SYNTACTIC WORD ORDER

IN HERODOTUS

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The study which follows is an attempt to approach the question of Greek word order in a contemporary perspective and from a linguistic viewpoint. The topic of word order was chosen because it is one of the major outstanding problems of Greek philology and there is very little written about it in English.

The data on which the study is based have been taken from the Oxford Text of Herodotus I. The choice of author was dictated partly by personal preference, partly by the fact that Herodotus writes in a simple, unaffected style which is relatively free from the influence of rhetoric. This has encouraged the hope that conclusions made regarding the Greek of Herodotus can be generalised to cover other forms of ancient Greek. In any case the validity of this assumption will not affect the value of the work as a study of Herodotean Greek.
ABBREVIATIONS

A  adjectival; head of an endocentric construction
a  observed integer value; modifier of an endocentric construction
acc accusative case
ADJ adjective
adj adjective
anim animate
ASTEM adjective stem
ASUF adjective suffix
b  observed integer value; modifier of an endocentric construction
BGAP gap to both right and left
c  expected value
COGN is cognate with
CONJ conjunction
cont continuous aspect
D  articular
DEP defining function
DET definite article
DIR directional phrase (i.e. allative)
Diss. Dissertation
DOBJ direct object
DOBJNO direct object number
DSTEM articular stem
DSUF articular suffix
e  expected value
ed.  editor
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>ELEM</td>
<td>syntactic element</td>
</tr>
<tr>
<td>EXEL</td>
<td>extraneous element (i.e. from another construction)</td>
</tr>
<tr>
<td>G-Index</td>
<td>Gapping Index</td>
</tr>
<tr>
<td>H</td>
<td>construction head</td>
</tr>
<tr>
<td>HWORD</td>
<td>head word</td>
</tr>
<tr>
<td>I</td>
<td>integer variable</td>
</tr>
<tr>
<td>i</td>
<td>integer variable</td>
</tr>
<tr>
<td>ICATS</td>
<td>inflectional categories and function</td>
</tr>
<tr>
<td>I.E.</td>
<td>Indo-European</td>
</tr>
<tr>
<td>J-Index</td>
<td>Inversion-Index</td>
</tr>
<tr>
<td>indic</td>
<td>indicative</td>
</tr>
<tr>
<td>INT</td>
<td>interrogative</td>
</tr>
<tr>
<td>IOBJ</td>
<td>indirect object</td>
</tr>
<tr>
<td>J</td>
<td>integer variable</td>
</tr>
<tr>
<td>K</td>
<td>integer variable</td>
</tr>
<tr>
<td>L</td>
<td>integer variable</td>
</tr>
<tr>
<td>LGAP</td>
<td>gap to the left</td>
</tr>
<tr>
<td>M</td>
<td>integer variable</td>
</tr>
<tr>
<td>m</td>
<td>modifier</td>
</tr>
<tr>
<td>masc</td>
<td>masculine gender</td>
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<tr>
<td>MCLAUSE</td>
<td>main clause</td>
</tr>
<tr>
<td>MCONJ</td>
<td>main conjunction</td>
</tr>
<tr>
<td>MNEGATIVISE</td>
<td>negativise with μη</td>
</tr>
<tr>
<td>MOD</td>
<td>modifier</td>
</tr>
<tr>
<td>MODSIGN</td>
<td>sign of subscript of modifier</td>
</tr>
<tr>
<td>ms.</td>
<td>manuscript</td>
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<tr>
<td>N</td>
<td>integer variable; nominal</td>
</tr>
<tr>
<td>n</td>
<td>integer variable; sample size</td>
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</table>
nom  nominative case
NP   noun phrase
NSTEM noun stem
NSUF noun suffix
o    observed value
ONEGATIVISE negativise with oφ(x)
PASSFORM convert to passive form
pers person
pres present tense
Prog. Programm
QUAL qualifying function
RADVERBIAL relatorisable adverbial
RANDELETE delete at random
RANSEQ sequence at random
RELATIV convert to a relative clause
RELT relator
repr. reprinted
RGAP gap to the right
SCLAUSE subordinate clause
SCONJ subordinate conjunction
SENT sentence
S-Index Spaltung-Index
sing singular
SINT subordinate interrogative
SUBJ subject function
SUBS subscript
SUF suffix
third third person
V verb; verbal
VMOD modifier of a verb
VNO verb number
VP verb phrase
VSTEM verb stem
VSUF verb suffix
W syntactic entity
X syntactic entity; marked point
Y syntactic entity
\[\rightarrow\] is rewritten as, develops from
\[\dagger\] sentence boundary
\[\dagger\dagger\] plus sign; positive; concatenation marker
\[\dagger\dagger\dagger\] minus sign; negative
\[\ddagger\] ambivalently charged
\[=\] is equal to
\[?\] optional
\[/\] or; in relation to
\[\emptyset\] zero
\[*\] form not attested
\[>\] is greater than; changes to
\[\gg\] is more essential than
\[\Psi\] a real number between 0 and 100
ABSTRACT

The purpose of the thesis is to determine whether Greek word order is free in terms of syntax. The word order of most natural languages is subject to two formal syntactic restrictions which are referred to here as the typological constraint (requiring modifiers to consistently precede or follow their heads), and the syntactic integrity constraint (requiring modifiers to be united with and not split off from their heads).

Although the typological constraint is not really observed in Greek certain statistical tendencies or norms can be identified. Some modifiers mostly but not always precede their heads; others mostly but not always follow their heads; others again precede and follow their heads with almost equal frequency. The behaviour of the three classes is explained by what is called in the text a theory of polarities. This theory claims that the various classes of modifiers are attracted with varying degrees of force towards the front of the sentence, the back of the sentence, or both front and back, in which case the two tendencies cancel each other out. Where several modifiers are attached to a single head their relative placement is determined by numerical subscripts based on the frequency with which they precede or follow their heads. The order so established is treated as a conventional order. When it is violated the violation is attributed to special intervention by the author. The argument then turns to breaches of the syntactic integrity constraint.
which are also explained by the theory of polarities. Next the mechanism of fronting is investigated with a review of recent work. Finally it is concluded that word order in Herodotus I is free in the abstract but restricted by conventions in the concrete. Some of the conventions identified are not confined to Greek but are found also in other languages.
CHAPTER I

INTRODUCTION

1.1 Essentially there are two ways in which one may approach the problem of Greek word order: i.e. from the viewpoint of either (1) Greek word order as an art or (2) Greek word order as a science.

1.2 Of these the art of Greek word order is concerned with the subjective interpretation of individual examples with a view to understanding the intentions of the author in particular instances. Work of this kind falls within the ambit of literary criticism and contributes to an awareness of the uniqueness of creative writing. The scholar relies above all on his feel for the language and on his sensitivity to text and context.

1.3 The science of Greek word order, on the other hand, is the objective study of sequential word order patterns en masse in order to describe and explain word order behaviour in general.

1.4 In any scientific enquiry there are at least three stages: (1) the formulation of an hypothesis (2) the collection of data (3) the testing of the hypothesis against the data. The first requirement is to find a good hypothesis.
Often an hypothesis can be formed on the basis of work by previous scholars whose views have not yet been rigorously tested. But sometimes a completely new hypothesis is required. When this is so intuition comes into play. The faculty of intuition has been defined as "knowing without knowing how you know" (Humphreys 1962: 183) or as "a sort of divination ... a function by which you see around corners" (Jung 1968:13f.). The importance of intuition in scientific work is that it provides the student with a "hunch" or belief about his subject which can be rigorously reformulated and converted into a theory or hypothesis. But not all hypotheses are of equal value. Some are better than others. The main features of a good hypothesis are:

(a) explanatory power (including generality)
(b) testability

1.5 Particularly desirable is that the hypothesis should make predictions which can be tested and if necessary, falsified by appropriate evidence. For as Popper (1963:36) has argued, it is never really possible to prove that a given hypothesis is true. The essential activity of the scientific method is not to verify that which is true, but to refute that which is false. And if an hypothesis is not disproved by testing, it is assumed provisionally to be true, until such time as evidence is found to contradict it, and a new hypothesis has to be formulated. Thus science proceeds towards the truth by the gradual elimination of error.

1.6 Once an hypothesis has been found it becomes
possible to collect data. For until a hypothesis has been formulated it is not possible to collect data systematically, because it is only in the light of an hypothesis that one can determine what data are relevant and should be collected. Relevant data are data which might disprove the hypothesis. Finally, when the data have been collected, it becomes possible to test the hypothesis.

1.7 In testing the validity of hypotheses against data it is customary to employ standard statistical procedures which make it possible to quantify the probability that the data do or do not accord with the hypothesis being tested.

1.8 Another important aspect of scientific work is that the description of methods and materials should be as formal and as explicit as possible. This enables other investigators to repeat the work in order to independently verify the results.

1.9 Since the present study approaches Greek word order within a scientific, not a literary framework, it will be appropriate to declare at the outset the nature of the central hypothesis which is to be tested in the chapters which follow.

1.10 The starting point for the enquiry is a statement made in Dover's book, *Greek Word Order*. In his chapter entitled "Syntactic Determinants" Dover presents and examines statistics on the relative position of subject, verb and object in Greek and comes to the conclusion that syntax is not a primary determinant of
word order in Greek. His remarks on page 31 may be quoted: "It is clear", he says, "that these statistics are very far indeed from establishing for 'Classical Greek' simpliciter anything worth calling a syntactical rule of word order. Extended to a much greater variety of authors and texts they would no doubt give us an interesting picture of the vagaries of individual preference - and thereby suggest with increasing force that all patterns of order which are describable in syntactical terms are secondary phenomena."

1.11 In the light of the fact that most contemporary work on word order in natural languages is syntactically oriented it would seem opportune to critically re-examine the validity of Dover's remarks as cited above. This can be done by formulating a suitable hypothesis and testing it against a range of Greek data. The approach to the problem adopted here is to state the null hypothesis, that syntax does not determine word order in Greek, and to test this hypothesis against statistical data taken from Book I of the Histories of Herodotus. In this way it will be demonstrated, beyond reasonable doubt, that Dover's views about the impact of syntax on Greek word order are incorrect. Not only is syntax important as a determinant of Greek word order. Syntax is primary.

1.12 Since matters of syntax are central to the argument of this thesis it will be useful as a preliminary to explain some of the theoretical assumptions about
syntax upon which the work which follows is based. This is particularly necessary in view of the fact that certain modern developments in syntax depart radically from the doctrines of traditional grammar.
Figure 1

\[
\begin{align*}
\text{Δ} & \quad \text{βασιλεὺς} & \quad \text{ὄρη} & \quad \text{τὸν} & \quad \text{νέον} & \quad \text{Υππον} \\
N^1 & \\
V^P & \\
N^2 & 
\end{align*}
\]
CHAPTER II

THE SYNTACTIC MODEL

2.1 Syntax may be defined as the study of word groups within the sentence. To take an example:

ο βασιλεύς ὁρφ τὸν νέον ἦπερν

The grouping of words may be shown by a tree diagram of constituent structure, as in Figure 1; or by brackets:

(((ο βασιλεύς) (ὁρφ) (τὸν νέον ἦπερν))

The example analysed consists of the lower level noun phrases ο βασιλεύς and τὸν νέον ἦπερν which combine with ὁρφ to form a larger word group or verb phrase at a higher level.

2.2 A feature of the word groups illustrated is that they are endocentric. In endocentric constructions not all the components have the same status. It is necessary in constructions of this kind to distinguish what is referred to as the head, which is syntactically the most important item in the construction, and determines its function, from the modifiers, which are elements syntactically subordinate to the head, and are often, though not always, optional.

2.3 Thus in the group ο βασιλεύς the word βασιλεύς is the head and ο is the modifier; in the group τὸν νέον ἦπερν the word ἦπερν is the head and τὸν and νέον are modifiers; in the larger group ο βασιλεύς ὁρφ τὸν νέον ἦπερν the word ὁρφ is the head and the phrases ο βασιλεύς and τὸν νέον ἦπερν
are modifiers.

2.4 In speaking of endocentric constructions it is customary to classify the construction as a whole according to the word class of the head. Thus constructions with a noun as head are referred to as noun phrases, constructions with an adjective as head are referred to as adjective phrases, and constructions with an adverb as head are referred to as adverb phrases. The range of modifiers available to be governed by a given head may be referred to as the valency of that head.

2.5 Grammars which give priority to head/modifier relationships and represent those relationships directly are known as dependency grammars. Other types of grammar may incorporate the head/modifier distinction or produce structures which can be converted into or related to dependency relationships.

2.6 To provide an adequate basis for the study of word order which follows it will be necessary not only to describe the composition of word groups but also to assign syntactic functions as appropriate to the word groups described. The functions recognised here are familiar: subject, direct object, indirect object, complement, instrumental, sociative, locative, directional, temporal etc. Theoretically distinct but likewise necessary are the traditional cases: nominative, vocative, accusative, genitive, dative. To these can be added the adverbial markers such as prepositions.

2.7 In the not so distant past descriptions of
Figure 2

- GENERATIVE BASE

- DEEP STRUCTURE

- TRANSFORMATIONAL COMPONENT

- SURFACE STRUCTURE
syntax were taxonomic, i.e. they provided a static
description of items and their arrangement. The approach
was essentially analytic. In more recent times however
it has become evident above all through the work of
Chomsky and his followers, that the taxonomic approach
does not provide an adequate account of the creative
behaviour of speakers of natural languages.

2.8 To meet this objection many linguists now
use a dynamic syntactic model with generative notation.
The essence of generative notation is the rewrite rule
whereby a symbol representing a higher level syntactic
entity can be rewritten in terms of symbols representing
lower level syntactic entities. The initial high level
symbol is SENT, which represents "sentence", and the
ultimate output is an actual sentence in the concrete.

2.9 In constructing syntactic rules it is necessary
to distinguish between the generative rules of the base
component, which are used to produce the deep structure
of the sentence, and the transformational rules which
operate on the deep structure to produce the surface
structure. The type of grammatical device envisaged is
illustrated in Figure 2. The overt grammatical features
of the finished sentence constitute the surface structure.
But no sentence can be understood without a knowledge
of its deep structure also. Some examples and diagrams
will illustrate what is involved.

