Matthew S. Dryer

Aspects of word order in the languages of Europe*

1. Introduction

The purpose of this paper is to discuss certain aspects of the word order found among the language of Europe, with a focus on the following related questions. What is the geographical distribution of these word order characteristics across Europe? To what extent do the languages of Europe exhibit word order proper-ties that are typical or atypical among the languages of the world? To what extent do generalizations about word order based on the languages of Europe reflect properties of languages in general? To what extent do general crosslingu-istic patterns of word order shed light on the word order typology of the languages of Europe? I will address these questions primarily as they apply to the order of subject, object, and verb at the clause level and to the position of a restricted set of modifiers with respect to the noun, but also with some discussion of the order of negative and verb. These questions are also addressed by a number of other papers in this volume, including Rijkhoff (this volume) and Siewierska (this volume).

An initial observation that must be made about the word order typology of the languages of Europe is that the boundary separating Europe from Asia is a rather artificial boundary from the perspective of linguistic geography and the geographical patterns found within Europe must be viewed from the larger perspective of geographical patterns within Eurasia as a whole. In particular, the easternmost part of Europe must be understood as the westernmost edge of a very large area covering much of central Eurasia in which most of the languages are not only OV languages, but further exhibit similarities to each other that go beyond what is shared crosslinguistically among OV languages. Among languages of Europe, this includes some Turkic languages, the eastern Uralic languages, the language groups indigenous to the Caucasus, as well as a few eastern Indo-European languages spoken in the Caucasus region, such as Armenian and Ossetic. The word order in these languages resembles, in many respects, the word order in other Indo-European, Uralic, and Altaic languages spoken in areas of Asia adjacent to Europe and to the eastward, as well as

other groups spoken outside of Europe, such as Dravidian languages in south Asia. Conversely, as one moves westward across Europe, languages increasingly deviate from the OV type found to the east, both in terms of clause order and in terms of other word order characteristics. At the level of the clause, not only does one find VO order as the most common dominant order in the area of Europe west of Russia, but a number of languages, such as German and Hungarian, are languages whose classification as OV or VO is problematic, but are nevertheless languages in which VO order is common. In addition the word order at other levels, particularly in the order of noun with respect to modifiers deviates from the general property found among the OV languages to the east in which the modifiers consistently precede the noun.

If one restricts attention to languages in Europe, one might get the impression that the occurrences of modifiers following the noun among VO languages is simply a reflection of VO characteristics, and that instances in which modifiers precede the noun in these VO languages are simply a retention of older OV characteristics. However, evidence from languages in other parts of the world shows that this picture is rather inaccurate. As will be illustrated in greater detail below, while the word order among VO languages towards the western part of Europe can be viewed as deviating from the patterns found in OV languages towards the east, this does NOT mean that the characteristics found in these VO languages reflect general VO characteristics. Rather, it simply indicates either that the languages to the west once resembled languages to the east but have lost various of the characteristics they once had, including OV order, or that they are sufficiently removed geographically from these languages to the east that they are free of the areal influences that cause the languages to the east to resemble each other in many respects.

2. Word order at the clause level

The data in this paper is based on a crosslinguistic sample of languages currently consisting of over 700 languages. The nature of this sample, discussion of the method of counting genera, and some general results of this project are discussed in Dryer (1988, 1989, 1991, 1992). The set of languages in the database is largely a convenience sample, the choice of languages based on availability of descriptive grammars and on an attempt to maximize genetic diversity. In the case of Europe, the database includes most languages for which adequate descriptive material in available in English. See Rijkhoff, Siewierska & Bakker (appendix to this volume) for more detailed data on the word order
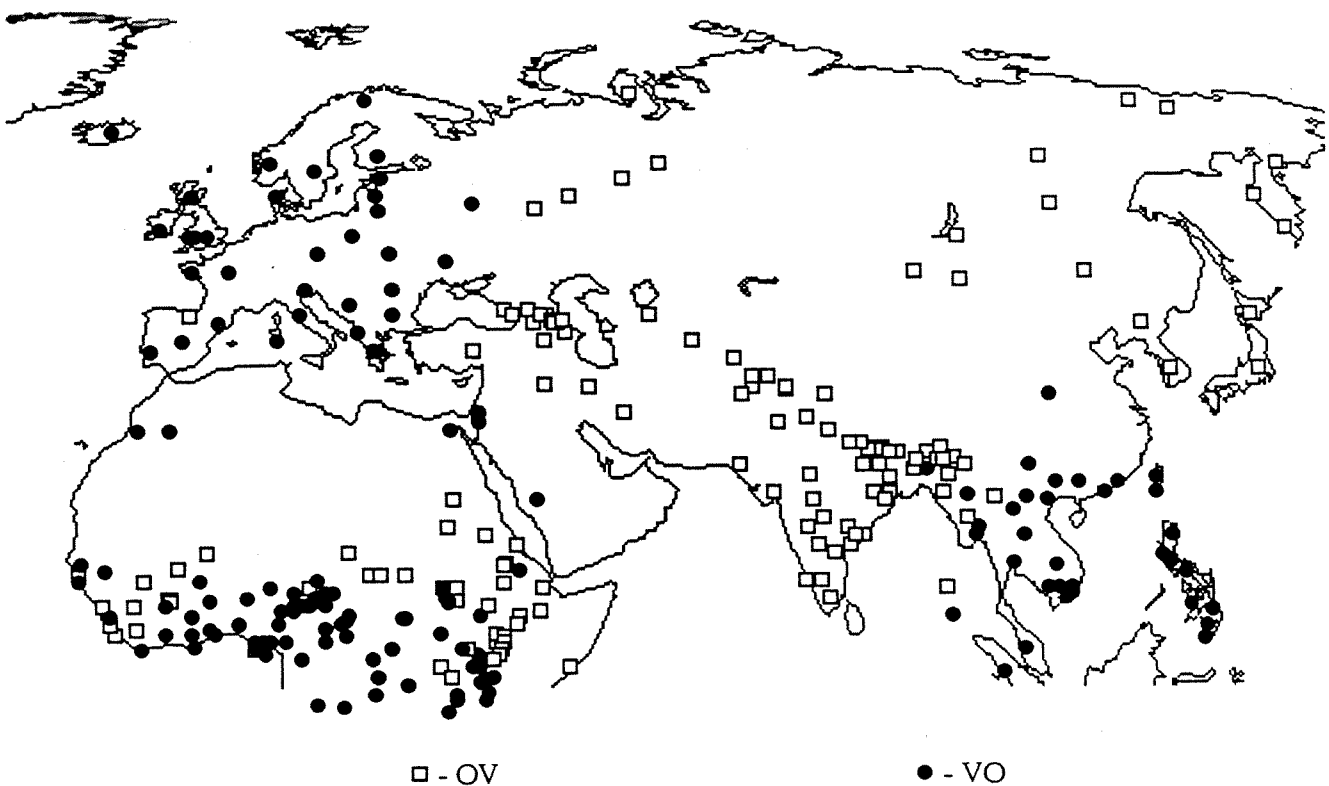
□ - OV   ● - VO

Figure 1. Distribution of OV and VO orders in Europe and adjacent areas

characteristics of the languages of Europe, both in terms of the number of languages covered and in terms of the information provided for each language.

The map in Fig. 1 illustrates the distribution of the order of object and verb among languages in Europe and a large area in Asia to the east and southeast and in Africa to the south, the white squares representing languages in which OV is the dominant order, the black circles representing languages in which VO is the dominant order.[1]

On the whole, the distribution of OV versus VO order within Eurasia can be seen as falling into three large areas. Over all but the easternmost part of Europe, the dominant order is VO. In an area extending from the extreme eastern side of Europe (in the Caucasus and to the north) across northern Asia and south across the Indian subcontinent, the dominant order is OV. In China and southeast Asia (and extending into the Philippines, Indonesia, and the Pacific) is a third area in which the dominant order is VO. The map in Fig. 1 includes one exception in Europe to this pattern, that of Basque, shown by the symbol for OV languages on the map in northern Spain. Adding the position of subjects does little to change this overall picture: the VO languages of Europe (and mainland Asia) are overwhelmingly SVO, the VSO order found among many Celtic languages being an exception.

Tables 1 and 2 list the languages of Europe in my database which I specifically code as OV or VO respectively. Here and elsewhere in the paper, languages are classified according to the dominant order for the elements in question. In these tables, and in numeric data cited below, I organize my data in terms of genetic groups I call genera (roughly comparable to the subfamilies of Indo-European) that contain languages of a type under discussion. In these

Table 1. OV languages of Europe by genus

BASQUE (Basque)
ARMENIAN (Modern Armenian)
IRANIAN (Ossetic)
SAMOYEDIC (Nenets)
UGRIC (Khanty, Vogul)
FINNIC (Udmurt)
TURKIC (Chuvash, Azerbaijani, Turkish)
KARTVELLIAN (Georgian)
NORTHWEST CAUCASIAN (Ubykh, Abkhaz, Kabardian)
NAX (Chechen, Ingush)
AVARO-ANDI-DIDO (Avar)
LAK-DARGWA (Lak, Dargva)
LEZGIC (Archi, Lezgian).

tables, the name of the genus occurs in capital letters, with the languages in my database from that genus following in parentheses.

