95   Relationship between the Order of Object and Verb and the Order of Adposition and Noun Phrase

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1 Defining the values

One of the central activities in linguistic typology is the investigation of relationships between different typological features. Maps 95, 96, and 97 illustrate three sorts of relationship between typological features. If one takes two typological features with two values each, they intersect to define four possible language types. This map, Map 95, illustrates a case where two of these types are very common and two are relatively uncommon. Map 96 illustrates a case where three of these types are very common and one is relatively uncommon. And Map 97 illustrates a case where there is no interaction between the two features, where all four types are very common. Each of these three maps shows the relationship between two features that are shown separately on other maps in this atlas.

This map shows the relationship between two of the values shown in Map 83, OV (object–verb order) and VO (verb–object order), and two of the values shown on Map 85, postpositions versus prepositions. The intersection of these defines the first four types shown in the box. Two of these four types, the first and fourth, are very common, while the other two types, the second and third, are relatively uncommon.

●	1. Object–verb and postpositional (OV&Postp)	427
◐	2. Object–verb and prepositional (OV&Prep)	10
●	3. Verb–object and postpositional (VO&Postp)	38
◐	4. Verb–object and prepositional (VO&Prep)	417
○	5. Languages not falling into one of the preceding four types	141
	total	1033

The example in (1) from Nivkh (isolate; Sakhalin Island, Russia) illustrates the first type, with **OV order and postpositions**; (1a) illustrates the OV order while (1b) illustrates a postposition *rulku* 'across'.

(1) Nivkh (Gruzdeva 1998: 18, 38)

  a. *n'iɣvŋ liɣř k'u-nt*
      man   wolf kill-FIN
      'The man killed a wolf.'

  b. *n'yŋ pila eri rulku vi-d'*
      1PL   big   river across go-FIN
      'We went across a big river.'

This type is very common, representing the typical situation found in OV languages. The examples in (2a) from Persian and in (2b) from Tigre (Semitic; Eritrea) illustrate the second type, **OV order with prepositions**.

(2) a. Persian (Mahootian 1997: 139)
     pul-o   be ma dad
     money-OBJ to 1PL gave
     'He gave the money to us.'

    b. Tigre (Raz 1983: 108)
     ʔana ʔət lehay māy ʔət-ta maḥāz gale
     1SG in   that   water in-the river   something
     ʔərʔə halle-ko
     see   be-1SG
     'I see something in the water in the river.'

This type is relatively uncommon; it is atypical for an OV language to have prepositions. The third type, **VO with postpositions**, is also uncommon; it is atypical for VO languages to have postpositions. The examples in (3) from Koyra Chiini (Songhay; Mali) illustrate this type, (3a) illustrating the VO order and (3b) a postposition.

(3) Koyra Chiini (Heath 1999b: 103, 124)

  a. *har   di   o   guna woy   di*
      man DEF IMPF see   woman DEF
      'The man sees the woman.'

  b. *ay too huu di   ra*
      1SG arrive house DEF LOC
      'I arrived in the house.'

This type is also illustrated in (4), from Arawak (Arawakan; Suriname), (4a) illustrating the VO order, (4b) a postposition.

(4) Arawak (Pet 1987: 47, 83)

  a. *li   fary-fa aba kabadaro*
      he   kill-FUT one jaguar
      'He will kill a jaguar.'

  b. *da-dykha no hyala diako*
      1SG-see   it   bench on
      'I saw it on a bench.'

The example in (5), from Chalcatongo Mixtec (Oto-Manguean; Mexico), illustrates the fourth type, VO order and prepositions.

(5) Chalcatongo Mixtec (Macaulay 1996: 117)
    ni-sáʔa=rí   ĩĩ   šiò   xakúu   sesíʔí=ri
    COMP-make=1.SUBJ one skirt for   daughter=1.POSS
    'I made a skirt for my daughter.'

This type is relatively common, the typical situation in VO languages. English is another example of a language of this type.

The fifth type shown on the map is for languages not falling into one of the first four types. Most of these are languages lacking a dominant order of object and verb or a dominant order of adposition and noun phrase. It also includes languages with inpositions and languages lacking adpositions altogether.

2 Geographical distribution

The distribution of the two common types on the map, OV with postpositions and VO with prepositions, is similar to the distribution of OV and VO order on Map 83 and the distribution of postpositions and prepositions on Map 85. OV order with postpositions is especially common in (i) Asia, except in the Middle East and South-East Asia; (ii) New Guinea; and (iii) North America, except in the Pacific North-West and in Mesoamerica. It is also found as the more frequent type in (i) Australia; (ii) South America; and (iii) two areas in Africa, one around Ethiopia, Sudan, and eastern Chad, the other in West Africa around Mali, Burkina Faso, western Côte d'Ivoire, and Liberia. VO order with prepositions is especially common in (i) Europe; (ii) sub-Saharan Africa, except in the two areas noted above; (iii) an area stretching from South-East Asia eastward into the Pacific; (iv) the Pacific North-West; and (v) Mesoamerica.

Apart from sporadic instances, VO order with postpositions is found in (i) an area in West Africa including Benin, Togo, Ghana, and eastern Côte d'Ivoire; (ii) an area in northern Europe centred in Finland; and (iii) scattered languages throughout South America. In fact, among the VO languages of South America, postpositions are as common as prepositions. OV languages with prepositions, the least frequent type, are only found sporadically. The only area

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where the map shows repeated instances in the same area is among Iranian languages in Iraq, Iran, and Tajikistan.