2.10 The use of simple rewrite rules to generate
deep structure will be considered first. The convention
of notation adopted here is as follows. The higher level
Figure 3
symbol to the left of the arrow is rewritten as the lower level symbol(s) to the right of the arrow.

When modifiers are generated with a head the modifiers are enclosed in brackets to the right of their heads and are separated by commas. Thus the rule \( W \rightarrow X(Y,Z) \)

indicates that a higher syntactic entity \( W \) is to be rewritten as a lower level syntactic construction \( X(Y,Z) \) in which \( X \) is the head and \( Y \) and \( Z \) are the modifiers. The result may be shown by a tree diagram (Figure 3). Here \( W \) is said to dominate \( X, Y \) and \( Z \). Alternatively one might say that \( W \) has developed into \( X(Y,Z) \), or that \( X(Y,Z) \) is a construction which can be described as a \( W \). The arrow represents the dynamics of the generative process.

2.11 For the sake of clarity in Figure 3 and subsequent diagrams modifiers will be shown beneath diagonal lines to the right of their heads, whereas heads of constructions will be found beneath vertical lines.

2.12 The adoption of the preceding notational conventions implies a claim that modifiers follow their heads in the deep structure and that the deep structure develops from left to right with higher level elements preceding lower level elements. Whether this is true of Greek is obviously open to question. The reasons for positing a left to right sequence in the syntactic base of ancient Greek will be presented in subsequent chapters. For the present it will be sufficient to
indicate that an important theoretical assumption has been made, namely that the deep structure of natural languages is sequenced. This viewpoint is contrary to that of Staal (1967: 70f.) who argued in a study based on Sanskrit that the deep structure of all natural languages is unsequenced and consists of unordered sets.

2.13 Since deep structure cannot be observed directly the question of whether or not it is sequenced is bound to remain controversial. The reasons for the stand taken on the matter here are as follows:

(1) The surface structure of language is sequenced: thus the phonology, morphology and surface syntax are sequenced; linear ordering would appear to be one of the most prominent features of language in so far as it can be observed.

(2) The human brain processes its contents sequentially. For example the operation of recall (memory) is perceived as sequential through time (Penfield 1952). Since the description of deep structure is an attempt to approximate the working of the brain when it is handling syntactic phenomena, the assumption of a linear process would seem to be reasonable.

2.14 The use of the notation may now be illustrated by a Greek example. The deep structure of the sentence

\[\delta\ \beta\alpha\sigma\iota\lambda\epsilon\delta\ \sigma\rho\iota\ \tau\omicron\ \nu\omicron\\omicron\nu\ \Lambda\pi\pi\omicron\nu\]

can be produced by rewrite rules as follows:

(1) \text{SENT} \rightarrow \text{MCONJ(VP)}

(2) \text{VP} \rightarrow \text{V(SUBJ,DOBJ)}
(3) $V \rightarrow \text{VSUF}(VSTEM)$

(4) SUBJ $\rightarrow \text{NP}^1$

(5) DOBJ $\rightarrow \text{NP}^2$

(6) NP$^1$ $\rightarrow \text{NOUN}^1(\text{DEF}^1)$

(7) NP$^2$ $\rightarrow \text{NOUN}^2(\text{QUAL,DEF}^2)$

(8) NOUN$^1$ $\rightarrow \text{NSUF}^1(\text{NSTEM}^1)$

(9) NOUN$^2$ $\rightarrow \text{NSUF}^2(\text{NSTEM}^2)$

(10) DEF$^1$ $\rightarrow \text{DET}^1$

(11) DEF$^2$ $\rightarrow \text{DET}^2$

(12) QUAL $\rightarrow \text{ADJ}$

(13) DET$^1$ $\rightarrow \text{DSUF}^1(\text{DSTEM}^1)$

(14) DET$^2$ $\rightarrow \text{DSUF}^2(\text{DSTEM}^2)$

(15) ADJ $\rightarrow \text{ASUF}(\text{ASTEM})$

(16) NSUF$^1$ $\rightarrow N^1\text{nom}$

\hspace{1cm} masc

\hspace{1cm} sing

(17) NSUF$^2$ $\rightarrow N^2\text{acc}$

\hspace{1cm} masc

\hspace{1cm} sing

(18) VSUF $\rightarrow V\text{ third}$

\hspace{1cm} sing

(19) VSTEM $\rightarrow V\text{ pres}$

\hspace{1cm} cont

(20) DSUF$^1$ $\rightarrow D^1\text{nom}$

\hspace{1cm} masc

\hspace{1cm} sing

(21) DSUF$^2$ $\rightarrow D^2\text{acc}$

\hspace{1cm} masc

\hspace{1cm} sing
(22) ASUF → A acc
      → masc
      → sing
(23) MCONJ → κατ
(24) V third → -η
      → sing
(25) V pres → δρα-
      → cont
(26) N¹ nom → -ζ
      → masc
      → sing
(27) NSTEM¹ → βασιλευ-
(28) D¹ nom → Ø
      → masc
      → sing
(29) DSTEM¹ → το-
(30) N² acc → -υ
      → masc
      → sing
(31) NSTEM² → ιπρο-
(32) A acc → -υ
      → masc
      → sing
(33) ASTEM → νεο-
(34) D² acc → -υ
      → masc
      → sing
(35) DSTEM² → το-

2.15 Rules (1) to (35) as they stand are capable of producing the deep structure of the target sentence seen
in Figure 4; but in fact this is the only sentence which they can produce in their present form. To produce a variety of deep structures for different sentences it is necessary to incorporate alternatives into the output of the rules. The alternatives are exclusive and are here separated by diagonal slashes. Thus in a complete generative base rule (1) would be represented by

\[ \text{SENT} \to \text{MCONJ(VP)}/\text{SCONJ(VP)} \]

Similarly rule (23) would appear as:

\[ \text{MCONJ} \to \text{καλ} /\text{δε} /\text{γαρ} /\text{όν} / \text{etc.} \]

and rule (27) would be reformulated as

\[ \text{NSTEM} \to \text{βασιλευ} /\text{άγαπη} /\text{ζεν} / \text{etc.} \],

and so on.

2.16 Another aspect of the generative base which must be mentioned is that some elements, and in particular some modifiers, are optional. This feature can be indicated by placing a question mark before each optional element. Thus rule (2) could be reformulated as:

\[ \text{VP} \to \text{V(?SUBJ, ?DOBJ, ?IOBJ, ?TEMP, ?etc.)} \]

This form of the rule recognises that all arguments attached to the verb are merely optional, whereas the verb itself is an obligatory part of the verb phrase.

2.17 It will be noticed that the rules have been numbered. This is because the order in which they are applied is sometimes significant. To take some examples, the number of the verb is determined by that of its subject noun. So rule (16), which assigns number to the verb, cannot be applied until after rule (16) has assigned number to the appropriate noun. Similarly
the number, gender and case of adjectives and articles are determined by the number, gender and case of their head nouns. So rules (20), (21) and (22), which assign these categories to adjectives and articles cannot operate until rules (16) and (17) have produced number, gender and case in the relevant nouns.

2.18 To return to the exemplar sentence the result of the derivation can be seen in Figure 4. But Figure 4 cannot be described as a complete Greek sentence. It is merely the deep structure of a Greek sentence. To obtain an appropriate surface structure it is necessary to apply some rules from the transformational component of the grammar.

2.19 The transformational rules are more powerful than the generative rules of the base. They have access to all of the deep structure and can operate on several elements at a time. Unlike the generative rules the transformational rules may be used to permute, delete or add symbols in the structure produced by the base. In the syntactic model adopted here each transformational rule consists of an operation command followed by one or more operands in brackets.

2.20 Take for example the rule:

\text{DELETE}(X)

Here "delete" specifies the formal operation and \textit{X} is the operand which is deleted. Another example can be seen in the fronting rule which moves an element at a given level past the preceding element at the same level.
and towards the front of the sentence. E.g.
\[ \text{FRONT(MOD}^I) \]
will move \( \text{MOD}^I \) to the left of a preceding modifier or head at the same level. Similarly the rule
\[ \text{BACK(ELEM}^I) \]
will move element\(^i\) to the right of a following element at the same level. In practice the units fronted or backed are often simply words.

So the rules might be stated more informally as
\[ \text{FRONT(WORD}^I) \]
\[ \text{BACK(WORD}^I) \]

2.21 A common feature of transformational rules is that a rule may operate only if some special condition applies. This can be indicated by an "if" - clause which precedes the rule. E.g.
\[ \text{IF(CONDITION}^I) \text{ THEN} \]
\[ \text{DELETE(X)} \]
On the other hand a rule may operate more than once. Here the possibility arises that it must keep operating until some special condition is fulfilled. This situation can be dealt with by attaching an "until" - clause after the rule. E.g.
\[ \text{INCREMENT(I)} \]
\[ \text{UNTIL(I = J + 1)} \]

2.22 A more powerful device for controlling the number of times a rule operates is the "do" - loop. This consists of the command DO followed by a rule schema with a control variable and BEGIN ... END
brackets which enclose the rule or rules activated
by the loop. E.g.
DO I = 1, J
BEGIN
IF (WORD^K = WORD^I) THEN
DELETE(WORD^I)
END
The effect of the example is that the variable I is
assigned the value of 1 the first time the loop operates,
the value of 2 the second time the loop operates and
so on until it finally reaches the value of J, whereupon
the loop is activated for the last time.
In practice it is sometimes necessary to place a "do"
-loop within a "do" - loop; this is known as "nesting".

2.23 More simply the number of times a rule
operates may be shown by a note, e.g.
INVERT(X,Y): applies once
This indicates that the rule applies once only to each
appropriate input.

2.24 Another aspect of the transformational rules
is that they may be formalised at a high level or at a
low level. In general low level rules provide a complete,
detailed description of what happens when a transformation
is activated. They provide an explicit formalisation in
terms of a very limited number of simple operations.
High level rules on the contrary do not specify all the
details. They provide a convenient shorthand notation
which can reduce a complex of conditions and processes to
simple unity. One high level rule may invoke several
low level operations en bloc. The use of a high level rule always implies that an equivalent low level formalisation is possible.

2.25 To take an example, it is possible to represent the conversion of an active sentence into the corresponding passive by means of a high level rule such as

\[ \text{IF} (\text{CONDITION}) \text{ THEN} \]
\[ \text{PASSIVISE} (\text{SENT}). \]

This rule makes the claim that passive sentences can under certain conditions (not specified) be produced from active sentences by means of one or more simple formal operations which can be made explicit. The high level rule can be broken down into low level rules as follows:

\[ \text{IF} (\text{DOBJ}) \text{ THEN} \]
\[ \text{SET} (\text{VNO} = \text{DOBJ NO}) \text{ AND} \]
\[ \text{NOMINATIVISE} (\text{DOBJ}) \text{ AND} \]
\[ \text{PASSFORM} (\text{VERB}) \]

\[ \text{IF} (\text{SUBJ}) \text{ THEN EITHER} \]
\[ \text{AGENTISE} (\text{SUBJ}) \text{ OR} \]
\[ \text{DELETE} (\text{SUBJ}) \]

The low level rules indicate that passivisation of a transitive sentence may be produced by the following operations:

1. changing the number of the verb to make it agree with the number of the direct object
2. putting the direct object in the nominative case
3. converting the verb to passive form
(4) converting the subject, if there is one, to an agent phrase or deleting the subject

2.26 The result of applying these rules is that a sentence such as

ο βασιλέας ὁ ἡρώ τὸν Ἄρηον

is converted into:

ὅπω τῷ βασιλέως ὁ ἐπέται ὁ Ἄρηον

or simply

ἐπέται ὁ Ἄρηον

2.27 Compare the high level and low level rules for gapping main clauses. First the high level rules:

(a) IF(CONDITION^I) THEN

RGAP(SENT)

This rule will gap appropriate sentences to the right.

(b) IF(CONDITION^I) THEN

(LGAP(SENT)

This rule will gap appropriate sentences to the left.

(c) IF(CONDITION^J) THEN

BGAP(SENT)

This will gap appropriate sentences both to the right and to the left.

The lower level formulations are more complex and involve the use of the "do" - loop:

(a) DO J = 2, N

BEGIN

IF(ELEM^I OF MCLAUSE^I = ELEM^I OF MCLAUSE^J) THEN

DELETE(ELEM^I OF MCLAUSE^J)

END: N is the total number of relevant successive main clauses in the sentence.
The effect of this rule is that if two or more successive main clauses have a major element in common, all occurrences of that element except the leftmost are deleted.

Thus the sentence:

\[ \text{oì μὲν εἶδον τὸν ἡκκον}, \]
\[ \text{oì δὲ εἶδον τὸν κροχόδειλον}, \]
\[ \text{oì δὲ εἶδον τὸν ἐλέφαντα} \]

will become, after the rule has been applied:

\[ \text{oì μὲν εἶδον τὸν ἡκκον}, \]
\[ \text{oì δὲ τὸν κροχόδειλον}, \]
\[ \text{oì δὲ τὸν ἐλέφαντα} \]

Next the low level formalisation of (b):

(b) \[ \text{DO } J = 1, N - 1 \]

BEGIN

\[ \text{IF(ELEM}^I \text{ OF MCLAUSE}^N = \text{ELEM}^I \text{ OF MCLAUSE}^J) \text{ THEN} \]
\[ \text{DELETE(ELEM}^I \text{ OF MCLAUSE}^J) \]

END: \( N \) is the total number of relevant successive main clauses in the sentence.

The effect of this rule is that if two or more successive main clauses have a major element in common all occurrences of that element except the rightmost are deleted.

