (175a), with a single adjective modifying the noun and preceding the noun, with (175b), where the adjective is modified by a verbal expression *panninga'* 'with reference to the way I see it' and the adjective plus modifier now follow the noun instead of preceding it.

(175) a. nan nappuhi-n tibung
          DET bad-LINK wine.jar
                  Adj   N
          'the bad wine jar'

     b. nan tibung an [nappūhih pan-nig-a']
          DET wine.jar LINK bad MANNER-see-1SG
             N   Adj+Modifier
          'the wine jar which is bad with reference to the way I see it'

The normal means of intensifying adjectives is morphological, but there is an intensifier word *ahan* 'very', which follows the adjective, as in (176).

(176) ababāin ahan
      shameful very
      'very shameful'

Negation is expressed in Batad Ifugao by a word that occurs at the beginning of the sentence, preceding the verb. It is not clear whether the negative word is itself a verb. It does behave verbally to the extent that there are two negative words used in verbal clauses, with a difference in tense, as illustrated in (177), with the past tense negative in (177a) and the nonpast negative in (177b).

(177) a. agguy nolo' han imbaluy-'u
          NEG.PAST sleep DET child-1SG.POSS
          'my child didn't sleep'

     b. adī-da um-uy
          NEG.NONPAST-3PL go
          'they will not go'

While verbs also distinguish past and nonpast forms (not indicated in the glosses in this chapter), the relationship between the two negative words is suppletive and these words exhibit no other morphological properties of verbs, so it is not clear whether they ought to be considered verbs. They do serve as host to subject enclitic pronouns, like -*da* 'third plural' in (177b), a property that is also one shared by verbs, although this property is also shared by a repetitive aspect particle *gun,* as in (178).

(178) gun-na   inhanglag   din   gadiw
      repeatedly-3SG   roast   that fish(sp.)
       T/A   V
      'he repeatedly roasted those small river fish'

Since this aspect particle does not otherwise exhibit any verbal properties, it is likely that the ability to host subject enclitics is a function of the fact that the negative words and this aspect particle can occur in initial position in the clause and that the ability to host these clitics reflects nothing more than this. Note that if we consider the negative words to be verbal, i.e. negative auxiliaries, then their position before the main verb is what we would expect of a negative auxiliary in a verb-initial language. However, negative particles also tend to precede verbs, as described above in section 7.4, regardless of the order of verb and object, and this tendency seems to be particularly strong in verb-initial languages, so the position of negative words in Batad Ifugao is unsurprising, regardless of whether the negative is verbal or not.

The word *gun* 'repeatedly', illustrated above in (178), is a candidate for status as a nonverbal tense-aspect particle, and it precedes the verb. Most indications of tense and aspect in Batad Ifugao are done in the verb morphology. Another apparent nonverbal tense-aspect particle that precedes the verb is one that is used, along with reduplication of the first syllable of the verb, to indicate that several events are happening concurrently, as in (179).

(179) 'ahi   ga-gallaw   nan   linalā'i-n   mangngal hi   dotag
      CONCUR   CONCUR-crowd   DET   man.PLUR-LINK   get   DET meat
      'the men all crowd together in getting meat'

It is noted above in 8.2 that prefixing is more common in VO languages than it is in OV languages. Batad Ifugao conforms to this in that it has a moderate amount of prefixing, and it is VO. It also employs a fair amount of suffixing and infixing. The use of infixing is more common in VO languages than it is in OV languages, so again this fits the fact that Batad Ifugao is verb-initial. Because the glossing in the examples above generally did not give the details of verb morphology, we need to examine a few examples illustrating the different types of affixes. The focus affixes indicating the semantic category of the grammatical topic is often a prefix, as illustrated by the actor focus prefix in (180a); it is sometimes a suffix, as illustrated by the locative focus suffix in (180b); and it is sometimes an infix, as illustrated by the actor infix -um- in (180c) (the verb stem is *hagīlip* 'spin horizontally'; the initial *h-* is part of the stem).

(180) a.   umuy   mang-anup   nan   linalā'i
          go   ACTOR-hunt   DET   man.PLUR
          'the men will go to hunt'

       b.   pagūy-an   nan   tatagud   Nāyun nan   ūma-da
          plant-LOC DET   person.PLUR   Nayun DET   upland.field-3PL.POSS
          'the people of Nayon plant their upland fields with rice'

       c.   h-um-agīlip   nan   batu
          -ACTOR-spin.horizontally   DET   stone
          'the stone will spin horizontally through the air'

The example in (181) illustrates two infixes, a past tense infix *-in-* and an actor focus infix *-um-*. (The verb stem for 'rain heavily' without infixes is *doloh*)

(181)   d<in>um-loh   ad   a''u
        <PAST>ACTOR-rain.heavily   DET.LOC   last.night
        'it rained heavily last night'

All three types of affixing are common in the language. This is a normal pattern for a verb-initial language.

14. Summary

We have discussed a variety of different pairs of elements in this chapter, some of which exhibit correlations with the order of object and verb and some of which do not. The following chart summarizes these generalizations, ignoring the fact that some are unidirectional and ignoring the fact that for some characteristics, SVO languages exhibit a pattern intermediate between OV and verb-initial:

OV	VO
postpositions	prepositions
genitive - noun	noun - genitive
manner adverb-verb	verb - manner adverb
standard - marker	marker - standard
standard - adjective	adjective - standard
final adverbial subordinator	initial adverbial subordinator
adpositional phrase - verb	verb -adpositional phrase
main verb - auxiliary verb	auxiliary verb - main verb
predicate - copula	copula - predicate
final question particle	initial question particle
final complementizer	initial complementizer
noun - article	article - noun
subordinate clause - main clause	main clause - subordinate clause
relative clause - noun	noun - relative clause
noun - plural word	plural word - noun

The following list of pairs of elements are those whose order does not correlate with that of object and verb:

adjective, noun
demonstrative, noun
numeral, noun
negative particle, verb
tense-aspect particle, verb
intensifier, adjective

Further Reading

The classic work in word order typology is Greenberg (1963) (sometimes cited as Greenberg (1966), its apparently unrevised second edition). This work not only documents many of the patterns that correlate with the order of object and verb, but is often viewed as defining the beginning of the study of linguistic typology in general. Hawkins (1983) provides a detailed discussion of various aspects of word order typology. Evidence supporting many of the claims made in this chapter is given in Dryer (1992). In this chapter, we have avoided discussion of the question *why* the order of various pairs of elements

correlates with that of object and verb, but there is an extensive literature on this topic, including Aristar (1991), Dryer (1992), Frazier (1979), Givon (1975, 1984), Hawkins (1983, 1984, 1990, 1994), Keenan (1979), Kuno (1974), Lehmann (1973, 1978), Vennemann (1973, 1974a, 1974b, 1976), and Vennemann and Harlow (1977). A wide variety of different explanations have been proposed, some in terms of syntax, some in terms of semantics, some in terms of sentence processing, some in terms of grammaticization, and even some in terms of phonology. In addition to the sources mentioned above, there are many references in the generative literature to a distinction between head-initial and head-final languages, which assumes an explanation for all or part of the correlations. See Dryer (1992) for problems with this view. It should also be noted that some of the literature discussing correlations or proposing explanations for the correlations assumes some correlations that can be shown not to be correct (see Dryer 1992), often assuming incorrectly, for example, that the order of adjective and noun correlates with the order of object and verb.

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