Table 2. VO languages of Europe by genus

INDIC (Welsh Romany)
ALBANIAN (Albanian)
GREEK (Greek)
ROMANCE (Sardinian, Rumanian, Italian, Rhaeto-Romance, French, Catalan, Spanish, Portuguese)
CELTIC (Irish, Scots Gaelic, Breton, Welsh)
GERMANIC (Danish, Swedish, Norwegian, Icelandic, English)
BALTIC (Latvian, Lithuanian)
SLAVIC (Russian, Ukrainian, Polish, Czech, Bulgarian, Serbo-Croatian)
FINNIC (Northern Saami, Finnish, Estonian).

Table 3 lists languages which I code as indeterminately OV/VO; while arguments might be given for treating one or more of these languages as falling specifically into OV or VO, I prefer to leave them unclassified.[2]

Table 3. OV/VO languages of Europe

GERMANIC (Dutch, German, Frisian)
UGRIC (Hungarian).

3. Order of noun and modifier in VO languages in Europe

Many of the languages of Europe, particularly those with VO order, show complexity in the order of modifier and noun in that some modifiers typically precede the noun, while others follow. Table 4 lists some of the basic characteristics of English word order in the noun phrase.

Table 4. Order of modifier and noun in English

AdjN	old men
DemN	this book
NumN	three cars
ArtN	the house
GenN/NGen	John's picture/picture of John
NRel	books that John likes

Table 4 shows that while a number of modifiers precede the noun in English, relative clauses follow the noun, and there are two common constructions for genitive and noun, one in which the genitive precedes the noun, the other in which it follows.

Welsh resembles English in having some modifiers before the noun, others after, but there are a greater number of modifiers following the noun than there are in English. Some of these are illustrated in (1).

(1) Welsh (Tallerman 1991: 311–312; James 1966: 33, 55, 73)

a. NAdj ci   bach
         dog   small
   'small dog'

b. NGen ci   Gwyn
         dog   Gwyn
   'Gwyn's dog'

c. NRel y   cae   y   porai-'r   gwartheg ynddo
         the field REL grazed-the cows   in.it
   'the field in which the cows grazed'

d. NDem,ArtN y   goeden hon
              the   tree   this
   'this tree'

e. NumN tri   bachgen
         three boy
   'three boys'

f. PossN ei   gi[3]
          3SG,MASC dog
   'his dog'

Welsh illustrates the necessity of distinguishing articles and demonstratives in statements of word order: the article precedes the noun in Welsh while the demonstrative follows. In addition, I have distinguished a category Poss (for pronominal possessive word), which more often precedes the noun in Welsh, in contrast to nominal genitives, which follow.

The VO languages of Europe illustrate a hierarchy of modifiers in terms of their position with respect to the noun (see also Hawkins 1983: 64–96). Table 5 lists the dominant order of noun and modifiers for VO languages in my database.[4]

Table 5. Dominant position of noun modifiers among the VO languages of Europe

NumN:	all VO languages in Europe
DemN:	INDIC (Welsh Romany), ALBANIAN, GREEK (Greek), ROMANCE (Italian, Rhaeto-Romance, French, Catalan, Spanish, Portuguese), GERMANIC (Danish, Swedish, Norwegian, Icelandic, English), BALTIC (Lithuanian), SLAVIC (Russian, Ukrainian, Polish, Czech, Bulgarian, Serbo-Croatian), FINNIC (Finnish, Estonian).
NDem:	CELTIC (Irish, Scots Gaelic, Welsh).
AdjN:	INDIC (Welsh Romany), GREEK (Greek), GERMANIC (Danish, Swedish, Norwegian, Icelandic, English), BALTIC (Latvian, Lithuanian), SLAVIC (Russian, Ukrainian, Polish, Czech, Bulgarian, Serbo-Croatian), FINNIC (Northern Saami, Finnish, Estonian).
NAdj:	ALBANIAN, ROMANCE (Sardinian, Rumanian, Rhaeto-Romance, French, Catalan, Spanish, Portuguese), CELTIC (Irish, Scots Gaelic, Breton, Welsh).
GenN:	INDIC (Welsh Romany), GERMANIC (Danish, Swedish, Norwegian), BALTIC (Latvian, Lithuanian), FINNIC (Northern Saami, Finnish, Estonian).
NGen:	ALBANIAN, GREEK (Greek), ROMANCE (Rumanian, Italian, Rhaeto-Romance, French, Catalan, Spanish, Portuguese), CELTIC (Irish, Scots Gaelic, Breton, Welsh), GERMANIC (Icelandic), SLAVIC (Russian, Polish).
NRel:	all VO languages in Europe.

This defines a hierarchy among modifiers of the noun whereby numerals precede the noun as the dominant order among all of these languages, while relative clauses always follow, with demonstratives, adjectives, and genitives arranged between. It also defines a hierarchy among the VO languages of Europe, as indicated in (2), where the Celtic languages place modifiers after the noun more often than languages in the other groups, while the Baltic and Finnic languages place modifiers before the noun more often than languages in other groups.[5]

(2) Hierarchy of VO languages in Europe from most heavily 'Noun + Modifier' to most heavily 'Modifier + Noun':
     Celtic < Albanian, Romance < Greek, Slavic < Germanic < Baltic, Finnic

The Celtic languages occupy the leftmost place on this hierarchy by virtue of the fact that they alone place demonstratives after the noun as the dominant order, while all of the other VO languages in Europe place them before the noun. The next pair of language groups on this hierarchy, Albanian and Romance, share the property with Celtic that they more often place adjectives

after the noun, while the languages in the groups to the right on the hierarchy more often place adjectives before the noun. The remaining three positions on the hierarchy are distinguished by the placement of genitives: while Greek and Slavic place the genitive after the noun as the dominant order (although the prenominal adnominal genitive is common in a number of Slavic languages), the general pattern in the last two groups, Baltic and Finnic, is that of placing the genitive before the noun. The position of Germanic on this hierarchy is problematic in a couple of ways, primarily stemming from the fact that there is greater variety of word order within this group than there is within the other groups. The crucial point is that across Germanic, both GenN and NGen order are quite common, and hence it is best viewed as intermediate between the more clearly NGen groups and the more clearly GenN groups.

The distribution of different orders of modifier and noun among the VO languages of Europe in my sample is also brought out by the maps in Figs. 2 to 5. The map in Fig. 2 illustrates the fact that all of the languages of Europe in my sample place the numeral before the noun as the dominant order, if there is one.[6]
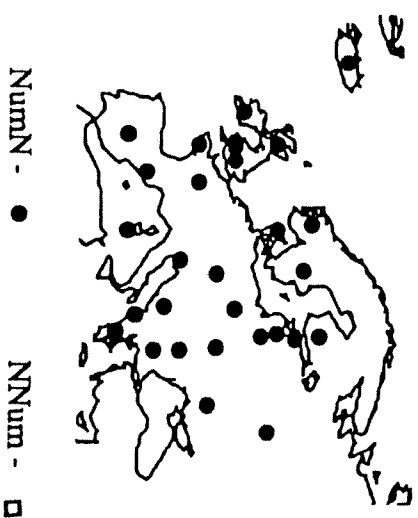

Figure 2. Order of numeral and noun in VO languages in Europe

NumN - ●   NNum - □

The map in Fig. 3 shows the distribution of the two orders of demonstrative and noun as dominant order among the VO languages of Europe.

The only languages in which NDem is the dominant order are Celtic languages, indicated on the map in Fig. 3 by white squares; the remaining languages are all DemN in their dominant order, indicated by black circles.[7] The map in Fig. 4 shows analogous information for the order of adjective and noun. The two types in the map in Fig. 4 are more evenly distributed, with NAdj as dominant order (indicated by the white squares) towards the west and south-
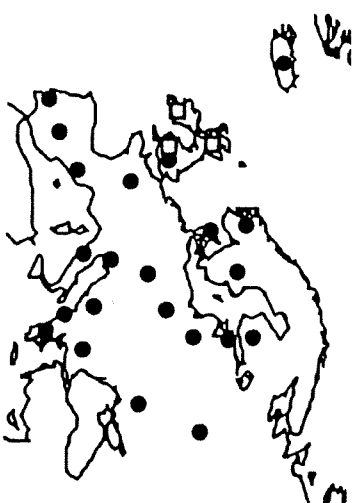
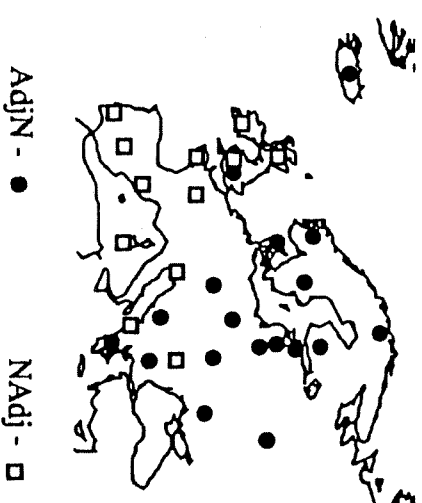*Figure 3.* Order of demonstrative and noun in VO languages in Europe

DemN - ●   NDem - □

west, and AdjN as dominant order (indicated by the black circles) towards the north and northeast. Finally, the map in Fig. 5 shows the distribution of the two orders of genitive and noun.