The output for the exemplar sentence will be:

\[ \text{oì μὲν τὸν ἡκκον}, \]
\[ \text{oì δὲ τὸν κροχόδειλον}, \]
\[ \text{oì δὲ εἶδον τὸν ἐλέφαντα} \]

Finally, the low level formulation of (c):

(c) \[ \text{DO } J = 1, K - 1 \]

BEGIN

\[ \text{IF(ELEM}^I \text{ OF MCLAUSE}^J = \text{ELEM}^I \text{ OF MCLAUSE}^K) \text{ THEN} \]
DELETE(ELEM\textsuperscript{T} OF MCLAUSE\textsuperscript{J})

END

DO J = K + 1, N

BEGIN

IF(ELEM\textsuperscript{T} OF MCLAUSE\textsuperscript{J} = ELEM\textsuperscript{T} OF MCLAUSE\textsuperscript{K}) THEN

DELETE(ELEM\textsuperscript{T} OF MCLAUSE\textsuperscript{J})

END: N is the total number of relevant successive main clauses in the sentence; K is an integer greater than one and less than N.

The effect of applying this rule is that if three or more successive main clauses have a major element in common, deletion occurs both to the right and to the left and the full form of the clause is found in the middle. The result for the exemplar sentence is as follows:

\textit{οἱ μὲν τὸν ἱππον,}
\textit{οἱ δὲ ἐξόν τὸν χρυσόδειλὸν}
\textit{οἱ δὲ τὸν ἐλεφαντα.}

Needless to say rules (a), (b) and (c) are mutually exclusive.

2.28 The advantage of using high level rules is that they make it possible to focus attention on the logical sequence of transformational processing without being distracted by minutiae. But to find out exactly what a high level rule is doing and the conditions under which it operates it is necessary to convert it into low level notation. Attention will be devoted to this matter in chapter XII.
Another distinction made with regard to transformational rules is between those which are optional and those which are obligatory. Thus the rule to produce the passive is optional because transitive sentences can always be left in their active form. On the other hand it is not possible to leave suffix + stem sequences in that order because they would be unacceptable in the surface structure. Consequently an inversion rule is necessary and its application to all suffix + stem sequences from the deep structure is obligatory. The rule takes the form:

\[ \text{INVERT} (\text{SUF, STEM}): \text{applies once.} \]

The rule applies once only to each suffix + stem sequence. The result of its application to the sentence in Figure 4 is as follows:

\[
\begin{align*}
-\varepsilon t + \delta \rho \alpha - & \text{ becomes } \delta \rho \alpha + \varepsilon t \\
-\zeta + \beta \alpha \iota \lambda e u - & \text{ becomes } \beta \alpha \lambda e u + \zeta \\
-\emptyset + \tau o & \text{ becomes } \tau o + \emptyset \\
-\nu + \iota \kappa \kappa o - & \text{ becomes } \iota \kappa \kappa o + -\nu \\
-\nu + \kappa e o & \text{ becomes } \kappa e o + -\nu \\
-\nu + \tau o - & \text{ becomes } \tau o - + -\nu 
\end{align*}
\]

Once the stems and suffixes are in the correct order they can be assembled into words by a joining rule:

\[ \text{JOIN} (\text{STEM, SUF}). \]

This is another rule which operates once only on each stem + suffix sequence. The rule is again obligatory. The output from the rule is as follows:

\[ \delta \rho \alpha e i \beta \alpha \iota \lambda e u \varsigma \tau o \iota \kappa \kappa o \nu e o n \tau o n. \]

For various reasons this is not acceptable as a surface structure.
2.31 Firstly, it is necessary in the surface structure for the articles to precede their nouns. The appropriate order can be produced by another obligatory application of an inversion rule: \textsc{invert}(\textsc{noun}, \textsc{det}): applies once.

This converts

\[ \text{βασιλευς...το to το βασιλευς} \]

and \[ \text{ιππον...τον to τον ιππον}. \]

2.32 Some problems remain. For \( \text{δρωτ} \) is not acceptable and must be changed to \( \text{δρατ} \); likewise \( \text{το βασιλευς} \) must be changed to \( \text{το βασιλευς} \). Changes of this kind can be made by a phonological adjustment rule: \textsc{adjust}(\textsc{sent})

which will deal with these morphophonemic problems.

2.33 Another phonological transformation is also needed in order to supply the accents. The result of applying the adjustment rule followed by the rule \textsc{accent}(\textsc{sent})

is that a valid surface structure emerges:

\[ \text{δ βασιλευς δρατ \ τον νεον ιππον} \]

2.34 It will of course be noticed that the adjustment and accentuation rules are high level rules. As they stand they imply the claim that morphophonemic adjustment and accentuation can be formalised by sets of low level operational rules. The matter will not be pursued further here because it is not relevant to word order.

2.35 Instead it will be useful to look at the surface syntax of the finished sentence:
καὶ ὁ βασιλεὺς ὁ ῥῆ τῶν νέον Ἰκπον

The surface syntax may be established by parsing:
καὶ co-ordinating conjunction
ὁ nom sing masc article
βασιλεὺς nom sing masc anim noun
ὁρῆ third pers sing pres indic verb
τῶν acc sing masc article
νέον acc sing masc adj
Ἰκπον acc sing masc anim noun

2.36 This information is not sufficient, however, for the syntax of the sentence to be correctly understood. Thus it is necessary to realise that ὁ βασιλεὺς is in subject function, as opposed to various other functions (e.g. complement) which may underlie a nominative case. Likewise the accusative must be recognised as derived from an underlying object as opposed to the other functions (e.g. duration) which may be manifested by a surface accusative.

2.37 In other words it is not sufficient to identify the surface syntax to understand the sentence. Understanding requires a knowledge of the deep structure also.

2.38 An important feature of the syntax of natural languages which must now be dealt with is the device of recursion, which makes it theoretically possible for the native speaker to produce a potentially infinite number of different sentences. Recursion involves the reactivation of a higher level symbol or process
when a lower level has been reached; it may be compared to the notion of wheels within wheels, or, typically, sentences within sentences. Examples of recursion are sufficiently familiar:

"The dog which saw the cat which saw the rat ..."

In generative grammars this phenomenon is formalised by rules which operate on the deep structure of a matrix sentence $\text{SENT}^1$ to embed into it a lower level sentence $\text{SENT}^2$. The way in which this is accomplished can be seen from Figures 5 and 6. In Figure 5 $\text{SENT}^2$ is embedded below $\text{DOBJ}$ by the rule:

$$\text{DOBJ} \rightarrow \text{SENT}^2.$$  

Figure 6 illustrates the deep structure of $\text{SENT}^2$ which is intended to develop into an object clause. The end result, once the appropriate transformational rules have been applied, is the surface structure of the complex sentence which follows:

καὶ ὁ βασιλεὺς λέγει ὅτι ὁ ἵππος τρέχει.

2.39 In general all subordinate clauses are produced by embedding. The same procedure is also used to develop infinitival and participial constructions. One consequence of these expedients is that Greek has a wide range of surface manifestations which reflect more limited resources of deep structure. Compare e.g.

(1) καὶ ὁ βασιλεὺς ὁρὼ τὸν ἱππον
(2) ὁ βασιλεὺς ὁρῶν τὸν ἱππον
(3) τὸν βασιλέα ὁρῶν τὸν ἱππον
(4) ὅτι τὸν ἱππον ὁρῶ ὁ βασιλεὺς
The list could be extended with ease.

2.40 Inevitably various transformations are required to produce the variety of surface structures. Thus with infinitives and participles it is often but not always necessary to delete the conjunction by a rule of the form:

\[ \text{IF} (\text{CONDITION}) \ \text{THEN} \ \text{DELETE} (\text{CONJ}) \]

Similarly in example (5) an optional relativisation rule is required to introduce the relative, e.g.

\[ \text{IF} (\text{CONDITION}) \ \text{THEN} \ \text{RELATIV} (\text{SENT}) \]

Needless to say all modifications of word order, such as the final placement of the subject in example (4), will be dealt with by suitable transformational rules.

2.41 Much more could be said about the transformational component, but only one final observation will be made. The transformational rules, like the generative rules, must be arranged so that they are applied in a particular order. The question of the order in which the word order transformations are applied in Greek will be taken up again in chapter XII.

2.42 At this point it must be said that the type of syntactic model which has been postulated here is not to be regarded as in any way orthodox. In technical terms it may be described as a transformational generative functional dependency grammar. Its purpose
is to provide a formal and explicit account of the theoretical stance adopted towards syntax in this thesis.

2.43 It should be added that at the present day a great variety of syntactic models is available. The most widely known (but not the most recent) is the phrase structure model propounded in Chomsky (1957). The principal differences between Chomsky's model and the one adopted here are as follows:

(1) The phrase structure model makes its first major division of the sentence into NP and VP as shown in the diagram (Figure 7).
(2) In the phrase structure grammar there is no direct incorporation of functional nodes. Thus subject, object, sociative etc. do not occur as syntactic entities but are reduced to implicational relationships between phrase markers.
(3) The modifier/head distinction is not explicitly recognised.

2.44 For a syntactic theory of word order such as the one assumed in this thesis characteristics (2) and (3), at least, must be regarded as serious defects.

2.45 In general the syntactic model which has been preferred owes a debt to the work of De Groot (1949), Harris (1957 & 1965), Chomsky (1957 & 1965), Tesnière (1959), Martinet (1962), Cook (1964 & 1969) and Pike (1967). Certain affinities with the case grammar of Fillmore (1968) and Anderson (1971) will also be noticed.
The model also draws freely on concepts from traditional grammar and, in the instance of the transformational rules, on methods of formalisation used in computer programming languages such as Fortran (McCracken 1961) and Algol (Souza & Manley 1973). The result is therefore eclectic and would not necessarily meet with the approval of the scholars whose work has inspired it.

2.46 Finally the model proposed is not intended as a definitive or in any way complete description of Greek syntax. It is merely an example of some of the procedures which might be used in constructing a transformational generative functional dependency grammar. For obvious reasons there has been an emphasis on syntactic entities and operations which are relevant to problems of word order.
3.1 Is Greek word order free? In order to answer this question it is necessary to distinguish between two meanings of the word "freedom". Freedom may be either absolute or relative. If Greek word order were free in the absolute sense, it would be possible to shuffle the words in a Greek sentence and deal them in random sequence like a hand of cards. In such circumstances there would be no restrictions on order whatsoever. The practical significance of absolute freedom in word order is best appreciated if it is restated in statistical terms. A simple law governing stochastic processes tells us that for any string of n units (or words), the number of different possible arrangements under absolute freedom of permutation may be found by the calculation of n factorial. Thus

- if \( n = 1 \), n factorial = 1
- if \( n = 2 \), n factorial = 2
- if \( n = 3 \), n factorial = 6
- if \( n = 4 \), n factorial = 24
- if \( n = 5 \), n factorial = 120
- if \( n = 6 \), n factorial = 720
- if \( n = 7 \), n factorial = 5,040
- if \( n = 8 \), n factorial = 40,320
- if \( n = 9 \), n factorial = 362,880
- if \( n = 10 \), n factorial = 3,628,800

and so on. In a sentence with no more than ten words the
number of possible arrangements is already over three million. As the number of words increases, the number of possible orders grows in geometric progression.

3.2 At this point a question must be asked. Does the speaker or writer of Greek really need 3,628,800 ways of ordering a sentence of ten words? The answer to this is obviously "no"!

3.3 Another question. Does the speaker or writer of Greek really enjoy absolute freedom of word order?

3.4 When free word order is attributed to Greek (e.g. Kühner 1898 - 1904: II, 2, 595) it is customary to explain the phenomenon in terms of Greek morphological structure. Greek is an inflexional language in which the syntactic relationships between words within the sentence are indicated, not by order rules, but by the use of grammatical suffixes. A result of this structural characteristic is that the order of words within the sentence can be manipulated for stylistic purposes without altering the syntax or meaning.

3.5 However, not all of the words in Greek are inflected. One need only mention the various particles, studied by Denniston (1954), the numerous enclitic words, the negatives οὐ(ν) and μή, the modal particle δὲ, the exclamatives, including ἀληθῶς, and the main and subordinate conjunctions. All such words, which lack morphological complexity, have a position which is either fixed, or almost fixed, within the sentence. The facts are
well-known and will not be repeated here.

3.6 But what of the inflected words? For them mobility is the norm. Nevertheless there are some obvious restrictions. So it is that the relative, being a conjunction, always stands at the front of its clause, and the article always precedes its noun. (Articles which appear to follow their nouns are to be treated as introducing an apposition). Likewise the patronymic genitive always follows its nominal head.

3.7 Also relevant here is the existence of formulae (Dover 1960: 56ff) or fixed phrases which always, or nearly always show the same words in the same order. Examples from Herodotus I include the following:

SUPERLATIVE + τῶν ἡμέρας ἦμεν
τῷ ὀνόματι ἦν + PROPER NOUN
ἐπεμψε ἡμέας + PROPER NOUN
ταῦτα ὡς ἀκεφαλήντα ἤκονσε
πεσόντων ἀμφιτέρων πολλῶν

3.8 Although much of Herodotus' work is colloquial in tone and designed to be read aloud, formulaic expressions are relatively rare and do not affect the stylistic colour to any great extent. There is no question of oral composition of the kind established for Homer.

3.9 In any case the answer to the question posed above is clear. No, Greek does not enjoy absolute freedom of word order.

3.10 A weaker question may now be put. If Greek
does not show absolute freedom, is it not true to say, nevertheless, that Greek word order, as compared with that of other languages, is free in a relative sense? A preliminary answer to this question has already been offered by Weil in his book entitled **De l'ordre des mots dans les langues anciennes comparées aux langues modernes**, and by Boldt in his **De liberiore linguae graecae et latinae collocatione verborum capita selecta**. Both these authors show an awareness that Greek is freer in its word order than familiar modern West European languages such as English and French.

3.11 More recently, however, fundamental new work in the field of language typology has made it possible to approach the same problem in a wider perspective. This work has underlined certain structural characteristics of natural languages which tend to impose limits on the freedom of word order within the sentence. The constraints which will be considered here are two in number and will be referred to as:

(1) The typological constraint
(2) The syntactic integrity constraint.

