Chapter 5

SOME UNIVERSALS OF GRAMMAR WITH PARTICULAR REFERENCE TO THE ORDER OF MEANINGFUL ELEMENTS

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1. Introduction

The tentative nature of the conclusions set forth here should be evident to the reader. Without much more complete sampling of the world's languages, the absence of exceptions to most of the universals asserted here cannot be fully assured. As indicated by the title, attention has been concentrated largely, but by no means exclusively, on questions concerning morpheme and word order. The reason for this choice was that previous experience suggested a considerable measure of orderliness in this particular aspect of grammar. In the body of this paper a number of universals are proposed. A large proportion of these are implicational; that is, they take the form, given x in a particular language we always find y. When nothing further is said, it is understood that the converse, namely, given y we always find x, does not hold. Where the two sets of characteristics are binary, the typical distribution in a tetrachoric table is a zero as one of the four entries.[1] From the point of view of scientific methodology, there is nothing to apologize for in such results, and this for two reasons. The lowest level laws as described in manuals of scientific method take precisely this form.[2] Secondly, what seem to be non-implicational universals about language are in fact tacitly implicational since they are implied by the definitional characteristics of language.[3] Further, to assert the definitional characteristics themselves is obviously tautologous.

It is perhaps worth while to point out that a number of universals of the second type, that is, those implied by the definitional characteristics of language, although not usually formally stated in this paper, are in fact involved in the notion of the general comparability of languages in the grammatical sphere which underlies the specific statements found here. For example, a whole series of universals in the usual sense are assumed in such a statement as the following: If a language has verb-

subject-object as its basic word order in main declarative clauses, the dependent genitive always follows the governing noun. It is here assumed, among other things, that all languages have subject-predicate constructions, differentiated word classes and genitive constructions, to mention but a few. I fully realize that in identifying such phenomena in languages of differing structure, one is basically employing semantic criteria. There are very probably formal similarities which permit us to equate such phenomena in different languages. However, to have concentrated on this task, important in itself, would have, because of its arduousness, prevented me from going forward to those specific hypotheses, based on such investigation, which have empirical import and are of primary interest to the non-linguist. Moreover, the adequacy of a cross-linguistic definition of 'noun' would, in any case, be tested by reference to its results from the viewpoint of the semantic phenomena it was designed to explicate. If, for example, a formal definition of 'noun' resulted in equating a class containing such glosses as 'boy', 'nose', and 'house' in one language with a class containing such items as 'eat', 'drink', and 'give' in a second language, such a definition would forthwith be rejected and that on semantic grounds. In fact, there was never any real doubt in the languages treated about such matters. There is every reason to believe that such judgments have a high degree of validity. If, for example, someone were to dispute the specific assignment of order type of a genitive construction given in this paper, it is quite clear on what evidence such an assignment would be accepted or rejected.

For many of the statements in this paper, a sample of the following 30 languages has been utilized: Basque, Serbian, Welsh, Norwegian, Modern Greek, Italian, Finnish (Europe); Yoruba, Nubian, Swahili, Fulani, Masai, Songhai, Berber (Africa); Turkish, Hebrew, Burushaski, Hindi, Kannada, Japanese, Thai, Burmese, Malay (Asia); Maori, Loritja (Oceania); Maya, Zapotec, Quechua, Chibcha, Guarani (American Indian).

This sample was selected largely for convenience. In general, it contains languages with which I had some previous acquaintance or for which a reasonably adequate grammar was available to me. Its biases are obvious, although an attempt was made to obtain as wide a genetic and areal coverage as possible. This sample was utilized for two chief purposes. First, it seemed likely that any statement which held for all of these 30 languages had a fair likelihood of complete or, at least, nearly complete universal validity. Less reliably, it serves to give some notion of the relative frequency of association of certain grammatical traits. In this respect, of course, it is not to be taken literally. On some questions I have gone well outside the sample.