The map in Fig. 5 shows NGen order (indicated by the white squares) as the dominant order among the majority of VO languages of Europe, while GenN as the dominant order (indicated by the black circles) is restricted among the languages in my database to a fairly well-defined Baltic area, including the north Germanic languages of Scandinavia, the (western) Finnic languages, and the Baltic languages.
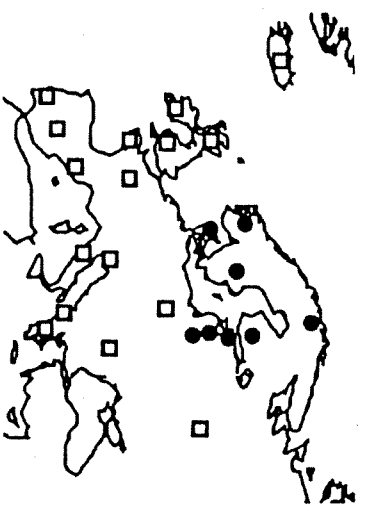

Figure 4. Order of adjective and noun in VO languages in Europe

AdjN - ●   NAdj - □

Figure 5. Order of genitive and noun in VO languages in Europe

GenN - ●   NGen - □

An initially plausible hypothesis, though one that I will argue against, is that we can understand the position of Celtic and the position of Finnic on the hierarchy in (2) in the following terms. According to this hypothesis, the place-ment of Celtic reflects the fact that these languages are not only VO but VS, and reflects the assumed fact that verb-initial languages are even more likely than SVO languages to place modifiers after the noun.[8] The position of Finnic, conversely, reflects, on this hypothesis, the apparent fact that the western Finnic languages have undergone a change from OV to or towards VO order, as reflected by the presence of postpositions in the western Finnic (as well as the eastern Finnic) languages.

The evidence from languages in other parts of the world, however, presents serious problems for both of these lines of explanation. First, except for geni-tives, I will illustrate the fact that verb-initial languages do not exhibit any greater tendency than SVO languages to place modifiers after the noun. And second, with the exception of genitives and relative clauses, OV languages are no more likely to place modifiers before the noun than VO languages are. In the next section I will summarize the crosslinguistic evidence behind these claims, and in section 5 below I will offer an alternative account for why Celtic and Finnic occur at opposite ends of the hierarchy in (2).

4. Order of noun and modifier crosslinguistically

Much of the evidence presented in this section has been published earlier, in Dryer (1988, 1989, 1991, 1992), though the current data is based on a some-

what expanded sample of languages, and I will present some of the data in a somewhat more revealing bar graph form. In the preceding section, I discussed the fact that the Celtic languages exhibit the strongest tendency among the VO languages of Europe to place modifiers after the noun: they are the only lan-guages to place demonstratives after the noun as the dominant order; and, along with Albanian and the Romance languages, they are the only languages to place adjectives after the noun as the dominant order. In this section I will show that it is not the case that VO languages in general, or verb-initial lan-guages in particular, are any more likely to place the adjective or the demon-strative after the noun.

4.1. Adjective and noun

The data in Table 6 provide the number of genera (genetic groups roughly comparable to the subfamilies of Indo-European) containing VO languages of each of the types listed on the lefthand side within each of six large continental-sized geographical areas.[9]

Table 6. Order of adjective and noun among VO languages

	Africa	Eurasia	SEAsia& Oc	Aus- New Gui	NAmer	SAmer	Total
VO&AdjN	3	6	4	5	17	3	38
VO&NAdj	28	4	12	3	7	5	59

The '6' under Eurasia in the second column of Table 6, for example, means that my database contains 6 genera in Eurasia containing languages that are VO & AdjN, while the '4' below it indicates that my database contains 4 genera in Eurasia containing languages that are VO & NAdj.[10] The larger of each pair of numbers is enclosed in a box, indicating the more common type in that area. The righthand column in Table 6 does seem to indicate an apparent weak over-all tendency for VO languages to place the adjective after the noun, with 59 genera containing VO & NAdj languages and 38 genera containing VO & AdjN languages. However, VO & NAdj languages outnumbers VO & AdjN in only three out of the six areas, while VO & AdjN is more common in the other three areas. Furthermore, it turns out that the difference between the totals for VO & NAdj and VO & AdjN is attributable entirely to the overwhelming number of genera in Africa containing VO & NAdj languages: outside of Africa, it is VO & AdjN that is more common, by 35 genera to 31 genera. The most important point,

however, is the fact that there is a similar weak overall preference for NAdj order among OV languages, as illustrated in Table 7.

Table 7. Order of adjective and noun among OV languages

	Africa	Eurasia	SEAsia& Oc NewGui	Aus- NewGui	NAmer	SAmer	Total
OV&AdjN	7	[27]	2	4	9	7	56
OV&NAdj	[23]	6	[5]	[16]	[15]	[19]	84

Table 7 reveals a weak overall tendency for OV languages to place the adjective after the noun, with 84 genera containing OV & NAdj languages and only 56 genera containing OV & AdjN languages. In addition, there is a clearer geographical pattern in Table 7: in five of the six areas, OV & NAdj order is more common. Only in Eurasia is OV & AdjN order more common, and, in fact, Eurasia provides almost half (27 out of 56) of the genera containing OV & AdjN languages. This contrast between Eurasia and the rest of the world is brought out graphically in Fig. 6, which indicates, for each of the six continental-sized areas, the PROPORTION of genera in each area that contain OV - & NAdj languages from the sum of the number of genera containing OV & AdjN languages and the number of genera containing OV & NAdj languages.[11]
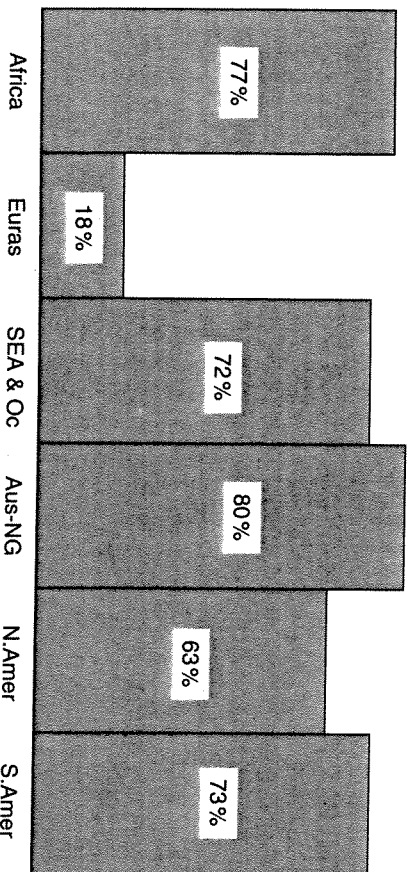

Figure 6. Proportion of genera containing AdjN languages for OV languages

Africa	Euras	SEA & Oc	Aus-NG	N.Amer	S.Amer
77%	18%	72%	80%	63%	73%

We can summarize Table 7 and Fig. 6 in terms of the average proportion of genera within each area that contain NAdj languages, in terms of the average of the six figures in Fig. 6: the average proportion of genera containing lan-

guages with NAdj order for OV languages is .64, indicating approximately that OV languages exhibit a crosslinguistic preference for NAdj order that is almost 2 to 1. The analogous proportion for VO languages is .56, also indicating a preference for NAdj order, though not as strong as that demonstrated for OV languages. These two proportions are shown in Fig. 7.
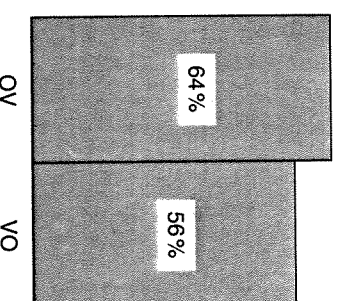

Figure 7. Average proportions of genera containing languages that are NAdj as opposed to AdjN

OV	64%
VO	56%

Fig. 7 shows that in so far as there is a difference between VO and OV languages in their placement of adjectives it is OV languages, not VO languages, that exhibit a greater preference for placing the adjective after the noun. This difference is sufficiently small, however, to be well within the range of chance, the crucial point is not that NAdj order is more common among OV languages, but that AdjN order is NOT more common.

A similar results obtains if we focus specifically on verb-initial (V-1) languages.

Table 8 gives comparable data for verb-initial languages.

Table 8. Order of adjective and noun among verb-initial languages

	Africa	Eurasia	SEAsia& Oc NewGui	Aus- NewGui	NAmer	SAmer	Total
V-1&AdjN	1	0	3	1	[14]	1	20
V-1&NAdj	[8]	[1]	3	1	6	[4]	23

In terms of overall numbers the preference for NAdj order is, if anything, weakest among verb-initial languages, the preference for NAdj order outnumbering AdjN order for verb-initial languages by only 23 genera to 20 genera. However, the average proportion of genera that are NAdj is .66, slightly higher

than the proportion mentioned above for OV languages (.64). Fig. 8 shows the proportions of genera within each of the six areas.
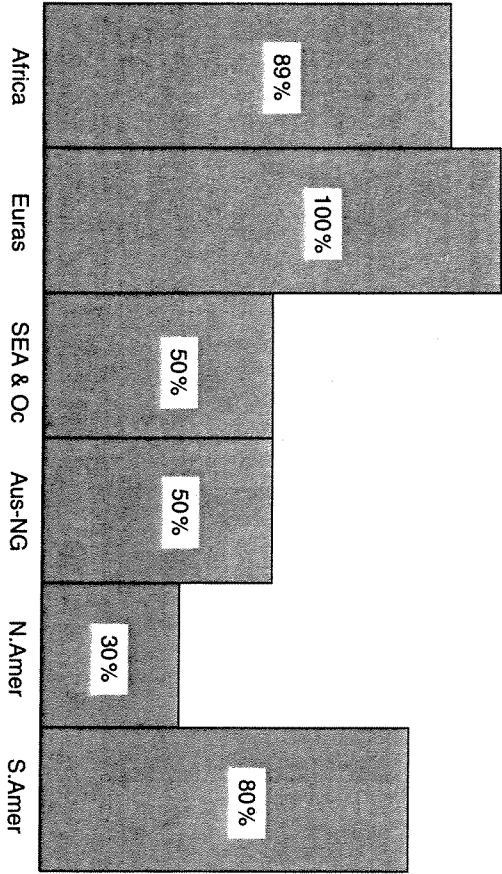