Both these constraints can be defined in formal syntactic terms. Accordingly examples of their violation are readily identifiable and can be treated statistically. Reference to earlier discussion of similar constraints may be found in Vennemann (1973: 40f.).
CHAPTER IV

THE TYPOLOGICAL CONSTRAINT

4.1 In natural languages certain constraints upon word order generally apply. The first of these constraints may be called the typological constraint. As Greenberg (1966a) pointed out in an important article those of the world's languages which have been studied so far tend to fall into classes according to the sequential behaviour of subject(S), verb(V) and object (O). In all there are six possibilities, which may be set out as three binary choices:

1. SV or VS
2. SO or OS
3. OV or VO

In practice the majority of languages appear to favour SV and SO over VS and OS. In Greek also it is reasonably clear that SV and SO are the dominant surface patterns, although their alternatives VS and OS also do occur.

4.2 More important, however, is the typological distinction between OV and VO languages, for this has structural implications which affect the entire syntactic systems of the languages concerned.

4.3 It has been argued by Greenberg, followed by Lehmann and Vennemann, that OV languages most often show a general preference, throughout their syntax, for the placement of modifiers or adjuncts before their heads,
whereas VO languages show a contrasting predilection for the opposite pattern in which modifiers or adjuncts follow their heads.

4.4 The selection of certain morphological features also correlates positively with OV or VO. The concrete implications of this dichotomy will be more readily appreciated if they are tabulated as a series of statements. Thus, in OV languages, the following assertions apply:

I. The Verb Phrase

1. Objects precede their verbs
2. Indirect objects precede their verbs
3. Instrumentals precede their verbs
4. Sociatives precede their verbs
5. Temporal phrases precede their verbs
6. Locatives precede their verbs
7. Adverbial phrases of manner precede their verbs
8. Infinitives precede their leading verbs
9. Subordinate clauses precede their leading verbs
10. The subject of the verb to be precedes its complement
11. The verb is anchored at the end of its clause
12. Gapped constructions are gapped to the left
13. Interrogative words follow their sentences
14. Sentence negatives follow their sentences
15. The sentence accent falls at the end of the sentence

II. The Noun Phrase

16. Adjectives precede their nouns
17. Demonstratives precede their nouns
18. Numerals precede their nouns
(19) Quantifiers precede their nouns
(20) Genitives precede their nouns
(21) Relative clauses precede their nouns
(22) Common nouns precede their proper nouns in apposition.

III The Adjective Phrase
(23) Adverbs precede their adjectives
(24) Inflected modifiers of adjectives precede their adjectives
(25) Standards precede their comparatives
(26) Standards precede their superlatives

IV The Adverb Phrase
(27) Modifying adverbs precede their adverbs
(28) Inflected modifiers of adverbs precede their adverbs.
(29) Inflected words precede their postpositional heads; i.e. postpositional, not prepositional phrases are used.

V The Word
(30) Objects precede their verbs in compounds
(31) Adverbs precede their verbs in compounds
(32) Adjectives precede their nouns in compounds
(33) Numerals precede their nouns in compounds
(34) Genitives precede their nouns in compounds
(35) Middle forms of the verb occur, but there are no reflexive or reciprocal pronouns
(36) Separate personal pronouns do not occur as subjects of the verb; the subject, in such instances, is "contained in the verb."
(37) The verb to be as copula is omissible
(38) The structure of the word shows suffixes rather than prefixes
(39) Modal affixes do not precede but follow the root of the verb

4.5 But in VO languages, on the contrary, the following statements apply:

I The Verb Phrase
(1) Objects follow their verbs
(2) Indirect objects follow their verbs
(3) Instrumentals follow their verbs
(4) Sociatives follow their verbs
(5) Temporal phrases follow their verbs
(6) Locatives follow their verbs
(7) Adverbial phrases of manner follow their verbs
(8) Infinitives follow their leading verbs
(9) Subordinate clauses follow their leading verbs
(10) The subject of the verb *to be* follows its complement
(11) The verb is mobile, i.e. freely occupies different positions within the clause
(12) Gapped constructions are gapped to the right
(13) Interrogative words precede their sentences
(14) Sentence negatives precede their sentences
(15) The sentence accent falls at the beginning of the sentence

II The Noun Phrase
(16) Adjectives follow their nouns
(17) Demonstratives follow their nouns
(18) Numerals follow their nouns
(19) Quantifiers follow their nouns
(20) Genitives follow their nouns
(21) Relative clauses follow their nouns
(22) Common nouns follow their proper nouns in apposition

III The Adjective Phrase

(23) Adverbs follow their adjectives
(24) Inflected modifiers of adjectives follow their adjectives
(25) Standards follow their comparatives
(26) Standards follow their superlatives

IV The Adverb Phrase

(27) Modifying adverbs follow their adverbs
(28) Inflected modifiers of adverbs follow their adverbs
(29) Inflected words follow their prepositional heads; i.e. prepositional, not postpositional phrases are used

V The Word

(30) Objects follow their verbs in compounds
(31) Adverbs follow their verbs in compounds
(32) Adjectives follow their nouns in compounds
(33) Numerals follow their nouns in compounds
(34) Genitives follow their nouns in compounds
(35) Middle forms of the verb do not occur; instead reflexive and reciprocal pronouns are used.
(36) Separate personal pronouns do occur as subjects of the verb
(37) The verb to be as copula is not omissible
(38) The structure of the word shows prefixes rather
than suffixes

(39) Modal affixes do not follow but precede the root of the verb

4.6 What, it must now be asked, is the situation in Greek? In Greek, the following statements apply:

I The Verb Phrase

(1) Objects both precede and follow their verbs
(2) Indirect objects both precede and follow their verbs
(3) Instrumentals both precede and follow their verbs
(4) Sociatives both precede and follow their verbs
(5) Temporal phrases both precede and follow their verbs
(6) Locatives both precede and follow their verbs
(7) Adverbial phrases of manner both precede and follow their verbs
(8) Infinitives both precede and follow their leading verbs
(9) Subordinate clauses both precede and follow their leading verbs
(10) The subject of the verb to be both precedes and follows its complement
(11) The verb is mobile, i.e., freely occupies different positions within the clause (VO)
(12) Gapped constructions are gapped both to the left and to the right
(13) Interrogative words precede their sentences (VO)
(14) Sentence negatives precede their sentences (VO)
(15) The sentence accent falls at the beginning of the sentence (VO)
II  The Noun Phrase

(16) Adjectives both precede and follow their nouns
(17) Demonstratives both precede and follow their nouns
(18) Numerals both precede and follow their nouns
(19) Quantifiers both precede and follow their nouns
(20) Genitives both precede and follow their nouns
(21) Relative clauses both precede and follow their nouns
(22) Common nouns both precede and follow their proper nouns in apposition

III  The Adjective Phrase

(23) Adverbs both precede and follow their adjectives
(24) Inflected modifiers of adjectives both precede and follow their adjectives
(25) Standards both precede and follow their comparatives
(26) Standards both precede and follow their superlatives

IV  The Adverb Phrase

(27) Modifying adverbs both precede and follow their adverbs
(28) Inflected modifiers of adverbs both precede and follow their adverbs
(29) Inflected words both precede and follow their postpositional or prepositional heads; i.e. both postpositional and prepositional phrases are used.

V  The Word

(30) Objects both precede and follow their verbs in compounds
(31) Adverbs precede their verbs in compounds (OV)
(32) Adjectives precede their nouns in compounds (OV)
(33) Numerals precede their nouns in compounds (OV)
(34) Genitives precede their nouns in compounds (OV)
(35) Middle forms of the verb occur, but reflexive and reciprocal pronouns are also used
(36) Separate personal pronouns do occur as subjects of the verb, but their use is not obligatory
(37) The verb to be as copula is omissible, but omission is not obligatory
(38) The structure of the word shows both prefixes and suffixes, but only the suffixes are grammatical (OV)
(39) Modal affixes do not precede but follow the root of the verb (OV)

4.7 It remains to mention one modifier which normally stands outside the OV/VO typology.

(40) Final constructions, whatever their surface form, generally follow their leading clauses in most of the world's languages. But in Greek final constructions may either precede or follow their leading clauses.

4.8 What conclusion can be drawn from these tables? It will be immediately evident that Greek does not conform to either the standard OV or the standard VO type. Greek is ambivalent and shows characteristics of both.

4.9 How is this situation to be explained? A solution to the problem has been suggested by Lehmann, who argues that Greek is in the process of changing
over from an OV to a VO typology. The data appear to support this contention. Thus on characteristics (11) position of the verb, (13) position of the interrogative, (14) position of the sentence negative and (15) position of the sentence accent Greek follows the VO pattern. However it is noteworthy that all these characteristics concern the syntax of the verb phrase, which is a relatively innovative domain. The structure of the compound word, on the other hand, is notoriously conservative (Givon 1971: 413), and here we find the preservation of six archaic OV patterns: (31) the position of the adverb in compounds, (32) the position of the adjective in compounds, (33) the position of the numeral in compounds, (34) the position of the genitive in compounds, (38) the selection of suffixes to express syntactic relationships, and (39) the position of the modal affixes.

4.10 Another interesting facet of Greek structure, i.e. its abundant resources of infinitives and participles is also relevant here. As Lehmann (1974: 22 - 23 & 209 -211) again has pointed out, the noteworthy presence of verbal nouns and the like seems to be typical of languages which are in transition from the OV to the VO type. Absolute constructions are also associated with mixed or transitional typology.

4.11 The difficult question of why Greek is changing from an OV to a VO structure may also be put, but at present admits of no secure answer. Relevant factors include not only the possibility of substrate, i.e. 
influence from the languages of conquered populations, but also the fact that other Indo-European languages, such as Latin and Sanskrit, show a similar tendency. Some comments regarding the position of Greek within the Indo-European context will be presented in the concluding chapter of the thesis.

4.12 Meanwhile it will be sufficient to point out that, viewed in the light of the typological constraint, Greek word order is remarkably free. Nevertheless, with this statement, the question cannot be regarded as closed. For there remains a further method of investigation, the statistical method, which can be used to demonstrate that certain limits to the freedom of head/modifier behaviour do exist in Greek, and can be measured. The application of this method forms the subject of the following chapter.
5.1 Given that in Greek modifiers may either precede or follow their heads, as has been stated in the previous chapter, two possibilities remain to be investigated:

(1) that modifiers precede and follow their heads at random, i.e. with roughly equal frequency;

(2) that modifiers show a measurable preference for either the preceding or the following position.

What is the situation in Greek?

5.2 An answer to this question can be found by testing against a broad range of modifiers the null hypothesis that a given modifier m precedes and follows its head H with equal frequency. The method employed here is to ascertain whether the actual frequencies of a given modifier before and after its head differ significantly from the theoretical frequencies which would occur if it preceded and followed with equal frequency.

5.3 The test is conducted by calculating the value of the $\chi^2$ statistic for a 2 x 2 table which compares the observed frequencies with the frequencies to be expected if the null hypothesis is valid. Thus if $a =$ the no. of times the modifier precedes its head, and $b =$ the no. of times the modifier follows its head, and $c = \frac{a + b}{2}$, then the table may be constructed as follows:
5.4 To obtain $\chi^2$ it is necessary to find the sum of the squares of the differences between the observed frequencies and the expected frequencies divided by the expected frequencies. I.e., if $e =$ expected frequencies and $o =$ observed frequencies,

$$\chi^2 = \sum \frac{(o - e)^2}{e}$$

5.5 In the special case which is relevant here the previous symbols $a$, $b$ and $c$ may be inserted as follows:

$$\chi^2 = \frac{(a - c)^2}{c} + \frac{(b - c)^2}{c}$$

Or, in this instance, $\chi^2 = \frac{(a - c)^2}{c} x 2$

5.6 Once $\chi^2$ has been calculated it may be looked up in a table of percentage points of the $\chi^2$ distribution with 1 degree of freedom to find the probability that the observed frequencies are related to the expected frequencies. A small value of $\chi^2$ indicates a high probability that the pairs of numbers are related; a large value of $\chi^2$ indicates a low probability that the pairs of numbers are related. This can be shown by tabulating some representative values of $\chi^2$ and the percentage probabilities that they indicate (Lindley & Miller 1970: 7):

<table>
<thead>
<tr>
<th>Value of $\chi^2$</th>
<th>Percentage Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00393</td>
<td>95%</td>
</tr>
<tr>
<td>2.71</td>
<td>10%</td>
</tr>
<tr>
<td>3.84</td>
<td>5%</td>
</tr>
</tbody>
</table>
5.7 It can be seen from the table that when $\chi^2$ reaches 10.83, or exceeds it, the probability that the pairs of observed frequencies are related to the pairs of expected frequencies as required by the null hypothesis is one in a thousand, or less, as the case may be.

5.8 It is customary in statistical work of this kind to fix a level of probability at which the null hypothesis will be rejected. For the purposes of this study it is proposed to take the 5% level (i.e. any $\chi^2$ of 3.84 or greater) as significant and sufficient grounds for rejecting the null hypothesis. This is an exacting requirement which will introduce considerable rigour into the scrutiny of the results.

5.9 Since the significance test will be satisfied only when the modifier tested shows a clear and unquestionable departure from the 50/50 distribution expected under the null hypothesis, it will be reasonable, when the null hypothesis is rejected, to claim that a primary determinant of word order has been identified. The expression "primary determinant" is here taken in the sense of a determinant which influences the behaviour of the larger part of the sample.
5.10 At this juncture a word of warning is necessary. The $\chi^2$ test cannot be applied with accurate results to small samples. For this reason when the sample size $n$ falls below 20 an adjustment known as Yates' Correction has been used. This involves subtracting .5 from the positive discrepancies $(o - e)$ and adding .5 to the negative discrepancies before these values are squared. The only appropriate instances of low numbers where Yates' Correction has not been used are those which give an uncorrected $\chi^2$ of zero. A further note. When the sample size $n$ falls below 10 the data have not been tested statistically because the chances of a significant result are too small.

5.11 In the past it has been the exception (Frisk 1933: 17 - 22) rather than the rule for studies of Greek word order to include statistical analysis and significance tests. In work of this kind philologists have usually limited their numerical endeavours to the quoting of percentages. It must be pointed out that such an approach is not fully satisfactory. The value of raw percentages is entirely dependent on sample size. Thus with a very small sample a high percentage may be worthless; with a very large sample a much lower percentage may be conclusive. Between these extremes there is an entire spectrum of possibilities to be evaluated. So no apologies are made here for the use of significance tests. They are the only accurate instruments available for controlling the data. Furthermore, as will become evident, the very nature of Greek word order is statistical.
5.12 A comment now about the examples. The examples quoted in the text which follows were chosen for two main reasons:

(1) to clarify the basis on which the statistics were taken

(2) to demonstrate that in Greek a vast range of modifiers is used both before and after construction heads.