The main section of the paper which follows is concerned with the establishment of universals on the basis of the empirical

linguistic evidence. These are presented with a minimum of theoretical comment. The final section is exploratory, seeking to discover what general principles may exist from which at least some of the generalizations of the earlier sections might be deduced. For convenience of exposition, the universals scattered though the text are repeated for cross-reference in Appendix 3. The theoretical section is far more speculative and uncertain than the sections devoted to the universals themselves. In a certain sense we would prefer to have as few universals as possible, not as many. That is, we would like to be able to deduce them from as small a number of general principles as possible. However, the establishment of a relatively large number of empirical generalizations must, on the whole, come first. For one thing, it would be embarrassing to deduce a particular universal from what seemed like a valid general principle, only to discover that the generalization was not empirically valid.

2. The Basic Order Typology[4]

Linguists are in general familiar with the notion that certain languages tend consistently to put modifying or limiting elements before these modified or limited, while others just as consistently do the opposite. For an example of the former type, Turkish puts adjectives before the nouns they modify, places the object of the verb before the verb, the dependent genitive before the governing noun, adverbs before adjectives which they modify, etc. Such languages, moreover, tend to have postpositions for concepts expressed by prepositions in English. A language of the opposite type is Thai, in which adjectives follow the noun, the object follows the verb, the genitive follows the governing noun, and there are prepositions. The majority of languages, as for example English, are not as well marked in this respect. In English, as in Thai, there are prepositions, and the noun object follows the verb. On the other hand, English resembles Turkish in that the adjective precedes the noun. Moreover, in the genitive construction both orders exist: 'John's house' and 'the house of John'.

More detailed consideration of these and other phenomena of order soon reveals that some factors are closely related to each other while others are relatively independent. For reasons which will appear in the course of the exposition, it is convenient to set up a typology involving certain basic factors of word order. This typology will be referred to as the basic order typology. Three sets of criteria will be employed. The first of these is the existence of prepositions as against postpositions. These will be symbolized as Pr and Po, respectively. The second will be the relative order of subject, verb and object in declarative sentences with nominal subject and object. The vast majority

of languages have several variant orders but a single dominant one. Logically there are six possible orders: SVO, SOV, VSO, VOS, OSV, and OVS. Of these six, however, only three normally occur as dominant orders. The three which do not occur at all, or at least are excessively rare, are VOS, OSV, and OVS. These all have in common that the object precedes the subject. This gives us our first universal:

Universal 1. In declarative sentences with nominal subject and object, the dominant order is almost always one in which the subject precedes the object.[5]

This leaves us with three common types, VSO, SVO, and SOV. These will be symbolized as I, II, and III, respectively, reflecting the relative position of the verb.

The third basis of classification will be the position of qualifying adjectives; (i.e., those designating qualities), in relation to the noun. As will be seen later, the position of demonstratives, articles, numerals, and quantifiers; (e.g., 'some', 'all'), frequently differs from that of qualifying adjectives. Here again there is sometimes variation, but the vast majority of languages have a dominant order. Dominant order with adjective preceding noun will be symbolized by A and dominant order noun preceding adjective by N. We thus arrive at a typology involving $2 \times 3 \times 2$, that is, twelve logical possibilities. The 30 languages of the sample are distributed among these twelve classes as follows:[6]

Table 1.

	I	II	III
Po-A	0	1	6
Po-N	0	2	5
Pr-A	0	4	0
Pr-N	6	6	0

The table has been arranged so that the 'extreme' types Po-A and Pr-N are in the first and fourth row, respectively. It is evident that with respect to these extremes, I and III are polar types, the former being strongly correlated with Pr-N and the latter with Po-A. Type II is more strongly correlated with Pr-N than with Po-A. It is also clear that adjective position is less closely related to types I, II, and III than is the Pr/Po contrast. The table is, I believe, a fair representation of the relative frequency of these alternatives on a world-wide basis. Type II is the most frequent; type III almost as common; I is a definite minority. This means that the nominal subject regularly precedes the verb in a large majority of the world's languages.