Africa	Euras	SEA & Oc	Aus-NG	N.Amer	S.Amer
89%	100%	50%	50%	30%	80%

Figure 8. Proportion of genera containing AdjN languages for verb-initial languages

The calculation of the average proportion of genera treats each of the six areas equally; the effect of this is that areas where there are a large number of verb-initial languages do not swamp the data. But since the only genus in Eurasia containing verb-initial languages is Celtic, this means that the Celtic languages themselves have a strong effect on the figure cited for average

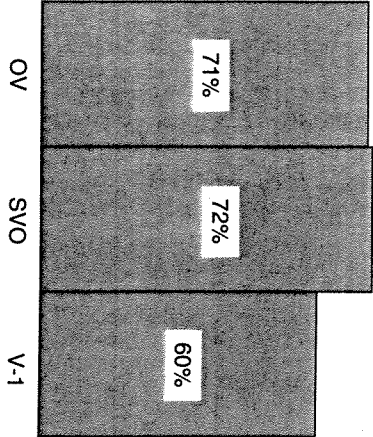| OV	SVO	V-1
71%	72%	60%

Figure 9. Average proportions of genera containing languages that are NAdj as opposed to AdjN for the five areas other than Eurasia

proportion of genera: the proportion of 100% shown in Fig. 8 for Eurasia is based entirely on the fact that the Celtic languages are NAdj. Fig. 9 shows the average of proportions over the five areas OTHER THAN Eurasia for OV, SVO, and verb-initial languages.

Fig. 9 shows that if we exclude Eurasia and compute the average proportion over the other five areas, we find that verb-initial languages place the adjective after the noun LESS OFTEN than OV or SVO languages. In short, we find no evidence that VO languages, or verb-initial languages in particular, are any more likely to place adjectives after nouns than OV languages are. There is thus no reason to believe that the occurrence of NAdj order in Celtic languages is in any way explained in terms of the fact that they are verb-initial.

4.2. Demonstrative and noun

The order of demonstrative and noun exhibits a pattern that at first sight looks different from that of adjective and noun but which on closer examination is rather similar. Table 9 shows the frequency of the two orders of demonstrative and noun among VO languages. Overall, it shows that the number of genera containing each of the two language types is actually quite close, with 52 genera containing VO & DemN languages and 49 genera containing VO & NDem languages.

Table 9. Order of demonstrative and noun among VO languages

	Africa	Eurasia	SEAsia& Oc	Aus-NewGui	NAmer	SAmer	Total
VO&DemN	4	8	7	5	19	9	52
VO&NDem	27	1	12	0	7	2	49

When we look at similar data for OV languages, we find that in fact, the number of genera containing DemN languages is actually noticeably higher than that for NDem, as shown in Table 10.

Table 10. Order of demonstrative and noun among OV languages

	Africa	Eurasia	SEAsia& Oc	Aus-NewGui	NAmer	SAmer	Total
OV&DemN	10	21	4	11	19	17	82
OV&NDem	12	1	2	10	4	4	33

Table 10 shows that the number of genera containing OV & DemN languages in 82 while the number of genera containing OV & NDem languages is only 33. This might suggest that NDem order is more likely to be found in VO languages than in OV languages. However, this difference largely disappears when we examine proportions of genera within areas, as illustrated in Figs. 10 and 11. Fig. 10 gives the proportion of genera containing NDem order for OV languages, while Fig. 11 gives the same for VO languages.
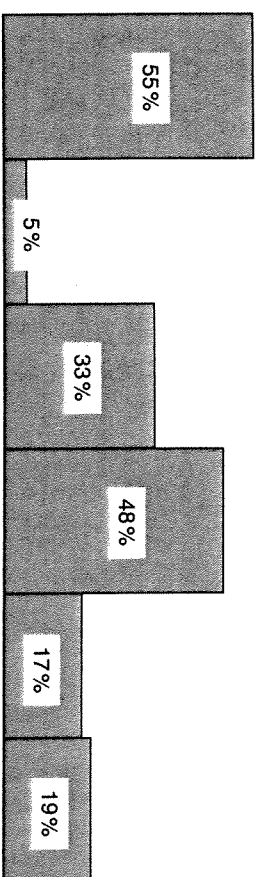
Africa	Euras	SEA & Oc	Aus-NG	N.Amer	S.Amer
55%	5%	33%	48%	17%	19%

Figure 10. Proportions of genera containing NDem languages among OV languages

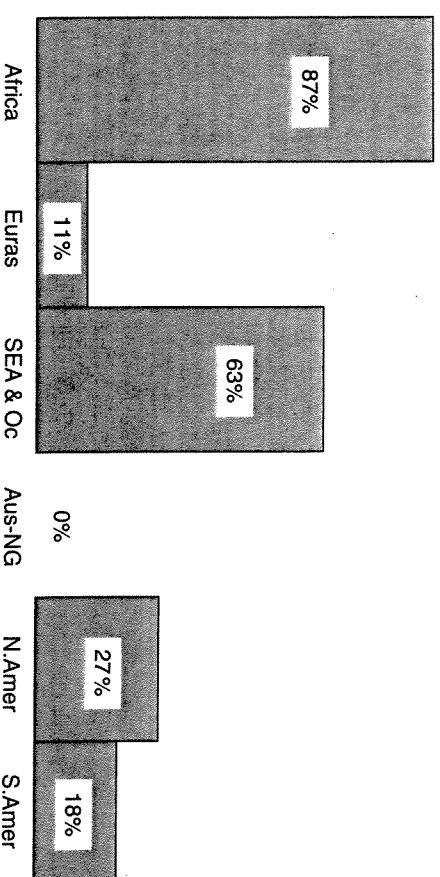| Africa	Euras	SEA & Oc	Aus-NG	N.Amer	S.Amer
87%	11%	63%	0%	27%	18%

Figure 11. Proportions of genera containing NDem languages among VO languages

Figs. 10 and 11 show considerable variation across areas in the order of demonstrative and noun, especially among VO languages. Again it is useful to compute the average of proportions from these graphs. The result of this is shown in Fig. 12.
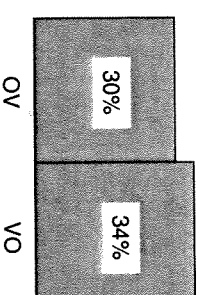
OV	VO
30%	34%

Figure 12. Average proportions of genera containing languages that are NDem as opposed to DemN

Fig. 12 shows that for OV languages, the average proportion of genera that contain NDem languages is 30%, while the figure for OV languages is 34%. While this still illustrates a greater preference for NDem order among VO languages, it is a very small difference, much smaller than the differences in terms of numbers of genera given in Tables 9 and 10.

Because in this case the two ways of looking at the differences between VO and OV languages — the numbers of genera and the averages of proportions — reveal such different patterns, it is worth going into the source of this difference, and seeing why it is the latter figure, the one based on averages of proportions, that is the more reliable one. We saw that overall, the number of genera containing OV & DemN languages is more than twice as common as the number of genera containing OV & DemN languages (82 vs. 33), but that the number of genera containing VO & DemN languages is about the same as the number of genera containing VO & NDem languages (52 vs. 49). However, it turns out that more than half of the genera containing VO & NDem languages (27 out of 49) are in Africa. Outside of Africa, we find a pattern among VO languages which is much more like the pattern we found for OV languages: if we exclude Africa, we find that VO & DemN outnumbers VO & NDem by 48 to 22, a difference of over 2 to 1 not unlike the figures we found for OV languages. When we compute the average of proportions, we treat each of the six geographical areas equally. What this means is that if one area contains a large number of genera containing languages of the types under examination and if the pattern in that area is rather different from the pattern found in the rest of the world, we can expect that the overall total number of genera will exhibit a different pattern from that exhibited by the averages of proportions. The reason for this is that if one area contains a large number of genera containing languages of the types under consideration, then the total numbers of genera for the entire world will be strongly affected by languages from this area. In an extreme case, that single area can "swamp" the figures for the other areas of the world. As a result, a difference between OV and VO languages in

terms of the total number of genera containing languages of different types may be due to a single geographical area. On the other hand, when we compute averages of proportions over areas, each of the areas contributes equally to the resultant statistic, so that a single area cannot affect the result in the same way. In the present instance, it turns out that there are a large number of genera in Africa containing VO languages, more than in other parts of the world, and there are a number of ways in which these VO languages in Africa exhibit typological similarities that are not shared by VO languages elsewhere in the world, so that we are led to hypothesize that certain widespread areal phenomena in Africa have contributed to the extent to which VO languages spoken on that continent are often different from VO languages elsewhere in the world. In the present instance, we find that there is an overwhelming preference for NDem order among the VO languages of Africa (27 genera to 4), while among VO languages outside of Africa, we find a clear preference in the opposite direction (48 genera to 22). In short, the difference among VO and OV languages that we observed in the overall figures reflects indiosyncratic properties of VO languages of Africa that are controlled for in the figures based on averages of proportions. In short, the data show little evidence for any significant difference between VO and OV languages in terms of the position of demonstratives with respect to the noun. Again, we can conclude that there is no reason to believe that the incidence of NDem order among the Celtic languages is related to the fact that they are VO.