5.13 One of the problems encountered in exemplifying syntactic phenomena is the large number of variables: differences of word class, surface form, grammatical function, arrangement and so on. It would be quite impossible in a study of this kind to provide a corpus of examples which would be in any way complete and exhaustive. It is hoped nevertheless that the examples presented will be sufficiently suggestive, and will not mislead in any obvious way.

5.14 A further preliminary point must also be made. The statistics which follow have been based on the behaviour of mobile inflected elements in Herodotus I. In general non-mobiles and such have not been counted. Thus the relative pronoun and the article have been excluded. Likewise the demonstrative ı. Articular constructions with the infinitive and participle have also been omitted.

5.15 In the examples which follow the relevant modifiers have been underlined for easy recognition, but their heads have not been indicated in any special way.
Wherever possible the examples have been arranged in pairs to exemplify both modifier + head and head + modifier sequences.
I THE VERB PHRASE

5.16 The position of the subject noun phrase in relation to the verb in main clauses.

Examples

(a) 115,3 οἱ μὲν νυν ἄλλοι παῖς τὰ ἐκπαιδεύτωµαν
      επετέλεσον
      9,2 κεῖται δὲ ἄγχος τῆς ἐσόδου ὅρονος

(b) 11,3 ὁ δὲ Γέωγκ τέως μὲν ἀπεθάνατε τὰ λεγόµενα
      23, - ἐπεράνθηνε δὲ ὁ Περίανδρος Κορίνθοι

(γ) 76,3 Ἡ πλευρὰ μὲν νυν οἷς ἐκπελεύτητο
      98,2 ποιεῖτο δὴ ταῦτα οἱ Μῆδαι

(δ) 184, - αὖθι μὲν ἐπεδέχατο χάµατα ἀνά τὸ πέδαλον
      180,1 ἤξετο δὲ σῶτος ἐς τὴν Ἑρυθρῆν θάλασσαν

(e) 209,3 ὡς δὲ ταῦτα ἀπερχείσθη οἶδα, ἐκὼ σημανέω
      112,2 τέτοια γὰρ καὶ δυσ

(ζ) 33,1 ἀλλὰ μοι ὁμοίς ὑπελεύσω ἐν τῷ ἤκινθ ἐκπίστασα
      ἡπὶ σε ὀλιγόχρονιον ἔσεθαι
      34,1 μετὰ δὲ ξύλων ὁλικώμενον ἔλεβε ἐκ θεοῦ
      νέμεις, ἑγαύῃ Ὀρίσσον

(η) 43,3 ἔθεος δὲ τις ἀγγελεῖαν τῷ Κριοῦ τὸ γεγονός

Statistics

subject precedes 517 (71.31%)
subject follows 208 (28.69%)
The value of chi square is significant; the null hypothesis is rejected; the subject normally precedes the verb in main clauses.

5.17 The position of the subject noun phrase in relation to the verb in subordinate clauses.

Examples

(a) 11,1 ὡς δὲ ημέρη τάχιστα ἐγερόντες
    34,3 πάντα τοῦτο χρέωνται ἐς κόλπουν ἀνθρώπων.

(b) 11,2 ὡς δὲ ὁ Ρύγης ἀκέχετο
    35,2 ἐπείτη δὲ τὰ νομιζόμενα ἐποίησε ὁ Κρότως.

(γ) 1,3 τῶντα τὸ καὶ Ἑλληνες λέγουσιν
    186,3 ξύλα τετράγωνα ἐκ ὧν τὴν διάβασιν ἐκοιμᾶτο
    ὁ Βαβυλώνιος.

(δ) 79,2 ὡς δὲ οἱ ταῦτα ἔδοξε
    91,3 δοῦν δὲ ἐνέδωκαν αὕτη.

(ε) 39,2 αἰχμή στιγμῇ τὴν ὑπὶ φοβέσαι

(ζ) 13,2 ὡς Ἰππαλείδους τέις ἤκει

(η) 32,2 τὰ μὴ τίς ἠθέλει

Statistics

subject precedes 200 (66.45%)
subject follows 101 (33.55%)
Conclusion

The value of chi square is significant; the null hypothesis is rejected, the subject normally precedes the verb in subordinate clauses.

5.18 The position of the subject noun phrase in relation to the verb in participial constructions.

Examples

(a) 78.1 οἱ ἢπποι μετιέντες τὰς νομὰς νέμεσθαι

36.2 τέλος δὲ ἄπικομένοι παρὰ τὴν Κροίου τῶν

Μυσῶν ἔγγελοι

(b) 14.1 ἡγύς δὲ τυραννεύσας

41.1 εὔπας δὲ ταύτα ὁ Κροίους

(γ) 36.1 πολλάκις δὲ οἱ μυσοὶ ἐκ' ἀυτῶν ἐξελθόντες

1.2 ἄπικομένους δὲ τοῦδε Ἀθηναῖκας ἐς ὃ τὸ ᾿Αργος
tούτο

(δ) 1.4 ταύτας στάσας κατὰ κρύμνην τῆς νεος

36.1 ὃρμαμένος δὲ οὕτως ἐκ τοῦ ὥρεος τούτου

(ε) 111.4 καὶ ἐγὼ ἀναλαβὼν

(ζ) 34.1 οἱ εὐδοκεῖ

41.1 ἄπικομένῳ δὲ οἱ

Statistics

subject precedes 439 (71.04%)
subject follows 179 (28.96%)
total 618
average 309
chi square 109.39

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the subject normally precedes the verb in participial constructions.

5.19 The position of the subject noun phrase in relation to the verb in infinitival constructions.

Examples

(a) 39,2 φής τοι τὸ δυνατόν ὑπὸ αὐτής σιδηρές φάναι ἐμὲ τελευτήσειν
120,4 ἐξῆκεν τε τὸν ἄνερου

(b) 24,4 ἀπειληθέντα δὲ τὸν Ἀτρίονα ἐς ἀποτίθα τοιαυτά
59,3 σοῦ δὲ ταύτα παρασημοφόροις Χίλωνος κείθεσθαι θέλειν τὸν Ιπποκράτεα

(γ) 4,3 Ἑλληνὸς δὲ Ἀκραδαιμονίης ἐξεσελευν γυναικὸς στόλου μέγαν οἰνοφείρατ
150,2 ἐκλειπεῖν Σμύρνην Αἰολέας

(δ) 81,7 τούτων δὲ ἐξέπεμπε τὴν ταχιστὴν δέσσο Appalachēn
27,3 ἐκπλῶσετο λέγειν ἐκεῖνον ἀληθέα
(ε) 69,2 ὑμέως γὰρ πυθόμοιμα προεστάναι τῆς Ἑλλάδος

(ζ) 9,2 παρέξει τοι δεήσονθαι
73,4 συνήνειξε ἐλεύ σφεας μηδέν

Statistics
subject precedes 291 (79.51%)
subject follows 75 (20.49%)
total 366
average 183
chi square 127.48

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the subject normally precedes the verb in infinitival constructions.

5.20 The position of the subject noun phrase in relation to the verb in genitive absolute constructions

Examples

(a) 19,2 τῆς στρατιῆς ἀποκομένης ὡς σάρδης
92,4 δόντος τοῦ κατορθός

(b) 103,1 Καμάτως δὲ τελευτήσαντος
26,1 τελευτήσαντος δὲ Ἀλυάττεω

(γ) 84,3 τελευτασεάν δικασάντων
82,3 βασιλεάσαντων δὲ Ἀργείων τῇ σφετέρῃ ἀποταμιομεμένη

(δ) 109,4 τούτου τελευτήσαντος
63,2 ψυγόντων δὲ τούτων
(ε) 41,2 ἐμεθ ἁρποκτήσαντος χρηστά ἐς σὲ
90,1 ἀναρτησάντον σεῦ ἀνδρὸς βασιλέως χρηστά
ἐργα καὶ ἔπεα ποιέων

(ζ) 19,2 συμβουλέυσαντος τε

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</thead>
<tbody>
<tr>
<td>subject precedes</td>
<td>45 (39.47%)</td>
</tr>
<tr>
<td>subject follows</td>
<td>69 (60.53%)</td>
</tr>
<tr>
<td>total</td>
<td>114</td>
</tr>
<tr>
<td>average</td>
<td>57</td>
</tr>
<tr>
<td>chi square</td>
<td>5.05</td>
</tr>
</tbody>
</table>

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the subject normally follows the verb in genitive absolute constructions. In this respect the word order of the genitive absolute differs from that of other clause types.

Note
The reason for the postposing of the subject in genitive absolute constructions may be the need to make it clear from the outset that a verbal construction is being used and not e.g. an adnominal genitive.

5.21 The position of the direct object noun phrase in relation to the verb in main clauses.

Examples

(a) 69,4 κέμψαντες γὰρ οἱ Λακεδαίμονες ἐς Χάρδης
χρυσῆν ἐνέσωσι
17,1 ἡμικατα ἐσέβαλε τὴν στρατηγὴν
Statistics

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<td>object follows</td>
<td>280</td>
</tr>
<tr>
<td>total</td>
<td>550</td>
</tr>
<tr>
<td>average</td>
<td>275</td>
</tr>
<tr>
<td>chi square</td>
<td>0.18</td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is not significant; the null hypothesis is sustained; the object is equally frequent before and after the verb in main clauses.
5.22 The position of the direct object noun phrase in relation to the verb in subordinate clauses.

Examples

(a) 94,1 ὅτι τὰ θῆλεα τέχνα καταχωρεῖται
111,1 ὅτι ὦν ἔσθως ὁ Ἀρχαγος μεταπέμψατο
αὐτῆς τὸν ἄνδρα.

(b) 102,2 τοῦτον οἴ Νίνον έίχον
155,3 τῷ οὐ ἐκέτρεψας Σάρδις.

(γ) 129,3 ὅτι τοῦ δείκνυν εὑνεκεν Νήδους κατεδούλωσε.
103,3 ὡς συμβαλὼν ἐνίκησε τοὺς Λασυρίους.

(δ) 100,1 ἐξέλτε ὅ ἡ τάγτα ὑιεχόμενε
119,1 Ἄρχαγος μὲν ὡς ἐκουσε τάγτα.

(ε) 94,7 ὡς σφεας ἄνήγαγε
27,4 ἦνα ὑπὲρ τῶν ἐν τῇ ἡκείρφ ὑιεχόμενων
'Ελλήνων τεισσωταί σε

Statistics

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
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<tbody>
<tr>
<td>object precedes</td>
<td>79 (55.24%)</td>
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<tr>
<td>object follows</td>
<td>64 (44.76%)</td>
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<td>total</td>
<td>143</td>
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<td>average</td>
<td>71.5</td>
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<tr>
<td>chi square</td>
<td>1.57</td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is not significant; the null hypothesis is sustained; the object is equally frequent before and after the verb in subordinate clauses.
5.23 The position of the direct object noun phrase in relation to the verb in participial constructions

Examples

(a) 27,1 

(b) 24,2 

(γ) 126,3 

(δ) 18,1 

(ε) 111,5 

(ζ) 190,1 

Statistics

<table>
<thead>
<tr>
<th></th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
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<td>44.49%</td>
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<td>Object follows</td>
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<td>55.51%</td>
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<tr>
<td>Total</td>
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<td>Average</td>
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<td>Chi square</td>
<td>6.17</td>
<td></td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the object normally follows the verb in participial constructions. In this respect
the word order of the participle differs from that of other clause types.

5.24 The position of the direct object noun phrase in relation to the verb in infinitive constructions.

Examples

(a) 59,2 δεύτερα τὴν γυναῖκα ἐκκέρμειν
     24,2 μισθώσασθαι πλεον ἀνδρῶν Κορινθίων

(β) 123,2 Ἀστυάγεα καθότα τῆς βασιλείας,
     10,2 τείσασθαι τὸν Κανδαύλα.

(γ) 65,5 ταύτα μὴ παραβαίνειν
     158,2 μὴ κατησθαί ταύτα.

(δ) 76,3 ῥεθαί ἀπὸ Κροίσου ἀποστάναι.
     112,1 μηδεμίῃ τέχνῃ ἐκδείναι μιν.

Statistics

<p>| | | |</p>
<table>
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<th></th>
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<tr>
<td>object precedes</td>
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<tr>
<td>total</td>
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<td>average</td>
<td>121.5</td>
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</tr>
<tr>
<td>chi square</td>
<td>4.48</td>
<td></td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the object normally precedes the verb in infinitival constructions.

5.25 The position of the subject noun phrase in relation to the direct object noun phrase in main clauses.
Examples

(a) 112,2 δεύτερα λέγει ἡ γυνὴ τάδε
     8,3 συνεχείται καὶ τὴν αὐτὴν γυνὴ

(b) 125,2 Κύρος μὲν τάστα κροτηγόρωσε
     99,1 τάστα μὲν οὖ ὁ Δημόκριτος ἐστυψε τε ἐτείχεε

(γ) 161,2 Χρόνιος οὖν ὑπερήφανον ἐξέδοσαν
     98,2 ποιεῖσθαι οὖ τάστας οἱ Μῆδοι

(δ) 171,1 οὗτος μὲν οὖν οἰκήμας τοιάδος ἀπεδέξαντο
     14,4 ἐσέβαλε μὲν οὖν στρατηγὸν καὶ οὗτος

(ε) 87,3 ἐγὼ τάστα ἐκρηξά
     121,1 ποικίλος δὲ ἐγὼ ἐμα πέμψω

Statistics

subject precedes 197 (71.12%)
subject follows 80 (28.88%)
total 277
average 138.5
chi square 49.42

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the subject normally precedes the object in main clauses.