Turning for a moment to genitive order, it may be noted that this characteristic might fittingly have been utilized for typological purposes. The reason for not employing it is its extremely high correlation with Pr/Po, a fact generally known to linguists. It would thus virtually have duplicated this latter criterion. It was not chosen because Pr/Po on the whole is slightly more

highly correlated with other phenomena. Of the present sample of 30 languages, 14 have post-positions, and in every one of these the genitive order is genitive followed by governing noun. Of the 14 prepositional languages, 13 have the genitive following the governing noun. The only exception is Norwegian, in which the genitive precedes. Thus, 29 of the 30 cases conform to the rule. If anything, 1/30 is an overestimation of the proportion of exceptions on a world-wide basis. We therefore have the following universal:

Universal 2. In languages with prepositions, the genitive almost always follows the governing noun, while in languages with postpositions it almost always precedes.

Turning once more to the data of Table I, it is a striking evidence of lawful relationships among the variables that of the 12 possibilities 5, or almost half, are not exemplified in the sample. All of these types are either rare or non-existent.[7] For type I, we see that all 6 languages of the sample are Pr/N. This holds with extremely few exceptions on a world-wide basis. There are, however, a few valid examples of I/Pr/A, the mirror image, so to speak, of the fairly frequent III/Po/N. On the other hand, there are, as far as I know, no examples of either I/Po/A or I/Po/N. Hence we may formulate the following universal:

Universal 3. Languages with dominant VSO order are always prepositional.

Languages of type III are, as has been seen, the polar opposites of type I. Just as there are no postpositional languages in type I, we expect that there will be no prepositional languages in type III. This is overwhelmingly true, but I am aware of several exceptions.[8] Since, as has been seen, genitive position correlates highly with Pr/Po, we will expect that languages of type III normally have GN order. To this there are some few exceptions. However, whenever genitive order deviates, so does adjective order, whereas the corresponding statement does not hold for Pr/Po.[9] We therefore have the following universals:

Universal 4. With overwhelmingly greater than chance frequency, languages with normal SOV order are postpositional.

Universal 5. If a language has dominant SOV order and the genitive follows the governing noun, then the adjective likewise follows the noun.

An important difference may be noted between languages of types I and III. In regard to verb-modifying adverbs and phrases as well as sentence adverbs, languages of type I show no reluctance in placing them before the verb so that the verb does not necessarily begin the sentence. Further, all VSO languages apparently have alternative basic orders among which SVO always figures. On the other hand, in a substantial proportion, possibly

a majority, of type III languages, the verb follows all of its modifiers and if any other basic order is allowed, it is OSV. Thus the verb, except possibly for a few sentence modifiers (e.g., interrogative particles) is always at the end in verbal sentences. It is not logically required, of course, that languages all of whose basic orders involve the verb in the third position should also require all verb modifiers to precede the verb, but this seems to hold empirically. Languages in which, thus, the verb is always at the end may be called the 'rigid' subtype of III. In the present sample, Burushaski, Kannada, Japanese, Turkish, Hindi, and Burmese belong to this group, while Nubian, Quechua, Basque, Loritja, and Chibcha do not.[10] These considerations permit us to state the following as universals:

Universal 6. All languages with dominant VSO order have SVO as an alternative or as the only alternative basic order.

Universal 7. If in a language with dominant SOV order, there is no alternative basic order, or only OSV as the alternative, then all adverbial modifiers of the verb likewise precede the verb. (This is the "rigid" subtype of III.)

3. Syntax

Having defined the basic order typology and stated some of the universals that can be most immediately derived from the consideration of its defining properties, we turn to a number of syntactic universals, many but not all of which are associated with this typology. One set of criteria employed in this typology was the order of nominal subject, nominal object, and verb in declarative sentences. One reason for stating the criteria in this manner was that interrogative sentences tend to exhibit certain characteristic differences as compared to declarative statements. There are two main categories of questions, those of the yes-no variety and those involving specific question words. A common method of differentiating yes-no questions from the corresponding statement is by a difference of intonational pattern, as in English. Our knowledge of these patterns still leaves much to be desired. However, the following statement seems to be sufficiently documented:

Universal 8. When a yes-no question is differentiated from the corresponding assertion by an intonational pattern, the distinctive intonational features of each of these patterns are reckoned from the end of the sentence rather than from the beginning.