Again, one might raise the question of whether the occurrence of NDem order among the Celtic languages might not be related to the more specific fact that they are also the one group that also exhibits a preponderance of verb-initial order. Table 11 gives the data for the two orders of noun and demonstrative for verb-initial languages.

Table 11. Order of demonstrative and noun among verb-initial languages

	Africa	Eurasia	SEAsia & Oc	Aus-NewGui	NAmer	SAmer	Total
V-1&DemN	2	0	4	[2]	[15]	[5]	28
V-1&NDem	[6]	[1]	4	0	6	1	18
Proportion NDem	.75	1.00	.50	.00	.29	.17	Avg.=.45

The data in Table 11 is inconclusive. Again we find higher overall numbers for DemN (28 genera to 18). The average of proportions for NDem is higher than the figures for VO languages in general and for OV languages (.45 versus .34

and .29), which might seem to provide a basis for suggesting that verb-initial languages are more likely to place the demonstrative after the noun than other languages. However, if we compare the proportions within each area for verb-initial and OV languages — where we might expect the greatest contrast — we find that the higher proportion for NDem order among verb-initial languages is found in only four of the six areas, as illustrated in Table 12.

Table 12. Proportions of genera that contain languages that are NDem

	Africa	Eurasia	SEAsia & Oc	Aus-NewGui	NAmer	SAmer	Total
V-1	[.75]	[1.00]	[.50]	.00	[.29]	.17	Avg.=.45
OV	.55	.05	.33	[.48]	.17	[.19]	Avg.=.29

But there is a more important reason to be suspicious of using this difference — whatever its magnitude — between verb-initial languages and OV languages as the basis of an explanation for the fact that the one group of languages in Europe that employs NDem order also happens to be the one group that is verb-initial. Namely, the difference in the average of proportions in Table 12 is due entirely to the contrast between Celtic languages on the one hand and the OV languages of Eurasia on the other. If we compute the average of proportions for the five areas OTHER THAN EURASIA, what we find is an average of .34 for verb-initial languages and an identical average of .34 for verb-final languages. Fig. 13 shows the average proportions of genera containing languages that are NDem as opposed to DemN for the five areas other than Eurasia, distinguishing OV, SVO, and verb-initial languages.

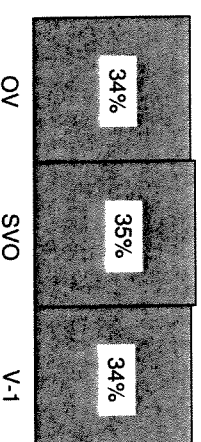| OV	SVO	V-1
34%	35%	34%

Figure 13. Average proportions of genera containing languages that are NDem as opposed to DemN for the five areas other than Eurasia

Fig. 13 shows that outside of Eurasia, NDem order occurs with almost exactly the same frequency for OV, SVO, and verb-initial languages. In other words, what initially looked like a difference between OV and verb-initial languages in Table 12 turns out to be entirely due to the fact that the Celtic languages

are the sole group in Eurasia containing verb-initial languages. It would clearly be circular to argue that there is some connection between the occurrence of NDem order among Celtic languages and the fact that they are largely verb-initial, when the sole evidence for there being a greater tendency for NDem order among verb-initial languages derives from the Celtic languages themselves. As with adjective-noun order, we are led to the conclusion that the occurrence of Celtic languages at the end of the hierarchy in (2), as the group with the greatest frequency of noun-modifier order (arising from the fact that they are the one group with NDem order) is not connected in any obvious way with the fact that these languages are the one group in Europe that are verb-initial.

4.3. Genitive and noun

I should conclude this section by noting (as I have shown elsewhere in Dryer 1991, 1992) that the lack of any relationship between the order of adjective and noun or demonstrative and noun and the order of verb and object (and of verb and subject) does not carry over to the order of genitive and noun. Here we do find a correlation: OV languages tend to be GenN, verb-initial languages tend to be NGen, and both GenN and NGen types are common among SVO languages. This is demonstrated in Tables 13, where I provide only the proportions of genera that are NGen within each area.

Table 13. Proportion of genera containing languages that are NGen

	Africa	Eurasia	SEAsia& Oc	Aus- NewGui	NAmer	SAmer	Average
OV	.21	.12	.17	.11	.00	.00	.10
SVO	.82	.63	.69	.00	.50	.00	.44
V-initial	1.00	1.00	.75	.00	.85	.60	.70

Except in Australia–New Guinea, Table 13 demonstrates a consistent pattern of greater or equal frequency of NGen order among verb-initial languages than among SVO languages and a similar pattern of greater or equal frequency of NGen order among SVO languages than among OV languages: in each column in Table 13, we find the proportion of genera containing languages that are NGen increasing (or at least not decreasing) as one moves down the column. The data for Australia–New Guinea does not confirm to this, since the figure is .11 for OV languages in that area ans .00 for both the SVO and V-initial

languages. What is particularly anomalous here is the figure for the verb-initial languages in this area, where none of them are NGen, the typical order for verb-initial languages elsewhere in the world. This anomaly is due, however, to two verb-initial languages in Australia that are atypical verb-initial languages in other respects as well.

What does this crosslinguistic data for the order of genitive and noun allow us to say about VO languages in Europe? The fact that the Celtic languages are NGen does fit with the fact that they are verb-initial, so in so far as this property contributes to their being at the lefthand and of the hierarchy in (2), their position towards that end of the hierarchy is to be expected. The fact that we find both NGen order and GenN order among the SVO languages of Europe is simply reflecting an ambivalence that SVO languages exhibit in other parts of the world. Both are normal orders for SVO languages, and it is not clear that any significance should be attached to the fact that some are NGen while others are GenN. Whether one can explain — or even predict — whether a particular SVO language is GenN or NGen is a matter for future research, and perhaps an answer to that question might shed light on the distribution of these two types in Europe, but at the present time, nothing more can be said. But one factor would appear to be the recent history of a language. Namely, given that GenN order is the predominant order among OV languages, we might expect that SVO languages that were recently OV would be more likely to exhibit GenN order. The fact that the VO Finnic languages are GenN is presumably to be explained in this way. In short, in so far as this contributes to the fact that the Finnic languages are at the righthand end of the hierarchy in (2), this is not surprising, given that this position reflects the fact that they are GenN. On the other hand, the fact that other modifiers of the noun occur before the noun in the VO Finnic languages does not appear to be related to the fact that these languages were previously OV, since other modifiers (other than genitives and relative clauses) do not exhibit any greater tendency to precede the noun in OV languages than they do in VO languages.

5. Order of noun and modifier in Europe reexamined

I argued in the preceding section that the position of Celtic languages at the lefthand end of the hierarchy in (2) is unrelated to the fact that they are the one group of languages in Europe that are verb-initial, except in so far as they are NGen. I have similarly argued that the position of the Finnic languages at the righthand end of the hierarchy is also unrelated to the fact that they have descended from OV languages, again except in so far as they are GenN. Are we

to conclude that these facts are completely coincidental, that there is nothing particularly interesting that we can say towards explaining the position of these languages on the hierarchy? The answer is that we can retain PART of the explanation, not by appealing to any notion of typological distance from the ideal OV language (which is in effect what that explanation involved) but rather in terms of the GEOGRAPHICAL and CHRONOLOGICAL distance from the EURASIAN OV TYPE, a language type that predominates over a large area of Eurasia, a type that is often thought to be typical of OV languages, but which the data cited earlier in this paper (as well as other data cited in Dryer 1992) shows is not at all characteristic of OV languages in general.

The distribution of the two orders of adjective and noun among OV languages can be used to illustrate this general point. The data cited in Table 7 and Fig. 6 above shows that outside of Eurasia, there is at least a weak tendency for adjectives to FOLLOW nouns in OV languages. This data shows that in all five of the areas other than Eurasia, OV & NAdj clearly outnumbers OV & AdjN, and, in fact, in four of these five areas, OV & NAdj is more common by a ratio of over 2:1. In terms of total number of genera, OV & NAdj outnumbers OV & AdjN outside of Eurasia by 78 to 29, approaching a ratio of 3 to 1. Within Eurasia, the pattern is exactly the opposite, with OV & AdjN outnumbering OV & NAdj by 27 genera to 6. The geographical distribution WITHIN Eurasia is equally revealing, as can be seen in the map in Fig. 14.[12]

The six exceptions to the general pattern in Eurasia, the six genera containing OV & NAdj languages, are in many ways the proverbial exceptions that prove the rule. These are listed in Table 14.[13]

Table 14. OV & NAdj languages in Eurasia, by genus

BASQUE (Basque)
ETRUSCAN (Etruscan)
IRANIAN (Kurdish, Persian, Tajik)
SUMERIAN (Sumerian)
NORTHWEST CAUCASIAN (Abkhaz)
ELAMITE (Elamite)