5.26 The position of the subject noun phrase in relation to the direct object noun phrase in subordinate clauses.
Examples

(a) 145, - ἀπ' ὅτεν ὃ ἐν Ἰταλίᾳ πότεμος τὸ οἴνομα ἔσχε.
110,2 ἔνθα τὰς νομὰς τῶν βοῶν ἔχει οὗτος ὁ ἄνθρωπος.

(β) 204,1 ἐν ὕπερ ὃ Κῦρος ἔσχε προσωπικήν στρατεύσασθαι
207,1 ἐκεῖ με Ζεὺς ἔδωκε τοῖς.

(γ) 74,1 ἐν τοῖς πολλάξις μὲν οἱ Ἰησοῦ τοὺς Λυδοὺς
ἔνικησαν
67,5 ὡς δὲ καὶ ταῦτα ἤκουσαν οἱ Ἀρχαιόλογοι.

(δ) 43,1 ἐπείτε ὃς ἠμείψατο Κροῖσον

(ε) 155,3 τῷ σὺ ἐπέτρεψας Ἰάρθις.

Statistics

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
<th>Percentage</th>
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<td>57.69%</td>
</tr>
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<td>Subject follows</td>
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<td>42.31%</td>
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<td>Chi square</td>
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<td></td>
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</tbody>
</table>

Conclusion

The value of chi square is not significant; the null hypothesis is sustained; the subject is equally frequent before and after the object in subordinate clauses. In this respect the word order of subordinate clauses differs from that of other clause types.
5.27 The position of the subject noun phrase in relation to the direct object noun phrase in participial constructions.

Examples

(a) 117,1 τοῦ μὲν βουχόλου τὴν ἀληθείαν ἐκφήναντος 67,3 εἰρωτῶσι δὲ ταῦτα τοῖς θεοχρόνοις

(β) 51,1 ἐπιτελέσας δὲ ὁ Κορίνθος ταῦτα 78,1 ἱδόντι δὲ τούτῳ Κορίνθῳ

(γ) 73,6 οἱ ἔκτιθαι ταῦτα κοινοπτωμένες 86,1 λαβόντες δὲ αὐτὸν ὁΙ Πέρσαι

(δ) 207,7 κεῖνοι ἱδόμενοι ἁγαθὰ πολλὰ

(ε) 159,2 ἰμέτες δὲ δειμαίνοντες τὴν Περσέων ὁμομοίων

(ζ) 39,1 τοῖς ἱδόντι γε δὴν τοιαύτην

Statistics

subject precedes 143 (76.88%)
subject follows 43 (23.12%)
total 186
average 93
chi square 53.76

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the subject normally precedes the object in participial constructions.
5.28 The position of the subject noun phrase in relation to the direct object noun phrase in infinitival constructions.

Examples

(a) 108,1 τὴν οὖ ἐπισχεῖν ἧμη Ἀσίνη κάσαν

114,3 ἐκέλευε αὐτῶν τοὺς ἄλλους καὶ διαλαβεῖν

(b) 86,5 τὸν μὲν Κροίου ταῦτα ἀκηγέονται

(γ) 98,3 τοὺς Κρίδους ἔνα γυμνὸν ἐν κόλλωμα κοτῆσανταί

150,2 ἐκλιπεῖν ἐμύρνην Ἀλόλας

(δ) 27,3 λέγειν ἐκείνον ἀληθέα

86,3 ἔρα μὲν προσοτήνα τοῦτο

(ε) 90,3 ἐκεῖναὶ οἱ τῷ θεῷ τούτῳ ὀνειδίσονταί

53,3 μεγάλην ἄρχην μὲν καταλύσειν

Statistics

subject precedes 79 (80.61%) 
subject follows 19 (19.39%) 
total 98 
average 49 
chi square 36.73

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the subject normally precedes the object in infinitival constructions.

5.29 The position of the subjectival direct object noun phrase in relation to the verb in main clauses. (By
subjectival direct object is meant a direct object which serves as subject of an infinitive).

Examples

(a) 73,3 παίζεις σφυ παρέδωκε τήν γλώσσαν τέ εξερήθειν
    74,3 ἔσκεπσαν καὶ ἄμφοτεροι εἰρήνην ἐσντοτοι ἐγνέσθαι

(β) 119,6 "Ἀπαγορεύετε ἐκέλευσον προωστάντες ἀποκαλύπτειν
    153,1 λέγεται Κύριον ἐκειρέσθαι τοῦς παρεόντας.

(γ) 98,3 τοὺς Μῆδας ἦν κλόεσμα κοιήσασθαι.
    133,2 ἡ τε Πέρσαι τοὺς Ἕλληνας συνεμένους
        πείναντας καθόσθαι

(δ) 164,2 ἀπαγαγεῖτον ἐκέλευον ἐκέλευον τῆν στρατιὰν
        ἀπὸ τοῦ τεῖχους

(ε) 37,3 ἐμὲ ὅν σὺ ἤ μέθες λέναι ἐπὶ τῆς θήρῃν

(ζ) 196,5 ἔλλο ὅτι τε ἔξετρεκασι νεωτί ἐγνέσθαι
    40,− μετέχαλ τέ σε λέναι ἐπὶ τῆς θυρῃν

Statistics

subjectival object precedes 37 (44.05%)
subjectival object follows 47 (55.95%)
total 84
average 42
chi square 1.19

Conclusion

The value of chi square is not significant; the null hypothesis is sustained; the subjectival object is equally frequent before and after the verb in main clauses.
5.30 The position of the subjectival direct object noun phrase in relation to the verb in subordinate clauses.

Examples

(a) 120,1 ὁς βασιλεύσας χρήν ἔδωκεν

(b) 125,1 ὅτε τρόπῳ οὐφωτάτῳ Πέρος ἀνακέλει άπιστος αὐτός

170,2 δὲ ἐκέλευσε κοινῷ στόλῳ Ἰωνας ἀδρέντας κλέειν ἐς Σαρδῶ

(γ) 128,2 οὐ μὲν ἀνέγνωσαν μετείχαν τὸν Κύρον

39,2 εἶ μὲν γὰρ ἕπε δῶντος τοι εἶπε τελευτήσειν μὲ

Statistics

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Subjectival object precedes</td>
<td>9 (50%)</td>
</tr>
<tr>
<td>Subjectival object follows</td>
<td>9 (50%)</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
</tr>
<tr>
<td>Average</td>
<td>9</td>
</tr>
<tr>
<td>Chi square</td>
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</tr>
</tbody>
</table>

Conclusion

The value of chi square is not significant; the null hypothesis is sustained; the subjectival object is equally frequent before and after the verb in subordinate clauses.

5.31 The position of the subjectival direct object noun phrase in relation to the verb in participial constructions.
Examples

(a) 61,1 οὕτως βουλόμενος οὗ γενέσθαι ἐκ τῆς νεογάμου γυναικὸς τέκνα

(b) 210,1 Κύρος μὲν δοκέων οἱ Ἀραβικοὶ ἐπιβουλεύειν

(γ) 124,2 Πέρσας γὰρ ἀναπείθος ἀπίστοικιος
191,5 οpositor δὲν περιψόντες τούς Πέρσας ἔσπερεν ἐξ τῆς πόλεως

(δ) 87,3 ὁ Ἑλλήνων θεὸς ἑκάρας ἐμὲ στρατεύεσθαι

(ε) 89,3 καὶ ἴσχενοι συγγνόντες κοινεῖν σε δίκαια

Statistics

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<tr>
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<tr>
<td>subjectival object precedes</td>
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<tr>
<td>subjectival object follows</td>
<td>20 (86.96%)</td>
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<td>total</td>
<td>23</td>
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<tr>
<td>average</td>
<td>11.5</td>
</tr>
<tr>
<td>chi square</td>
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</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the subjectival object normally follows the verb in participial constructions.

5.32 The position of the subjectival direct object noun phrase in relation to the verb in infinitival constructions.
Examples

(a) 3,1 ἐθελήσατ εἰ ἐκ τῆς Ἑλλάδος ὅτι ἀρχαγής γενέσθαι γυναῖκα

(β) 39,2 φης τοι ὅτι ὄνειρον ἦκ ἀληθής οἰδηρής φάναι ἐμὲ τελευτήσειν

(γ) 112,2 σε πείθειν μὴ ἐκθείναι
24,8 αὐτῶν διαχράσθαι μην

Statistics

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<thead>
<tr>
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<th>Percentage</th>
</tr>
</thead>
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<td>subjectival object follows</td>
<td>12</td>
<td>(85.71%)</td>
</tr>
<tr>
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<td>average</td>
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<td></td>
</tr>
<tr>
<td>chi square</td>
<td>5.79</td>
<td></td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the subjectival object normally follows the verb in infinitival constructions.

5.33 The position of the noun clause direct object in relation to the verb in main clauses. (This category includes indirect questions.)

Examples

(a) 13,2 ὁσόνδε μέντοι εἶπε ἡ Πυθή, ὡς Ἡρακλείδης
τίς ἐξεί ἐς τὸν κέμπτον ἀπόγονον γυναῖ

(β) 119,6 εἴρετο δὲ αὐτῶν ὃ Ἀστυάγης εἶ θυγάτεροι
ὅτεν θηρίου κρέα βεβρώκοι
Statistics
noun clause precedes 0 (0%)
noun clause follows 46 (100%)
total 46
average 23
chi square 46.00

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the noun clause object normally follows the verb in main clauses.

5.34 The position of the noun clause direct object in relation to the verb in subordinate clauses.

Examples

(a) 207,2 Εί δ' ἡγισθα μάθημα καὶ οὐ εἰς καὶ εύρεται τοῦ ἀνδρὸς καὶ εὐρετάτης
(b) 197,- πρὶν οὖν ἐπειδὴ ημεῖς νοοῦμεν ἔχει

Statistics
noun clause precedes 0 (0%)
noun clause follows 4 (100%)
total 4
average 2
chi square
Conclusion

The number of examples is too small for the calculation of a valid chi square. The raw figures appear to offer some support to the result obtained for main clauses.

5.35 The position of the noun clause direct object in relation to the verb in participial constructions.

Examples

(a) 96,2 ἐπιστάμενος ἵνα τῷ δίκαιῳ τὸ ἀληθὸς πολέμιον ἐστί.

(β) 193,4 ἐξ δὲ κέντρου καὶ σημάτων ὅσον τι δένδρον μεγάλος γίνεται, ἐξεπιστάμενος

173,5 αὐτομένου δὲ έτέρου τὸν πλησίον τίς εἶν

Statistics

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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>noun clause precedes</td>
<td>1 (3.03%)</td>
</tr>
<tr>
<td>noun clause follows</td>
<td>32 (96.97%)</td>
</tr>
<tr>
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<td>33</td>
</tr>
<tr>
<td>average</td>
<td>16.5</td>
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<tr>
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</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the noun clause object normally follows the verb in participial constructions.
5.36 The position of the noun clause direct object in relation to the verb in infinitival constructions.

Examples

(a) 127,2 ὁ δὲ Κύρος ἔκλειψε τὸν ἀγγέλου ἀηδυγέλλειν ὅτι πρῶτον ἤκου καὶ ἔκειν η ᾗ ἀστυνάγης αὕτης βουλήσται

(β) 57,1 ημεία δὲ γλῶσσαν ὤσην οἱ Πελασγοί, οὐκ ἔχω ἄρεξέως εἰπεῖν.

32,9 σκοπεῖς ὅ ἑρχη παντὸς χρήματος τὴν ἕλευτην κῇ ἀποθήκης.

Statistics

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<table>
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<tbody>
<tr>
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</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the noun clause object normally follows the verb in infinitival constructions.

5.37 The position of the "nominative" participial complement in relation to the verb in main clauses.
Examples

(a) 202,4 τήν μὲν γὰρ Ἑλληνες ναυτιλλούνται κάσα καὶ ἡ Ἔξω στηλέων θάλασσα ἡ Ἀτλαντὶς καλεόμενη καὶ ἡ Ἑρυθρὴ μία ἐσόμαι τυγχάνει.

38,2 εἶς γὰρ μοι μοθύνος τυγχάνεις ἐὰν παῖς.

Statistics

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<tr>
<td>precedes</td>
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<td>follows</td>
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<td>(93.33%)</td>
</tr>
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<td>22.53</td>
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Conclusion

The value of chi square is significant; the null hypothesis is rejected; the "nominative" complement normally follows the verb in main clauses.

5.38 The position of the "nominative" participial complement in relation to the verb in subordinate clauses.

Examples

(a) 47,1 ὧτι Κολεῶν τυγχάνει ὁ Ἀνδῶν βασιλεὺς Κροῖς ὁ Ἀλανττεῖω.

68,2 ὥς τοῦ ὑπὸ τὰς τυγχάνεις ὡμα Κολεύμενος τὴν ἐργασίαν τοῦ σιδήρου,
Conclusion

The number of examples is too small for the calculation of a significant chi square. The raw figures appear to offer some support to the result obtained for main clauses.

5.39 The position of the "nominative" participial complement in relation to the verb in infinitival constructions.

Examples

(a) 137,2 ταύτα δὲν εὑρεθήναι ἦτοι ὑποβολιμαία εἴόντα ἡ μοιχίδια.

(b) 111,3 ἑκέλευε τὴν ταχύστην ἀναλαβόντα τὸ κατόλοι οξύεσθαι φέροντα.

Statistics

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<table>
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<tbody>
<tr>
<td>nominative complement precedes</td>
<td>3 (33.33%)</td>
</tr>
<tr>
<td>nominative complement follows</td>
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</tr>
<tr>
<td>average</td>
<td>4.5</td>
</tr>
<tr>
<td>chi square</td>
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Statistics

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<tbody>
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</tr>
<tr>
<td>nominative complement follows</td>
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<tr>
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<td>average</td>
<td>3</td>
</tr>
<tr>
<td>chi square</td>
<td>-</td>
</tr>
</tbody>
</table>
Conclusion

The number of examples is too small for the calculation of a valid chi square. The raw figures appear to offer some support to the result obtained for main clauses.