For example, in English a yes-no question is marked by a rise in pitch in the last stressed syllable of the sentence and the corresponding statement by falling pitch. The reckoning of

distinctive patterns from the end of the sentence may well hold for all intonational patterns.

Yes-no questions may likewise be signaled by a question particle or affix. Some languages use both this method and intonation as alternatives. The position of such question markers is fixed either by reference to some specific word, most frequently the verb, or the emphasized word of the question, or it may be fixed by position in the sentence as a whole. In languages of the rigid subtype III, it is of course impossible to distinguish between position after the verb and position at the end of the sentence. In the present sample, there are 12 languages with such initial or final particles. These 12 examples are distributed as follows with reference to the basic order typology:[11]

Table 2.

	I	II	III
Initial particle	5	0	0
Final particle	0	2	5

The two examples of a final particle in group II are prepositional languages (Thai and Yoruba) The table includes only cases where there is a single such particle or affix in the language, or there are several following the same rule. In two of the languages in the samples, there is more than one such element, each with differing rules. Zapotec (I/Pr) has either an initial particle alone or this same particle in conjunction with a final particle. Songhai (II/Po) has three such particles, two of them an initial and one a final particle. These complications as well as the fact that at least one language outside of the sample belonging to (II/Po), namely, Lithuanian, has an initial particle suggest the following rather cautious statement:

Universal 9. With well more than chance frequency, when question particles or affixes are specified in position by reference to the sentence as a whole, if initial, such elements are found in prepositional languages, and, if final, in postpositional.

Where specification depends on some particular word, the particle almost always follows. Such particles are found in 13 languages of the present sample.[12] Examples of the rigid subtype III are counted both in this and the previous category. Of these 13, 12 are suffixed. They include both prepositional and postpositional languages, but none in group I. The following, therefore probably holds:

Universal 10. Question particles or affixes, when specified in position by reference to a particular word in the sentence, almost always follow that word. Such particles do not occur in languages with dominant order VSO.

The other basic kind of question, that involving an interrogative word, likewise shows a definite relationship to the basic

order typology. In such sentences, many languages have a different word order than that of the corresponding declarative sentence. Characteristically, the question word comes first, except for the possible retention of normal order within smaller units (e.g., phrases). This holds in English, for example where the question word is first in 'What did he eat?' as against the statement, 'He ate meat'. The second point is illustrated by 'With whom did he go?' as against 'He went with Henry', where the question phrase comes first but the order within the phrase itself is not disturbed. Many languages which put interrogatives first likewise invert the order of verb and subject (e.g., German 'Wen sah er?'). Such languages sometimes invert for yes-no questions, (e.g., 'Kommt er?'). It appears that only languages with interrogative always initially invert, and only languages which invert in interrogative word questions invert for yes-no questions. [13]

In the present sample, 16 languages put the interrogative word or phrase first. They are distributed as follows:

Table 3.

	I	II	III
Question word first	6	10	0
Question and statement order identical	0	3	11
	Pr	Po	
Question word first	14	2	
Question and statement order identical	2	12	

A definite relationship thus appears, and we have the following universals:

Universal 11. Inversion of statement order so that verb precedes subject only occurs in languages where the question word or phrase is normally initial. This same inversion occurs in yes-no questions only if it also occurs in interrogative word questions.

Universal 12. If a language has dominant order VSO in declarative sentences, it always puts interrogative words or phrases first in interrogative word questions; if it has dominant order SOV in declarative sentences, there is never such an invariant rule.