A number of the languages in Table 14 are geographically or chronologically peripheral to central Eurasia. Three of the six genera in Table 14 involve ancient languages, namely Etruscan, Sumerian, and Elamite, the latter two outside of Europe (in the area of modern day Iraq). Basque is clearly geographically peripheral with respect to central Eurasia. While some of the Iranian languages have NAdj as the dominant order, in others AdjN is dominant; the occurrence of NAdj order as dominant order among some of the Iranian languages may
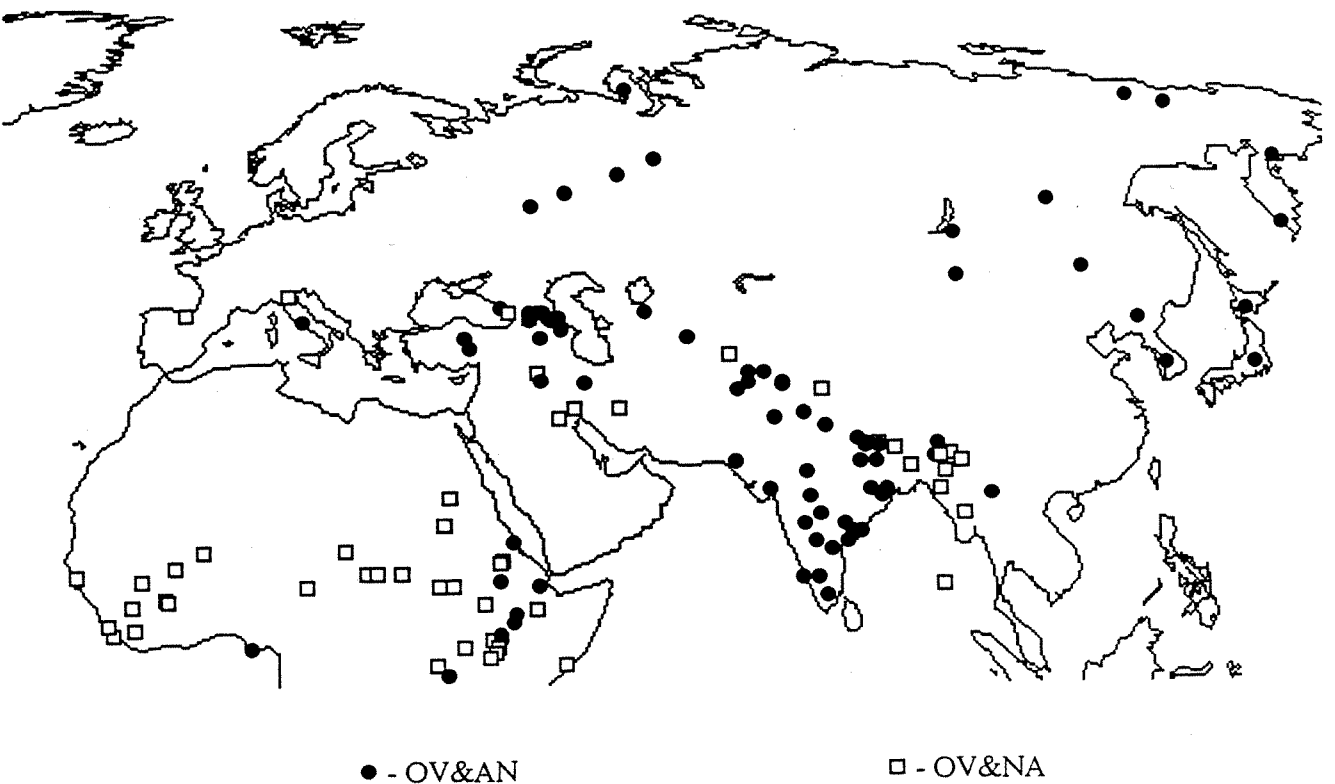
● - OV&AN

□ - OV&NA

Figure 14. Distribution of AdjN and NAdj order in OV languages

reflect influence of Arabic. Abkhaz is the sole language in Table 14 that is not peripheral.[14]

The geographically or chronologically peripheral nature of most of the OV- & NAdj languages in Eurasia only underscores the pervasive extent of the area across much of Eurasia which is fairly solidly OV & AdjN. As can be seen from the map in Fig. 14, this area extends across northern Russia to Siberia and to Korea and Japan, and from northern Russia down to Turkey and across and down to south India. It includes all of the contemporary OV languages of Europe in my database other than Basque and Abkhaz. Outside this area, OV- & NAdj order is more common, as shown by the frequency of white squares on the map in Fig. 2 in Africa and in southeast Asia around Burma. The pervasive distribution of OV languages that are AdjN across this area generally extends to the order of dependent and head in general: these languages conform to what was once thought to be the norm for OV languages, to place dependents before the head, though, as illustrated by the data cited above for adjective and noun, this type is not a common type of OV language outside of Eurasia (see also Dryer 1992).

The chronology of this large OV, head-final, area is something that requires more research. To what extent it is a very old phenomenon and to what extent it reflects areal phenomena within the past couple of thousand years is not clear, at least to me. There is at least some evidence that to at least some extent, it reflects more recent areal phenomena. According to my data, Classical Armenian was OV/VO, prepositional, NGen, and AdjN/NAdj; Modern Armenian, in contrast, exhibits typical Eurasian OV characteristics, being OV, postpositional, GenN, and AdjN. Similarly, Harris (1985) reported that Old Georgian was NGen and NAdj; Modern Georgian, in contrast, conforms to the dominant Eurasian OV type, being OV, GenN, AdjN, DemN, and NumN. This suggests that the spread of the dominant Eurasian type within the Caucasus region, at least, is a more recent phenomenon. It is possible however that it is a very old phenomenon outside the Caucasus region and that the relatively recent spread to this region reflects its geographical isolation.[15]

The question of how old the dominant Eurasian OV type is has bearing on the question of understanding the distribution of word orders among VO languages in Europe. One possibility is that many of these languages have descended, not only from OV languages, but from OV languages of the dominant Eurasian type, and that they have changed from OV to VO as well as changing the order of various modifiers of the noun from prenominal position to postnominal position. A second possibility is that the people who moved into Europe from further east whose languages are the ancestors of modern European VO languages, did not speak languages that conformed to the dominant Eurasian

OV type, that the spread of the dominant OV Eurasian type is something that postdated these early languages. It is also possible that the truth is actually a mixture of these two possibilities. However, under either of these two scenarios, we can now obtain a new perspective on the position of Celtic and Finnic languages on the hierarchy in (2).

The western VO Finnic languages (in my database, these are Finnish, Estonian, and Northern Saami) are apparently recent members of the VO area in Europe. The data I have on the more eastern Finnic languages, such as Udmurt, suggests that they conform to the dominant Eurasian OV type, and apart from VO order, the western Finnic languages tend to conform as well. In addition, these languages are geographically close to the area in which languages of the dominant Eurasian OV type are spoken. In short, these languages are both geographically and chronologically close to the area of the dominant Eurasian OV type, their chronological closeness presumably being the dominant factor. Their position at the righthand end of the hierarchy in (2) thus reflects the fact that they are geographically and chronologically close to the dominant Eurasian OV type in which modifiers precede the noun.

The Celtic languages represent the opposite situation. Geographically, they are the language group (except perhaps for Basque) that is farthest from the area in central Eurasia in which languages of the dominant Eurasian OV type are spoken. And they have been geographically distant for a considerable period of time. The other Indo-European groups in Europe represent either later migrations from the east or migrations that did not go as far west into Europe, or both. If the Celtic languages are descendent from languages of the dominant Eurasian OV type, then they have been separated from the area in which languages of that type are spoken for considerable time and have been separated by considerable distance. If the spread of the dominant Eurasian OV type postdates the movement of speakers of pre-Celtic into Europe, then the Celtic languages have been geographically further from this type than the other VO groups in Europe. Either way, we can say that the Celtic languages are geographically and chronologically further removed from this type than the other VO groups in Europe.[16]

The central point is that while the verb-initial nature of the Celtic languages and their position on the hierarchy in (2) may not be DIRECTLY connected, as I have argued in section 3, the possibility remains that they are INDIRECTLY connected, that both of these word order properties of Celtic languages reflect the fact that they are chronologically and geographically furthest removed from the dominant Eurasian OV type. Under this view, the fact that they are the one group that widely employs verb-initial order is related to this geographical and chronological distance in that they have had the greatest opportunity to change

to verb-initial order. And for exactly the same reason, the high degree of post-nominal modification might similarly reflect the fact that they also have had the greatest opportunity to change to postnominal modification (if the original order was prenominal), both because of the greater time in which these changes might occur, and because, again, they are furthest separated from areal influences that might have discouraged such changes. If some of these characteristics of postnominal modification are original Celtic characteristics, then the Celtic languages have been furthest removed geographically from areal influences that might have encouraged changes towards prenominal modification. The crucial point is that it is possible to understand the two "extreme" character-istics of Celtic languages as related, without claiming the the degree of postnominal modification is in any sense causally linked to the verb-initial order. They may be related only in the weak sense that the Celtic languages have had greater opportunity, both chronologically and geographically, to devi-ate from the dominant OV type and these characteristics may simply be two separate instances in which the Celtic languages have availed themselves of that opportunity.

The speculative nature of my discussion of Celtic languages here cannot be denied. Detailed historical work that has already been done or that is yet to be done could contribute important insights bearing on my speculations. There is considerable historical work, however, that has proceeded from assumptions about word order typology that are not supported by the empirical cross-linguistic results discussed in this paper. While typological considerations should enter into historical work, it is important that those typological consid-erations be ones that are supported by crosslinguistic evidence.

6. The position of relative clauses in OV languages in Europe

The discussion in this section turns to discussion of the OV languages of Europe. Since I have argued that most of the OV languages of Europe, spoken on the extreme eastern side of Europe, are best viewed as the western part of a large Eurasian OV area, my discussion will include languages in Asia that are part of this larger area as well, though I will draw particular attention to the contribution of languages of Europe.