5.40 The position of the accusative participial complement in relation to the verb in main clauses.

Examples

(a) 10,2 ἔσκλησον δὲ καὶ τῇς τὴς ἐν τοῖς ἔθεντο ὁ γύρης
     10,2 καὶ ἡ γυνὴ ἔκρυφ μὴν ἔγιόντα

Statistics

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<table>
<thead>
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<tr>
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<td>13.5</td>
</tr>
<tr>
<td>chi square</td>
<td>23.15</td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the accusative complement normally follows the verb in main clauses.

5.41 The position of the accusative participial complement in relation to the verb in subordinate clauses.
Examples

(a) 32,5 πρίν τελευτήσαντα καλώς τὸν αἰώνα πέθανε.
127,1 ὡς ἔπεσεν Κῦρον ταῦτα κρήσσοντα.

Statistics

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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>accusative complement precedes</td>
<td>1</td>
<td>(5.55%)</td>
</tr>
<tr>
<td>accusative complement follows</td>
<td>17</td>
<td>(94.44%)</td>
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<td></td>
</tr>
<tr>
<td>chi square</td>
<td>12.50</td>
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</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the accusative complement normally follows the verb in subordinate clauses.

5.42 The position of the accusative participial complement in relation to the verb in participial constructions.

Examples

(a) 124,1 εὕρην δὲ ἐν αὐτῷ τὸ βυθὸν ξύσδην

Statistics

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<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>accusative complement precedes</td>
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<td>(0%)</td>
</tr>
<tr>
<td>accusative complement follows</td>
<td>21</td>
<td>(100%)</td>
</tr>
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<tr>
<td>chi square</td>
<td>21.00</td>
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</table>
Conclusion
The value of chi square is significant; the null hypothesis is rejected; the accusative complement normally follows the verb in participial constructions.

5.43 The position of the accusative participial complement in relation to the verb in infinitival constructions.

Examples

(a) 110,3 ἐποργή δὲ ἔκκειμενον τέταγμα ἐγώ.

Statistics
accusative complement precedes 0 (0%)
accusative complement follows 3 (100%)
total 3
average 1.5
chi square -

Conclusion
The number of examples is too small for the calculation of a valid chi square. The raw figures appear to offer some support to the results obtained for other clause types.

5.44 The position of the passive "subject" in relation to the verb in main clauses: (The passive "subject" is derived from a direct object in the deep structure.)
Examples

(a) 84,5 καὶ πᾶν τὸ ἄτομο ἐπορθέετο
98,4 μεμηχύνθησαν δὲ οὕτω τὸ ὁμο τὸ τεῖχος

(b) 191,6 καὶ Βαβυλὼν μὲν οὕτω τότε κράτουν ἀραίρητο.
180,1 ἐτετείχιστο μὲν νῦν ἦ Βαβυλὼν τρόπῳ τοιῷδε

(γ) 209,2 καὶ οὕτως κατελέξειτο ἐν Πέρσαι
51,2 μετεξεινήθησαν δὲ καὶ οὕτως ὑπὸ τὸν νηὸν
κατακαέντα

(δ) 89,3 καὶ σύ τέ σφι οὕκ ἀπεκθήραι
110,3 ἑποράν δὲ ἑκκείμενον τέταγμαι ἐγὼ

Statistics

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>passive &quot;subject&quot; precedes</td>
<td>45</td>
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</tr>
<tr>
<td>total</td>
<td>65</td>
</tr>
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<tr>
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</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the passive "subject" normally precedes the verb in main clauses.

5.45 The position of the passive "subject" in relation to the verb in subordinate clauses.
Examples

(a) 179,4 ἔνθεν ἡ δοφαλτος ὡς τὸ ἐν Βαβυλῶνι τείχος ἔχομισθη.
    19,1 ὡς ἀφθη τάχιστα τὸ λῆτον

(β) 83,− ὡς ἡλώκοι τὸ τείχος τῶν Λυδῶν καὶ ἔχουτο
    Κροῖς ηγηθεὶς.

(γ) 141,1 ὡς οἱ Δυσοὶ τάχιστα κατεστράφητο ὑπὸ Περσαίων
    63,2 ὡς μῆτε ἀλιθεῖτεν ἢτι οἱ Ἄθηγαῖοι

(δ) 21,1 ὡς οἱ ταύτα ἐξαγγέλθη

(ε) 133,2 εἰ δὲ τι παραφέροιτο

Statistics
passive "subject" precedes 21 (58.33%)
passive "subject" follows 15 (41.66%)
total 36
average 18
chi square 1.00

Conclusion
The value of chi square is not significant; the null hypothesis is sustained. The passive "subject" is equally frequent before and after the verb in subordinate clauses. In this respect the word order of subordinate clauses differs from that of other clause types.
The position of the passive "subject" in relation to the verb in participial constructions.

Examples

(a) 19,1 τῇ δὲ συνδεικτῷ ἦτει λήπον ἐμπειραμένου ὑπὸ τῆς στρατιάς

(b) 164,3 τὴν δὲ σφακαῖαν ἐρημαθείαν ἀνδρῶν

(c) 80,2 τοὺς Λυδοὺς ἐς μάχην τασσομένους

(d) 158,1 ταῦτα δὲ ὡς ἀκενειχθέντα

(e) 111,2 ἐγὼ δὲ ἐκκλαγέλες

Statistics

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<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>passive &quot;subject&quot; precedes</td>
<td>72 (71.29%)</td>
<td></td>
</tr>
<tr>
<td>passive &quot;subject&quot; follows</td>
<td>29 (28.71%)</td>
<td></td>
</tr>
<tr>
<td>total</td>
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<tr>
<td>average</td>
<td>50.5</td>
<td></td>
</tr>
<tr>
<td>chi square</td>
<td>18.31</td>
<td></td>
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</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the passive "subject" normally precedes the verb in participial constructions.

The position of the passive "subject" in relation to the verb in infinitival constructions.
Examples

(a) 22,3 τὸν λαῷ τετρύθησαί ἐς τὸ ἔσχατον κακοῦ
     87,2 κατασβεθήναι τε τὴν χυρήν.

(β) 1,4 τὴν ἔδε Ἰςαν σὺν ἀλλήλοι ἀρπασθῆναι.
     170,3 διαφθαρῆναι Ἰωνήν

(γ) 94,2 ταῦτα τε ἐξευρεθῆναι παρὰ ὕφειν

Statistics

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<table>
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<tbody>
<tr>
<td>passive &quot;subject&quot; precedes</td>
<td>8 (53.33%)</td>
</tr>
<tr>
<td>passive &quot;subject&quot; follows</td>
<td>7 (46.66%)</td>
</tr>
<tr>
<td>total</td>
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<td>7.5</td>
</tr>
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</tr>
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Conclusion

The value of chi square is not significant; the null hypothesis is sustained; the passive "subject" is equally frequent before and after the verb in infinitival constructions. In this respect the word order of infinitival constructions differs from that of other clause types except subordinate clauses.

5.48 The position of the agent phrase in relation to the verb in main clauses.
Examples

(a) 114,5 ὑπὸ τοῦ σοῦ δούλου, βουκόλου δὲ καὶ δὲ ἐκεῖνος ἡ δέ 
περιπατήσατο

(β) 30,1 ἔφευγεν τῇ ἐν τοῖς βασιλείσσοις ὑπὸ τοῦ Κροίου

(γ) 14,3 ὥδε χρυσὸς οὗτος καὶ ὁ ἄργυρος, τῶν ὁ Γύμης 
ἀνέθηκε, ὑπὸ Δελφῶν καλέται Γυγάδας

80,6 ἐποιεῖτο ὑπὸ τῶν Περσῶν

Statistics

agent phrase precedes 3 (27.27%)
agent phrase follows 8 (72.73%)
total 11
average 5.5
chi square 0.73

Conclusion

The value of chi square is not significant; the null 
hypothesis is sustained; the agent phrase is equally 
frequent before and after the verb in main clauses.

5.49 The position of the agent phrase in relation 
to the verb in subordinate clauses.
Examples

(a) 124,3 καὶ ἦν τε ἔγω ὑπὸ Ἀστυάγεως ἀποδεχόμενος σφατηγός ἀντία σεῦ

(β) 70,3 ὡς ἀπαραθείησαν ὑπὸ Σαμίων

Statistics
agent phrase precedes 4 (40%)
agent phrase follows 6 (60%)
total 10
average 5
chi square 0.10

Conclusion
The value of chi square is not significant; the null hypothesis is sustained; the agent phrase is equally frequent before and after the verb in subordinate clauses.

5.50 The position of the agent phrase in relation to the verb in participial constructions.

Examples

(a) 35,3 ἐξεληλομένος τε ὑπὸ τοῦ πατρὸς
Statistics
agent phrase precedes 6 (31.58%)
agent phrase follows 13 (68.42%)
total 19
average 9.5
chi square 1.89

Conclusion
The value of chi square is not significant; the null hypothesis is sustained. The agent phrase is equally frequent before and after the verb in participial constructions.

5.51 The position of the agent phrase in relation to the verb in infinitival constructions.
Examples

(a) 122,3 τραφθήκατι δὲ ἔλεγε ὕπο τῆς τοῦ βουξόλου γυναικὸς

(β) 61,2 ἀμιμάξεσθαι πρὸς Πεισιστράτου

(γ) 127,1 ὕπο Κήδων ἄρχεσθαι

Statistics
agent phrase precedes 1 (20%)
agent phrase follows 4 (80%)
total 5
average 2.5
chi square

Conclusion
The number of examples is too small for the calculation of a valid chi square. No conclusion can be reached.

5.52 The position of the personal dative in relation to the verb in main clauses.

Examples

(a) 71,4 ἐγὼ μὲν νυν θεοῖς ἐχω χάριν
      113,1 τοῦτον μὲν παραδίδοι τῇ ἐσωτήρ γυναικὶ

(β) 120,1 Ἀρτέμιδι μὲν Ἀστυάγης ὡκην ταύτην ἔκινθηκε
      26,2 ἀνέδοσαν τὴν κόλον τῇ Ἀρτέμιδι

(γ) 74,2 θαλῆς ὁ Μιλῆςος τοῦτο Ἰωσὶ προηγόρευσε
      68,5 ἔφραξε λαξεδαμονίοις πᾶν τὸ κρῆμα

(δ) 144,3 τοῦτοι μὲν νυν οὐκ ἄρτι ταύτην τὴν ζημίαν ἱπέθηκαν.
      32,1 ζόλων μὲν ὡδ εὐθαμονίης δευτερεῖα ἐνεμε τοῦτοι...
Statistics

dative precedes 129 (65.15%)
dative follows 69 (34.85%)
total 198
average 99
chi square 18.18

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the dative normally precedes the verb in main clauses.

5.53 The position of the personal dative in relation to the verb in subordinate clauses.

Examples

(a) 34,3 μη τι οι κρεμάμενον τῷ καιδί εμπέση
183,2 ἔπεαν τὴν ὅρτην ἀγωσι τῷ θεῷ τούτῳ

(b) 92,1 τρίτους χρόνους, τὸν ἀνέθηκε τῷ Ἀκόλλωνι.

(γ) 122,3 ἵνα θειοτέρως δοξη τοῦτοι πέρσης κερδεῖναι

σφι ὁ παῖς
Statistics

dative precedes 78 (80.41%)
dative follows 19 (19.59%)
total 97
average 48.5
chi square 35.89

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the dative normally precedes the verb in subordinate clauses.

5.54 The position of the personal dative in relation to the verb in participial constructions.

Examples

(a) 207,6 τούτοις ὄν τοῖς ἀνδράσι τῶν προβάτων ἀφειδεός κολλά κατακόψαντας
161,- ληπήν κοινήμενος τῷ στρατῷ

(b) 169,2 αὐτῷ Κύριο όρκιον κοινήμενοι
33,- ναύτα λέγων τῷ Κροίω
Statistics

dative precedes 37 (50%)
dative follows 37 (50%)
total 74
average 37
chi square 0.00

Conclusion

The value of chi square is not significant; the null hypothesis is sustained; the dative precedes and follows the verb with equal frequency in participial constructions. In this respect the word order of participial constructions differs from that of main and subordinate clauses.

5.55 The position of the personal dative in relation to the verb in infinitival constructions.

Examples

(a) 90,3 τῷ ἑαυτῷ τοῦτο ὀνειδίζει
144,2 αὐτὸς ἀναγινώσκει τῷ ἑαυτῷ

(b) 78,2 ὁποία ἁπάγγελε
70,1 δῶρον βουλόμενοι ἀντιδοθήναι ὁποία
(γ) 132,2 τοῦτο πάντα Πέρσης κατεύχεται εἵ ῥίνεσθαι.  
158,1 ἐκδίδοναι Πακτήν Πέρσης

(δ) 2,3 οὐδὲ ἕν αὐτοὶ δώσειν ἐκέλευσιν

(ε) 87,3 πολέμιον ἀντὶ φίλου ἐμοὶ καταστήματι  
36,3 συνεξελεῖτιν ἡμῖν τὸ θηρίον ἐκ τῆς χώρης

(ζ) 39,2 φής τοι τὸ δυνατὸν ὑπὸ αἰχμῆς σιδηρείς  
φάναι ἐμὲ τελευτήσαιν.  
89,1 δικαιῶ, εἶ τι ἐνορῶ πλέον, σημαίνειν σοι.

Statistics

dative precedes 48 (60.76%)
dative follows 31 (39.24%)
total 79
average 39.5
chi square 3.66

Conclusion

The value of chi square is not significant; the null hypothesis is sustained; the dative precedes and follows the verb with equal frequency in infinitival constructions. In this respect the word order of infinitival constructions differs from that of main and subordinate clauses but agrees with that of participial constructions.

5.56 The position of the equational subject in relation to the verb in main clauses.
Examples

(a) 32,3 μὴνς μὲν παρὰ τὰ ἐβδομήκοντα έτεα οἱ ἐπισκόποι γίνονται τριήμερο πέντε

77,1 ἦν γὰρ οἱ συμβαλὼν στρατὸς πολλὸν ἔλασσων ἢ ὁ Κύρος.

(b) 92,3 ὁ δὲ Παγγαλέων ἦν Ἀλυάττεω μὲν καὶς Κροῖσον ὀὰ ἀδελφοὶς οὐκ ὀμομήτριος.