Many instances of languages of the two less common types can be seen as being located near or between languages of both of the two more common types. For example, the VO and postpositional languages in West Africa have OV and postpositional languages to the west and north-west, and VO and prepositional languages to the east. The OV and prepositional languages in and around Iran have OV and postpositional languages to the north and east, and VO and prepositional languages to the south and west. In other instances, this is not the case: for example, there are a couple of VO postpositional languages in northeastern Peru with no VO prepositional languages nearby.

3 Theoretical issues

The fact that only two of the four types shown on the map are common shows that these two typological features correlate. The distribution can be described by a **bidirectional implicational universal**: a language tends to be OV if and only if it is postpositional. In other words, if a language is OV then it is usually postpositional, and if a language is postpositional then it is usually OV. This bidirectional nature contrasts with the pattern illustrated on Map 96, where the implication is not bidirectional.

The correlation between the order of object and verb and the order of adposition and noun phrase is only one of many correlations between the order of object and verb and the order of other pairs of elements, and there is considerable literature discussing these correlations and attempting to explain them (including Greenberg 1963, Hawkins 1983, 1994, Dryer 1992). Among the various hypotheses that have been put forward are (i) the idea that using prepositions in VO languages and postpositions in OV languages involves consistent ordering of grammatical heads with respect to their dependents or complements; (ii) the idea that the word-order correlations reflect a tendency to use consistently left-branching structures or consistently right-branching structures, ultimately motivated by considerations of ease of processing; and (iii) the idea that the correlations reflect the results of grammaticalization: adpositions arise from verbs, retaining their order with respect to the noun phrase, or from head nouns in genitive constructions. Significantly, of the twenty-three VO languages with postpositions for which I have data on the genitive construction, twenty employ genitive–noun order, and two allow both orders of genitive and noun with neither order dominant; only one VO postpositional language has noun–genitive order. For example, Koyra Chiini, cited in (3) above illustrating a VO language with postpositions, has genitive–noun order, as in (6).

(6) Koyra Chiini (Heath 1999b: 85)
    [ay   baaba   wane]   huu   di
    [1SG   father   POSS]   house   DEF
    'my father's house'

This fits the prediction of grammaticalization theory that an adposition grammaticalizing from a head noun in a genitive construction in a VO language with genitive–noun order will become a postposition, although it equally well could simply be that VO postpositional languages are former OV postpositional languages. The reverse situation obtains with OV languages that have prepositions: of the nine languages of this type for which I have data on their genitive construction, seven employ noun–genitive order, and two have both orders with neither dominant; none of them have genitive–noun order as the dominant order, even though OV languages

generally place the genitive before the noun. For example, Tigre, illustrated in (2b) as an example of an OV language with prepositions, places the genitive after the noun, as in (7).

(7) Tigre (Raz 1983: 108)
    walat   farʕon
    daughter   Pharaoh
    'the daughter of the Pharaoh'

There are a number of other observations that can be made about the two less common types shown on this map. First, although both are uncommon, one of them, VO with postpositions, is somewhat more common than the other (though the difference may not be significant): the map shows thirty-nine instances of VO languages with postpositions, but only eleven instances of OV languages with prepositions. Second, when one examines the languages of the uncommon types in greater detail, one finds that they are often not typical OV or VO languages. This observation is illustrated by the number of languages mentioned above where the order of genitive and noun is unexpected given the order of object and verb in the language. Similarly, among the ten OV languages with prepositions, two are OVS, a quite unusual word order (see Map 81). Also, six of them place adpositional phrases after the verb either with as great a frequency as in preverbal position or at least as a possible option; OV languages typically place adpositional phrases before the verb (see Chapter 84 and Dryer 1992: 92). For example, Iraqw (Cushitic; Tanzania) employs OV order, as in (8a), but prepositional phrases follow the verb as often as they precede it, as in (8b).

(8) Iraqw (Mous 1993: 238, 226)
    a. *ta   tiʔitá-r   axwees*
        IMPERS.SUBJ   story-F   tell.3SG.M
        'They tell a story.'

    b. *baabá   aa   búuhh   as   aníng*
        father   3.SUBJ.PERF   be.angry.3SG   because.of   1SG
        'Father is angry because of me.'

A number of the VO languages with postpositions are also atypical in that they have prepositions, too, although the postpositions are deemed the dominant type in the language. For example, Koyra Chiini, illustrated above in (3) as a VO language with postpositions, actually has a few prepositions in addition to its more numerous postpositions. The example in (9) illustrates the preposition *hal* 'until'.

(9) Koyra Chiini (Heath 1999b: 108)
    yer   o   nan   ga   hal   alaasar
    1PL   IMPF   leave   3SG.OBJ   until   afternoon
    'We will leave it until the afternoon (prayer).'

In a number of cases, there is evidence that languages of one of the uncommon types have undergone a recent historical change in the order of object and verb and that the adposition type reflects the earlier word order. For example, Tigre, illustrated as an OV prepositional language in (2b) above, is one of a number of South Semitic languages in Ethiopia whose original order was clearly VO, based on comparative evidence, but which have undergone considerable structural change due to contact with Cushitic languages, which are OV. South Semitic languages vary as to which of their earlier word-order characteristics they have retained and which they have lost; in the case of Tigre, it has retained prepositions, but has undergone a change from VO to OV. It appears to be the case that if a language changes the order of one of these two features, it will almost always be the order of object and verb that changes first.