Verbal subordination to verb will be considered next. Semantically, the concepts to be considered here include time, cause, purpose, and condition. Formally, we have one or more of the following: introductory words (i.e., "conjunctions"); and verbal

inflections, whether finite, involving categories of person and number (e.g., subjunctives) or non-finite forms such as verbal nouns, gerundives, etc. It seems probable that conjunctions are more frequent in prepositional languages, non-finite verb forms in postpositional languages, and that finite verb forms are found in both, but this point was not investigated. In accordance with the overall emphasis of the paper, attention was directed to the question of the relative order of subordinate and main verbal forms. Since the subordinate verb qualifies the main verb, we would expect it to precede the main verb in all languages of the rigid subtype of III. Since this subtype was defined merely in terms of the invariable precedence of noun object, the question remains for empirical verification. In fact, this turns out to be true for all the languages of this subtype in the sample, and no doubt holds generally. [14] In languages of other types certain characteristics of individual constructions appear. The normal order everywhere is for the protasis of conditional constructions to precede the apodosis, that is, for the condition to precede the conclusion. This is true for all 30 languages of the sample. In languages of the rigid subtype of III the protasis never follows, but in other languages it will do so occasionally.

On the other hand, in expressions of purpose and volition the normal order is for these to follow the main verb except in languages of the rigid subtype of III. Here again there are no exceptions in the sample. We have therefore the following universals:

Universal 13. If the nominal object always precedes the verb, then verb forms subordinate to the main verb also precede it.

Universal 14. In conditional statements, the conditional clause precedes the conclusion as the normal order in all languages.

Universal 15. In expressions of volition and purpose, a subordinate verbal form always follows the main verb as the normal order except in those languages in which the nominal object always precedes the verb.

Another relation of verb to verb is that of inflected auxiliary to main verb. For present purposes, such a construction will be defined as one in which a closed class of verbs (the auxiliaries) inflected for both person and number, is in construction with an open class of verbs not inflected for both person and number. For example, in English 'is going' is such a construction. This definition, of course, excludes the possibility of such a construction in languages in which the verb has no category of person and number (e.g., Japanese). In the sample of 30 languages, 19 have such inflected auxiliaries. They are distributed as follows among the order types:[15]

Table 4.

	I	II	III
Auxiliary precedes verb	3	7	0
Auxiliary follows verb	0	1	8

	Pr	Po
Auxiliary precedes verb	9	1
Auxiliary follows verb	0	9

These data suggest the following universal:

Universal 16. In languages with dominant order VSO, an inflected auxiliary always precedes the main verb. In languages with dominant order SOV, an inflected auxiliary always follows the main verb.

Uninflected auxiliaries will be considered later in connection with verb inflections.

In nominal phrases, the position of attributive adjectives in relation to the noun modified is a key factor. The position of the qualifying adjective shows a definite though only statistical relation to the two other bases of the typology. A summary of these data for the languages of the sample is as follows:

Table 5.

	I	II	III
NA	6	8	5
AN	0	5	6

	Pr	Po
NA	12	7
AN	4	7

In general, then, the tendency is for adjectives to follow the noun in prepositional languages, and most strongly so in languages of type I, which are always prepositional as has been noted. There are a few rare exceptions, not in the sample, of languages of type I with adjective before the noun, as was noted earlier. Hence, we have the following near universal:

Universal 17. With overwhelmingly more than chance frequency, languages with dominant order VSO have the adjective after the noun.

From the data of Table 5, it will also be noticed that there are 19 languages with adjective after the noun, as against 11 with the adjective before the noun. This is representative of a general tendency which very nearly overrides the opposite rule to be expected in languages of type III.

The position of demonstratives and numerals is related to that of descriptive adjectives in individual languages. However, these items show a marked tendency to precede even when the descriptive adjective follows. On the other hand, when the descriptive adjective precedes, then the demonstratives and numerals virtually always precede the noun likewise. The data from the sample languages follows:

Table 6.

	NA	AN
Dem. - Noun	12	7
Noun - Dem.	11	0
Num. - Noun	8	10
Noun - Num.	11	0

In one language, Guarani, numbers may either precede or follow the noun and this case was not included in the table. In Guarani, the adjective follows the noun as would be expected. In the case of numbers, it should be noted that for languages with numeral classifiers, it was the position of the numeral in relation to the classifier which was taken into account.[16] There seems to be no relation between the position of the numeral and the demonstrative outside of that mediated by adjective position. Languages in which the adjective follows the noun may have numeral preceding while demonstrative does not, demonstrative preceding while numeral does not, both preceding or neither preceding. Outside of the sample, however, there are a small number of instances (e.g., Efik) in which the demonstrative follows while the adjective precedes. It may be noted that other quantifiers (e.g. 'some', 'all'), and interrogative and possessive adjectives show this same tendency to precede the noun, as evidenced, for example in the Romance languages, but those cases were not studied. We have then the following universals:

Universal 18. When the descriptive adjective precedes the noun, the demonstrative, and the numeral, with overwhelmingly more than chance frequency, does likewise.