The OV languages of Eurasia differ from those elsewhere in the world in that prenominal relative clauses are more common than they are elsewhere. Table 15 gives the data in terms of number of genera, while Fig. 15 shows the proportions of genera that are RelN within each area.

Table 15. Order of relative clause and noun among OV languages

	Africa	Eurasia	SEAsia& Oc	Aus-NewGui	NAmer	SAmer	Total
OV&RelN	6	[13]	[2]	2	2	3	28
OV&NRel	[13]	6	1	[6]	[12]	[4]	42
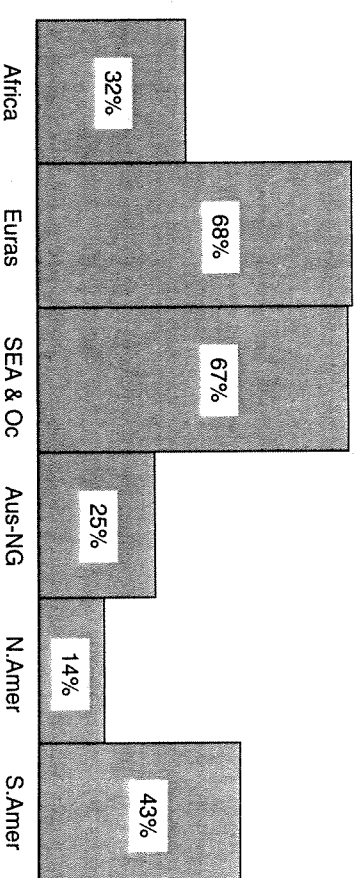
Figure 15. Proportion of genera containing RelN languages for OV languages

Africa	Euras	SEA & Oc	Aus-NG	N.Amer	S.Amer
32%	68%	67%	25%	14%	43%

Table 15 and Fig. 15 show that only in Eurasia and in Southeast Asia & Ocea-nia is RelN order more common among OV languages than NRel order. In addition, the two genera in Southeast Asia & Oceania containing OV&RelN languages are both branches of Tibeto-Burman and thus part of Eurasia in a more conventional sense that includes southeast Asia.

The exceptional nature of the OV languages of Europe can be seen by con-sidering the generalization in (3).

(3)   All OV languages of Europe place either the adjective or the relative clause before the noun.

The crosslinguistic frequency of the four possible types of OV languages, de-pending on whether the adjective precedes or follows the noun and whether the adjective precedes or follows the noun and whether the relative clause precedes or follows the noun, is given in Table 16.

The righthand column of Table 16 shows that, despite what common lore might lead us to expect, the most frequent type of OV language is the type in which both the adjective and the relative clause FOLLOW the noun. This type is represented by 31 genera, followed closely by the OV & AN & RelN type

Table 16. Order of adjective and noun and of relative clause and noun among OV languages

	Africa	Eurasia	SEAsia& Oc	Aus-NewGui	NAmer	SAmer	Total
OV&AN&RelN	6	[12]	[2]	2	2	[2]	26
OV&AN&NRel	0	5	0	0	3	1	9
OV&NA&RelN	0	2	1	2	0	0	5
OV&NA&NRel	[12]	2	1	[5]	[9]	[2]	31

with 26 genera. The two other types, in which one of these modifiers precedes the noun and the other follows, are less frequent. The relative frequency of these four types is noticeably different within Eurasia. Here, the OV&-NA&NRel type, the most frequent type crosslinguistically, is among the two LEAST frequent types, represented by only two genera. For Eurasia the two guages by genus in my data for Eurasia for each of the four types. Those languages which are specifically languages of Europe are placed in italics, as are names of genera containing such languages.

Table 17. OV languages of Eurasia (excluding Southeast Asia and with languages of Europe in italics), by order of adjective and noun and order of relative clause and noun

OV&AN&RelN
TURKIC (*Chuvash, Turkish,* Uzbek, Karakalpak), UGRIC (*Vogul*), NORTHWEST CAUCASIAN (*Ubykh*), NAX (*Ingush*), INDIC (Marathi, Lamani), MONGOLIAN (Dagur, Kalmyk, Khalkha), JAPANESE, KOREAN, AINU, BURUSHASKI, DRAVI-DIAN PROPER (Kolami, Koya, Kuvi, Telugu, Kannada, Tamil), MUNDA (Kurku, Mundari, Ho).

OV&AN&NRel
ROMANCE (*Latin*), ARMENIAN (*Modern Armenian*), INDIC (Panjabi), IRANIAN (Pashto), TURKIC (Chaladsch).

OV&NA&RelN
BASQUE, NORTHWEST CAUCASIAN (*Abkhaz*).

OV&NA&NRel
IRANIAN (Kurdish, Persian, Tajik), SUMERIAN.

If we restrict attention in Table 17 to the languages of Europe (those whose names are italicized), we find that, as stated in (3), there are no instances of the last type (OV&NA&NRel) in Europe, the type that Table 16 shows to be the most frequent type crosslinguistically. All three of the other types are represented by at least two genera in Europe. This illustrates the extent to which the OV languages of Europe are atypical crosslinguistically, in exhibiting a strong preference for prenominal position for modifiers.

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7. VNeg order in European languages

The final topic that I will discuss here is the position of negative words among languages in Europe. I will discuss in particular a well-known change in the position of primary negative marking that has occurred in French and that continues to occur and argue that in certain respects it is an unusual phenomenon crosslinguistically. French can be described as having undergone or to be currently undergoing some if not all of the changes in (4).

(4)   NegV>NegV(Neg)>NegVNeg>(Neg)VNeg>VNeg

In other words, while the negative construction began as one involving a preverbal negative, the postverbal word *pas* became reanalyzed as a second indicator of negation, first optionally and later obligatorily, resulting in the construction in standard French illustrated in (5).

(5)   Je   ne   sais   *pas*.
       1SG   NEG   know   NEG
       'I don't know.'

Colloquial French has undergone the change from the third to the fourth stage in (4) in that the preverbal negative *ne*, the original negative, has become optional, so that the form in (6), with only a postverbal negative, is now common.

(6)   Je   sais   *pas*.
       1SG   know   NEG
       'I don't know.'

The postverbal negation has thus become the primary indicator of negation. One can easily imagine how the *ne* might now get lost altogether, completing a change from NegV to VNeg order.

A very similar change from NegV to VNeg order has occurred in colloquial Welsh (Awbery, 1990: 3; Maggie Tallerman, personal communication). In Literary Welsh, negation is marked by an obligatory preverbal negative particle *ni*, as in (7).

(7)   Ni   welais   gath.
       NEG   saw:1SG   cat
       'I didn't see a cat.'

In colloquial Welsh, however, negation is marked by postverbal particle *ddim*, as in the examples in (8).

(8) a. Welais   i   ddim cath.
       saw:1SG I NEG cat
       'I didn't see a cat.'

 b. Siaradodd hi ddim lyweth.
    spoke:3SG she not   again
    'She didn't speak again.'

In some situations, the verb undergoes initial mutations as well, so there are still traces of the preverbal negation. The postverbal negative particle immediately follows a subject pronoun (as in (8)), precedes an indefinite subject noun phrase, and either precedes or follows a definite subject noun phrase (Awbery 1990:4). While we apparently lack evidence of stages between the more conservative Literary Welsh and the less conservative colloquial dialects, the evidence suggests that the colloquial dialects have followed a diachronic path similar to that of French.

While one might view the change in the position of the negation in colloquial French and colloquial Welsh as isolated changes unrelated to other word order properties of the language, one might also propose that it is related to the fact that French and Welsh are VO languages. If one views the negation as a modifier of the verb, and if one assumes that modifiers tend to follow the words they modify in VO languages, then one might propose that the change from NegV to VNeg in French is motivated by a change towards more consistent overall word order.[17] The idea of a relationship along these lines is also suggested by the position of the negative in German, in which the negative follows the verb when VO order is used, as in (9a), but precedes the verb when OV order is used, as in (9b).[18]

(9) a. VONeg: Ich sehe das Messer nicht.
           1SG see the knife   NEG
    'I do not see the knife.'

 b. ONegV: Ich habe das Messer nicht gesehen.
           1SG have the knife   NEG   seen
    'I have not seen the knife.'

Ignoring various points of detail, the contrast in (9) can be seen in terms of the negative occurring on the same side of the verb as the object. The change in

French and in Welsh from NegV towards VNeg is a change whereby the negative is tending to end up on the same side of the verb as the object.

When one examines the crosslinguistic pattern in the position of negative morphemes, a radically different picture emerges which not only casts the above account of the change in French and Welsh in doubt, but also suggests that the change that has been occurring in these languages is a change towards a typologically highly unusual type, and hence not a change that makes any sense from the perspective of word order typology. Consider first the data in Table 18.[19]

Table 18. Order of negative and noun

	Africa	Eurasia	SEAsia& Oc	Aus- NewGui	NAmer	SAmer	Total
OV&VNeg	2	0	0	3	2	4	11
OV&NegV	6	8	2	12	7	3	38
VO&VNeg	8	0	1	0	0	0	9
VO&NegV	9	7	6	3	17	5	47

Two important generalizations emerge from the data in Table 18. First, when we examine the data on the last two lines for the VO languages, we find that there is a very strong preference for negative particles in VO languages to precede the verb, by 47 genera to 9. The preference is found independently in all six areas: in all six areas the number of genera containing VO & NegV languages is greater than the number of genera containing VO & VNeg languages. And second, when we examine the analogous data for OV languages, we find a very similar preference, with 38 OV & NegV genera and only 11 OV & VNeg genera. While the data for OV languages suggests a slight trend in the direction of VNeg being more common OV languages, I will assume that this trend is not statistically significant and conclude that there is no evidence of any difference between OV and VO languages with respect to the position of negative particles, but that in both types of languages there is a clear preference for such particles to precede the verb.