An additional related observation may be noted:

Universal 19. When the general rule is that the descriptive adjective follows, there may be a minority of adjectives which usually precede, but when the general rule is that descriptive adjectives precede, there are no exceptions.

This last universal is illustrated by Welsh and Italian in the present sample.

The order within the noun phrase is subject to powerful constraints. When any or all of the three types of qualifiers precede the noun, the order among them is always the same: demonstrative, numeral, and adjective, as in English, 'these five houses'.

When any or all follow, the favorite order is the exact opposite: noun, adjective, numeral, demonstrative. A less popular alternative is the same order as that just given for the instances in which these elements precede the noun. An example of the latter is Kikuyu, a Bantu language of East Africa, with the order, 'houses these five large', instead of the more popular 'houses large five these'. We have, then, a universal:

Universal 20. When any or all of the items (demonstrative, numeral, and descriptive adjective) precede

the noun, they are always found in that order. If they follow, the order is either the same or its exact opposite.

The order of adverbial qualifiers of adjectives in relation to the adjective will now be considered. This order also shows a definite relation to that between the descriptive adjective and the noun, as shown by the following table. In the third row are cases in which certain adverbs precede and others follow.[17]

Table 7.

	AN	NA
Adverb-Adjective	11	5
Adjective-Adverb	0	8
Adj.-Adv. and Adv.-Adj.	0	2

From Table 7 it can be seen that there is a tendency for the adverb to precede the adjective which can only be overridden in some cases when the adjective follows the noun. The situation thus far is similar to that obtaining with regard to demonstratives and numerals. However, if we look further we note that all of those languages in which some or all adverbs follow the adjective not only have the noun followed by the adjective, but also are likewise all of types I and II. Thus we have a universal:

Universal 21. If some or all adverbs follow the adjective they modify, then the language is one in which the qualifying adjective follows the noun and verb precedes its nominal object as the dominant order.

One other topic concerning the adjective will be considered, that of comparisons, specifically that of superiority as expressed, for example in English, by sentences of the type 'X is larger than Y'. A minority of the world's languages have, like English, an inflected comparative form of the adjective. More frequently a separate word modifies the adjective, as in English, 'X is more beautiful than Y', but in many languages this is optional or does not exist at all. On the other hand, there is always some element which expresses the comparison as such, whether word or affix, corresponding to English 'that', and obviously both the adjective and the item with which comparison is made must be expressed. We thus have three elements whose order can be considered, as in English larg(er) than Y. These will be called adjective, marker of comparison, and standard of comparison. The two common orders are: adjective, marker, standard (as in English); or the opposite order, standard, marker, adjective. These two alternatives are related to the basic order typology, as shown by the following table.[18] A number of languages are not entered in this table because they utilize a verb with general meaning 'to surpass'. This is particularly common in Africa (e.g., Yoruba): 'X is large, surpasses Y'. Loritja, an Australian language which has 'X is large, Y is small', is likewise not entered.

Table 8.

	I	II	III
Adjective-Marker-Standard	5	9	0
Standard-Marker-Adjective	0	1	9
Both	0	1	0

	Pr	Po
Adjective-Marker-Standard	13	1
Standard-Marker-Adjective	0	10
Both	0	1

Universal 22. If in comparisons of superiority, the only order, or one of the alternative orders, is standard-marker-adjective, then the language is postpositional. With overwhelmingly more than chance frequency if the only order is adjective-marker-standard, the language is prepositional.

A clear relation to the basic order typology is likewise found in constructions of nominal apposition, particularly those involving a common along with a proper noun. A number of semantic and formal subtypes are involved (e.g., titles of address, 'Mr. X', as against appellations 'Avenue X'). The latter type is in certain cases assimilation to the genitive, and may therefore be expected to show a similar order (e.g., 'the city of Philadelphia'). English is somewhat ambivalent, doubtless because of adjective-noun order, as can be seen from '42nd Street' vs. 'Avenue A', or 'Long Lake' vs. 'Lake Michigan'. Most languages, however, have a single order (e.g., French, 'Place Vendôme', 'Lac Génève', 'Boulevard Michelet', etc.). My data here are incomplete because grammars often make no statement on the subject, and I was dependent on text examples. [19]

In the following table, contrary to usual practive, the genitive construction is used instead of Pr/Po since it gives more clear-cut results.

Table 9.

	I	II	III
Common Noun-Proper Noun	2	7	0
Proper Noun-Common Noun	0	2	6

	GN	NG
Common Noun-Proper Noun	8	1
Proper Noun-Common Noun	0	8

Universal 23. If in apposition the proper noun usually precedes the common noun, then the language is one in which the governing noun precedes its dependent genitive. With much better than chance frequency, if the common noun usually precedes the proper noun, the dependent genitive precedes its governing noun.

As the concluding item in the discussion of nominal construction, we take the relative clause which modifies a noun (e.g., English, 'I saw the man who came', 'I saw the student who failed the examination'). Here again there is considerable diversity of formal means from language to language. All that will be considered here is the order as between nominal antecedent and the verb of the relative clause (e.g., 'man' and 'came' in the first sentence above).

Once more the distribution of the rules of order, as set forth in Table 10, shows a clear relation to the categories of the basic order typology.[20]

Table 10.

	I	II	III
Relational expression precedes noun	0	0	7
Noun precedes relational expression	6	12	2
Both constructions	0	1	1

	Pr	Po
Relational expression precedes noun	0	7
Noun precedes relational expression	16	4
Both constructions	0	2

From Table 10 it is clear that if the relational expression precedes the noun either as the only construction or as alternate construction, the language is postpositional. However, outside of the sample there is at least one exception, Chinese, a prepositional language in which the relational expression precedes the noun. It is plausible to explain this deviation as connected with the fact that in Chinese the adjective precedes the noun. As with adjective-noun order there is a pronounced general tendency for the relative expression to follow the noun it qualifies. This tendency is sometimes overcome but only if (1) the language is prepositional or (2) if the qualifying adjective precedes the noun.

Universal 24. If the relative expression precedes the noun either as the only construction or as an alternate construction, either the language is postpositional, or the adjective precedes the noun or both.

Thus far nothing has been said about pronouns. In general, pronouns exhibit differences regarding order when compared

with nouns. This was the reason for specifying nominal subject and nominal object in the definitions of the basic typology. One peculiarity of pronominal order is illustrated by French where we have, 'Je vois l'homme' but 'Je le vois'; that is, the pronominal object precedes, whereas the nominal object follows. Similar examples are found in a number of languages of the sample. In Italian, Greek, Guarani, and Swahili, the rule holds that the pronominal object always precedes the verb, whereas the nominal object follows. In Italian and Greek, however, the pronoun follows just as does the nominal object with imperatives. In Berber the pronoun objects, direct or indirect, precede the verb when the verb is accompanies by the negative or future particle. In Loritja, the pronominal object may be an enclitic added to the first word of the sentence. In Nubian, the usual nominal order is SOV, but the alternative SVO is fairly frequent. For pronominal object, this alternative never occurs. In other words, the pronominal object always precedes the verb, whereas the nominal object may either precede or follow. In Welsh, in an alternative order with emphasis on the pronoun subject, the pronoun subject comes first in the sentence. In such sentences the pronominal object precedes the verb but the nominal object follows. Finally, in Masai, whereas normal order for nominal object is VSO, a pronominal object precedes a nominal subject and immediately follows the verb.

No contrary instances occur in the sample of a pronominal object regularly following the verb while a nominal object precedes. We may therefore state the following universal:

Universal 25. If the pronominal object follows the verb, so does the nominal object.

[redacted]