The data in Table 18 immediately reveals the fact that the change that has been occurring in French and Welsh (from VO & NegV to VO & VNeg) is a change from a typologically normal state to a typologically abnormal state, since VO & NegV outnumbers VO & VNeg by 47 genera to 9. While there may be factors that explain these changes, they apparently cannot involve a supposed preference for VNeg order in VO languages. The change can certainly not be explained in terms of a change towards head-modifier order in VO

languages, since this would predict that VO languages should tend to be VNeg, which the data in Table 18 shows clearly is not the case. Why both French and Welsh have undergone this unusual change, with somewhat analogous facts in German, is thus a mystery.

The state that results from the changes in both French and Welsh are even more unusual than the data in Table 18 might suggest. Namely, the order in both of these languages is not only VNeg, but more specifically VNegV. In other words, if both the negative and the object occur after the verb, the negative comes first, before the object noun phrase, as in the French example in (10).

(10) Je (ne) vois pas le couteau.
1SG NEG see NEG the knife
'I don't see the knife'.

The other VO & VNeg languages in my database are overwhelmingly VONeg, placing the negative AFTER the object rather than before it, typically placing the negative at the end of the clause. Table 18 shows 9 genera containing VO & VNeg languages. These 9 genera contain 15 languages of the type in question and all of these 15 languages are VONeg rather than VNegO. The example in (11) from the Chadic language Ngizim, with the negative particle at the end of the sentence, following a prepositional phrase, is typical.

(11) Ngizim (Schuh 1972: 455)
dee ii Ngwajin bai
come to Ngwajin NEG
'He didn't come to Ngwajin'.

In none of the 80 VO languages which express negation by means of negative particles and for which I have data on the exact position of the negative, is the order VNegO, the order that both colloquial French and colloquial Welsh seem to have been moving towards. The change in both languages is clearly towards a crosslinguistically unusual state.

The change in Welsh is if anything even more unusual than that in French in that VNeg order is itself quite unusual in verb-initial languages. Of the 47 verb-initial languages in my database for which I have data on the position of negative particles, 46 place the negative before the verb. In only one case (Lamang, a Chadic language), does the negative follow the verb. And in this one case, the normal position for the negative particle is at the end of the clause, unlike colloquial Welsh.

It is important to be clear on exactly what is and what is not unusual about the French and Welsh constructions. The change from NegV to NegVNeg was a change towards a quite common type of order crosslinguistically. My data contains many languages that employ double negation, either obligatorily or optionally. SVO languages with one negative preceding the verb and a second one following are quite common. And while I have no statistics to report, at least some of these cases are languages in which the normal order is SNegV-NegO, exactly the order that occurs in standard French. But it appears to be unusual for such a language to lose the first of the two negative in such a construction. Hence while the double negation of standard French (and option-ally in standard Welsh) apparently represents a normal type crosslinguistically, the VNegO order of the colloquial varieties is less normal.

8. Conclusion

I have examined the distribution of a number of word order characteristics of languages in Europe, and discussed how to interpret the facts discussed from a typological point of view. The general theme shared by the examples I have discussed is that in order to obtain a typological perspective of the languages of Europe, it is necessary to examine languages from other parts of the world, not only in Europe and Asia, but also elsewhere in the world. When we do so, what appeared at first to be plausible typological views of European languages turns out not to be.

Notes

1. Although I have consulted a number of grammatical descriptions in Russian, there are a number of languages in Russia and in the Caucasus region for which there exist grammars in Russian that I have not consulted. The map in Figure 1 includes only extant languages. Most of the tables below also include a number of non-extant languages, like Latin and Etruscan.
2. One further language of Europe not represented in my sample that fits into this category is Sorbian. See Siewierska & Uhlířová (this volume).

3. A possessive word can also follow the noun in Welsh, but occurs simultaneously with a prenominal possessive.

4. Table 5 lists those languages where I have been able to identify a 'basic' order for the noun and the modifier in question. Where languages listed in Table 3 do not appear in Table 5, this is either because the sources I have consulted to date do not provide sufficient basis for my concluding what the basic order is for the noun and the modifier in question, or because the both orders of noun are sufficiently common that I have refrained from treating either as basic. English, for example, I treat as indeterminately GenN/NGen.

5. The hierarchy in (2) occasionally ignores some variation among the languages of individual groups of languages, where I have chosen what I take to be the dominant pattern within the group. The position of Germanic is discussed below.

6. However, Siewierska, Rijkhoff & Bakker (appendix, this volume) list Abkhaz, Adygh, Kabardian as languages in which the dominant order is noun-numeral. There are also many other languages of Europe that allow noun-numeral order as an alternative order. See Siewierska, Rijkhoff & Bakker (appendix).

7. Again NDem order exists as an alternative order among some of the languages in Europe in which DemN is the dominant order. See Siewierska, Rijkhoff & Bakker (appendix).

8. Fife (1993: 20) is a recent example of this view. He states that the a number of features of Celtic languages, including noun-modifier order, "obviously stem from the VSO typology".

9. Note that as I employ the term here, Eurasia excludes Semitic languages of the Middle East (whose genetic connections are in Africa) as well as Southeast Asia, which I treat as part of an area Southeast Asia & Oceania. This area includes the Sino-Tibetan languages and other languages to the southeast. Eurasia includes Japanese, Korean, Mongolian, and the languages of the Indian subcontinent that are not Tibeto-Burman, as well as all languages to the north and west of these. The numeric data cited here and below includes a number of ancient languages, like Latin and Etruscan, that are excluded from the maps and list of languages above.

10. Table 5 above lists only 3 genera in Europe containing VO & NAdj languages. This is because that table excludes languages not currently spoken and Koine Greek is classified in my database as an instance of this type, in contrast to Modern Greek, which is classified as VO & AdjN.

11. Note that I define proportions of genera in this way so that the proportions for the two types add up to 100%. As I define it, this is not the same as the proportion of genera containing VO languages in the area, since it is possible for a given genus to contain languages of both sorts. This applies to all references in this paper to proportions of genera.

12. Unlike the map in Fig. 1, the map in Fig. 14 includes a number of ancient languages, including Latin, Etruscan, Sumerian, Elamite, and Hittite.

13. Recall that for the purposes of this paper, Eurasia excludes Southeast Asia and the Semitic languages of the Middle East. In particular, this means that Table 14 does not include a number of OV & NAdj Tibeto-Burman languages shown on the map in Fig. 2 north and northeast of India (including some in northeast India).

14. The classification of Abkhaz as NAdj is itself not straightforward. Yakov Testelec (personal communication) has informed me that the postnominal adjectives in Abkhaz (and other West Caucasian languages) really form a single phonological word

with the preceding noun, even though Hewitt (1979) represents them as separate words. Nominal suffixes, such as plural marking and the indefinite article, attach after the adjective rather than after than noun. The class of postnominal adjectives is closed. Hewitt (p. 59) cites an example with three postnominal adjectives; it is not clear whether Testelec would view all of these as bound to the noun. Testelec has informed me that there is also a class of adjectival words that precede the noun, either borrowed or formed from nouns, and that the quality adjectives that follow the noun can also precede the nouns as participles of predicate forms; the latter appear to be relative clauses. If the adjective is itself modified, only this prenominal construction is possible (Hewitt, p. 53). Siewierska, Rijkhoff & Bakker (appendix, this volume) classify the postnominal adjective in Abkhaz as a semi-compound. They also list Abaza and Adygh as being OV and NAdj.

15. See Nichols (1992: 210) for some discussion about the spread of typological characteristics in Eurasia. She attributes the distribution of dependent-marking in Eurasia to an early spreading of Indo-European that included areas in central Asia where they were later displaced by Turkic languages. The large OV head-final area in Asia is also largely dependent-marking, so it is plausible that the distributions of these two characteristics are related, though as Nichols notes, word order is spread by contact more often than the type of marking is.

16. Eska & Evans (1993) discuss evidence that Proto-Celtic was not verb-initial (based on evidence from Continental Celtic). Gensler (1993) discusses similarities between Celtic languages and Berber languages (verb-initial Afroasiatic languages spoken in northwest Africa) that suggest possible common influence from pre-Indo-European languages in western Europe. Some of the word order characteristics that distinguish Celtic from other branches of Indo-European may well reflect such influence. See also Pokorny (1927–1930) and Wagner (1959) for related discussion.

17. Vennemann (1989: 30) proposes an argument of this form for French.

18. VO and VNeg order also occur in Danish main clauses not containing an auxiliary verb (Koefoed 1958: 195). Haiman (1988: 376) notes that the Surselvan dialect of Rhaeto-Romansch is also VO and VNeg, the preverbal negative from Old Surselvan (which still occurs in the other modern Rhaeto-Romansch dialects) having been lost. There are other VO languages with postverbal negatives that co-occur with a preverbal negative, as in Standard French; the focus of the discussion here is on the fact that the postverbal negative in Colloquial French has become the primary indicator of negation.

19. In the discussion here, I will restrict attention to negative particles that are clearly not themselves verbs and that are not affixes on the noun. Both of the latter types of negatives exhibit rather different patterns from negative particles (see Dryer 1992).

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