122,3 ἦν τε οἱ ἐν τῷ λόγῳ τὰ πάντα ἢ Κυνά.

(γ) 207,6 Ἀποσαγωγήται εἰς τὸν Ἀγαθὸν τὰς Περσικὰς ἄκρεοι καὶ καλῶς μεγάλων ἀπαθεῶς

143,2 πολλῷ ὃ ἦν ἄσθενέστατον τῶν ἐθνῶν τὸ Ἰωνικὸν καὶ λόγου ἐλαχίστον.

(δ) 163,1 καὶ τὸν Παρπηοῦν οὕτω έλθὲι οἱ καταδέχαντες.

193,1 καὶ τὸ ἐκτέφων τὴν ρύξαν τοῦ σῖτου ἐστὶ τούτο.

(ε) 45,2 εἶς δὲ καὶ τοῦτο τῶν κακῶν αἰτίος.

(ζ) 193,2 αὕτη μὲν ὃ ὁρᾶ τηρησίς περὶ τὸ σώμα ἐστὶ

35,2 ἐστὶ δὲ παραπληθείς ἢ καθαρσίς τοῖς Λυδοῖς καὶ τοῖς Έλλησι.
Conclusion
The value of chi square is significant; the null hypothesis is rejected; the equational subject normally precedes the verb in main clauses.

5.57  The position of the equational subject in relation to the verb in subordinate clauses.

Examples

(a) 185,6 ὡς ἀ τε ποταμὸς βραδύτερος εἶη
     114,1 δικε δη ἣν δεκαέτης ὁ παῖς

(b) 109,3 ὅτι ἁστυάγης μὲν ἄστι γέρων καὶ ἀπαις
     ἔρευνος γόνου
     87,2 ὡς εἶη ὁ Κροῖος καὶ θεοφιλὴς καὶ ἀνὴρ ἀγαθὸς

(γ) 146,1 τὰν Ἀβαντεκ μὲν ἐξ Ἕβοιης εἶοι οὐκ
     ἐλαχίστη μοῖρα

(δ) 207,2 ὅτι ἀρθρωπός καὶ ὄδ εἶς

(ε) 196,3 εἰ τὰς αὐτέων ἔμπηρος ἦν

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Conclusion

The value of chi square is significant; the null hypothesis is rejected; the equational subject normally precedes the verb in subordinate clauses.

5.58 The position of the equational subject in relation to the verb in participial constructions.

Examples

(a) 139,- τὰ οὐνόματα σφι ἑόντα εἰμι τοῦ τοῦτο σάμασι
     32,2 οὗτοι ἑόντες ἐνιαυτόλ ἐβδομήκοντα

(b) 73,2 Ἄστυάγεια γὰρ τὸν Κυκάρθεων ἑόντα Κροίουν
     μὲν γαμβρόν, ἡδόνην δὲ βασιλέα
     129,1 ἑόντι δὲ αἰχμαλώτης τῷ Ἀστυάνει

(γ) 76,2 ξυρίουσα τε οὐδὲν ἑόντας αἰτίους
     153,1 τίνες ἑόντες ἄνθρωποι Δακεδαιμόνιοι

(δ) 84,3 κατηλόγησε τοῦτο δὲ ἑν ἐμαχόν τε καὶ ἀπότομον
     191,4 γενομένου δὲ τοῦτον τοιοῦτον

(ε) 120,5 ἡμεῖς ἑόντες Μῆδοι

(ξ) 129,3 μὲν ἀκέφαλον τῷ λόγῳ σκειώτατον τε καὶ
     ἀδικώτατον ἑόντα πάντων ἄνθρωπων.

Statistics

equational subject precedes 69 (88.46%)
equational subject follows 9 (11.54%)
total 78
The value of chi square is significant; the null hypothesis is rejected; the equational subject normally precedes the verb in participial constructions.

5.59 The position of the equational subject in relation to the verb in infinitival constructions.

Examples

(a) 60,5 πειθόμενοι τὴν γυναικα εἶναι αὐτὴν τὴν θεόν

8,1 ἐνέμεις οἱ εἶναι γυναικα πολλὰν πασέων καλλίστην

(b) 86,2 πυθόμενος τὸν Κροίσον εἶναι θεοσεβέα

111,3 φὰς Ἀκτυάγεα εἶναι τὸν ταύτα ἐκποθόμενον μοι

(γ) 210,2 ἐκοίμησος ἐλευθέρους Πέρος εἶναι

(δ) 8,4 πεθομαι ἐκείνην εἶναι πασέων γυναικῶν καλλίστην

99,1 καὶ ἔλασι εἶναι τούτα γε αἰσχρόν

(ε) 126,6 καὶ ὅμεισ ἡγήμαι ἄνδρας Μήδῳν εἶναι οὗ

φαυλοτέρους

(χ) 51,3 φασί δὲ μιν Δελφοὶ Θεοδώρου τοῦ Σαμίλου

ἐργον εἶναι.

(η) 116,1 καὶ ἡ ὑπόχρεις ἐλευθεριστήρη εἶναι

209,3 οἱ ἐδόκεε μεγάλη εἶναι ἢ ὅπλα
Statistics

equational subject precedes 43 (82.69%)
equational subject follows 9 (17.31%)
total 52
average 26
chi square 22.23

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the equational subject normally precedes the verb in infinitival constructions.

5.60 The position of the equational complement in relation to the verb in main clauses.

Examples

(a) 149,1 άντας μεν αἱ Ἰδίες κόλιες εἰσι
148,1 τὸ δὲ Πανιώνιον ἐστι τῆς Μυκάλης χώρος ἱερός

(β) 205,1 Τόμυος οἱ ἢν οἴνομα
34,2 οἴνομα δὲ οἱ ἢν ἂν ἀτυχ

(γ) 2,1 ἐίχαν δὲ ἢν οὕτωι κούτες

(δ) 111,5 νῦν τε ὅσο εἰσί
125,4 ὦλοι δὲ Πέρσαι εἶσι οὔδε

(ε) 80,6 οὐ μέντοι οὐ γε Ανδοὶ τὸ ἐνθέτευν δειλοὶ ἦσαν
6,3 κάπετες Ἀλληνες ἦσαν ἔλευθεροι
Statistics
equational complement precedes 54 (40.91%)
equational complement follows 78 (59.09%)
total 132
average 66
chi square 4.36

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the equational complement normally follows the verb in main clauses.

5.61 The position of the equational complement in relation to the verb in subordinate clauses.

Examples

(a) 207,2 ὃτι ἀνθρώπων καὶ οὐ εἰς
122,2 ὡς θυσίαν τοῦ Ἀπολλώνης εἶναι ταῖς

(b) 60,4 τῇ οὖν θυσίᾳ ἡν θυσία

(γ) 146,1 ὡς γέ τι μάλλον σῶτοι Ἰωάννης εἶσι τῶν ἄλλων Ἰωάννη

(δ) 8,4 ἐν τούτῳ ἐν ὁδῷ ἔστι

(ε) 80,4 ἦς τῷ Κρονίῳ ἰχθύστον ἢ τὸ ἰχθύς
186,2 ὡς ἐδέ οἱ ἦσαν οἱ λέοντα Στομίοι

Statistics
equational complement precedes 16 (29.63%)
equational complement follows 38 (70.37%)
total 54
average 27
chi square 8.96

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the equational complement normally follows the verb in subordinate clauses.

5.62 The position of the equational complement in relation to the verb in participial constructions.

Examples

(a) 68,4 δύο ὧραν φύσας τοὺς ἀνέμους εὑρίσκε ἑόντας

114,3 ἦν Ἀρτέμιδος παῖς

(β) 31,2 τοῦτοις γὰρ ἐσούσι γένος Ἀργεῖοι

(γ) 124,3 ως δὲν ἔστωμοι τοῦ γε ἐννέαδε ἑόντος

185,2 τὸν Ἐφρήτην ποταμὸν ἑόντα πρῶτερον ἦσον

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Conclusion
The value of chi square is significant; the null hypothesis is rejected; the equational complement normally follows the verb in participial constructions.
5.63 The position of the equational complement in relation to the verb in infinitival constructions.

Examples

(a) 74,2 τὴν ἡμέρην ἐξερήνη ἡμικτα γενέσθαι
171,6 τὸν γὰρ Λυδὸν καὶ τὸν Μυσὸν λέγουσι εἶναι

(β) 68,3 συνεβάλλετο τὸν 'Ορέστην κατὰ τὸ Θεοκρότουν
tοῦτον εἶναι
1,3 τὸ δὲ οἶνομα εἶναι, κατὰ τοῦτο τὸ καὶ
'Ελληνες λέγουσι, 'Ιοῦν τὴν 'Ινάχου

(γ) 202,2 τοῦτων μὲν αὐτὴ λέγεται διάκινε εἶναι

(δ) 46,1 πρὶν μεγάλους γενέσθαι τοὺς Πέρσας
185,1 τὴν ἡμικτὴν ἔσθητα νομίζωντες τῆς ἑσφαλίαν
eἶναι καλλίω

Statistics

equational complement precedes 46 (63.88%)
equational complement follows 26 (36.11%)
total 72
average 36
chi square 5.56

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the equational complement normally precedes the verb in infinitival constructions.
In this respect the word order of infinitival constructions differs from that of other clause types.

5.64 The position of the equational subject in relation to the equational complement in main clauses.

**Examples**

(a) 205,1 ἦν δὲ τοῦ ἀνδρὸς ἀποθανόντως ἐγγύθι τῶν
Mαυσολείων βασιλείας.

199,4 γίνεται γὰρ ἵνα τὸ ποιήσει τὸ ἄργυρον

(b) 91,5 ἦν γὰρ ὁ ὁ Κύρος οὗτος ἡμῶνος

122,3 ἦν τε οἱ ἐν τῷ λόγῳ τὰ πάντα ἣν κυκά

(c) 172,1 οἱ δὲ Καύνιοι αὐτόχθονες δοκεῖν ἐμοὶ εἰσι

68,6 πολλὶ καταπέτασον τῷ πολέμῳ ἐγένοντο
οἱ Ἀκεχεκαμένοι.

(d) 2,1 εἶθεν δὲ ὁ οὗτοι Κρήτες

186,1 καὶ ἦν, ὡς ἐγὼ δοκῶ, ὧς λέγει τὸ τούτο

(e) 45,2 εἰς δὲ τὸν μοι τοῦ ὄντος κακοῦ αἰτίος

(ζ) 195,2 αὖθι μὲν ὡς σφί ἄρτιος περὶ τὸ οὕτω ἐστι

**Statistics**

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Conclusion

The value of chi square is significant; the null hypothesis is rejected; the equational subject normally precedes the equational complement in main clauses.

5.65 The position of the equational subject in relation to the equational complement in subordinate clauses.

Examples

(a) 196,1 ὡς ἐν ᾧ παρθένοι γενοίτο γάμων ὄραται 103,2 διε νῦξ ἡ ἡμέρῃ ἐγένετο

(b) 96,3 ὡς ἀπελθὼν εἰς ἀνήρ μοῦνος κατὰ τὸ ὀρθὸν δικάζων 155,2 μη ἀναστάτους ποιήσῃ τὰς σάρκις

(c) 146,1 τῶν Ἀθωνίτες μὲν ἐξ ὑπολίθης ἔσιν οὖν ἐλαχίστη μοῖρα.

(d) 146,1 ὡς γέ τι μᾶλλον οὗτος Ἰωάννας ἔσιν τῶν ἄλλων Ἰῶννος 37,3 ἵκως μοι ἀμείων ἐστὶ ταύτα οὗτοι ποιεόμενα.

(e) 207,2 ὡς ἀνθρώπος καὶ οὖ εἶξ

(ζ) 196,3 εἰ τῆς αὐτέων ἐκπροσ ἦν
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Conclusion

The value of chi square is significant; the null hypothesis is rejected; the equational subject normally precedes the equational complement in subordinate clauses.

5.66 The position of the equational subject in relation to the equational complement in participial constructions.

Examples

(a) 31,4 ἦ δὲ μίτωπ περιχαρῆς ἕθεσα
    19,2 μακροτέρης δὲ οἱ γινομένης τῆς νοῦς

(b) 59,1 ἰπποχόδετει γὰρ ἐόντι ἱοῦτα
    129,1 ἐόντι δὲ αἰχμαλώτη τῷ Ἀστυάχει

(γ) 129,4 θῶδοὺς μὲν ἀνατίους τοῦτον ἑόντας

(δ) 185,1 ἁμὴ δὲ συνετοπέρη γενομένη τῆς πρῶτον ἀρξάσης

(ε) 120,5 ἡμεῖς ἑόντες θῆδοι

(ζ) 129,3 Ἀστυάγης δὲ μὴ ἰππάτειν τῷ λόγῳ σκαλώτατον
    τε καὶ ἀδικώτατον ἑόντα πάντων ἀνθρώπων
Statistics

equational subject precedes 85 (88.54%)
equational subject follows 11 (11.46%)
total 96
average 48
chi square 57.04

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the equational subject normally follows the equational complement in participial constructions.

5.67 The position of the equational subject in relation to the equational complement in infinitival constructions.

Examples

(a) 60,5 πειθόμενοι τὴν τυχαία eίναι αὐτὴν τὴν θεον
131,1 όμως ἀνθρακοφυέας ἐνόμισαν τοὺς θεοὺς κατά περ οί "Ελληνες eίναι

(b) 30,4 κοίτη ὅπε κρίνεις Τέλλον eίναι ολβιώτατον

(γ) 1,1 Φοίνικας αίτίους φασί γενέσθαι τῆς διαφορῆς
210,2 ἐποίησας ἐλευθέρους Πέρσας eίναι

(δ) 125,1 εὐρισκέ τε ταύτα καιριώτατα eίναι
114,1 εὔλογο ἑωντῶν βασιλέα eίναι τούτων ὁτι τῶν τοῦ βουκόλου ἐκξήλησιν κατόδα

(ε) 126,6 καὶ ὡμέας ἥγημαι ἀνδρας λήξων eίναι οὐ φαύλοτέρους
(ζ) 38,1 ἔφη σε ολιγοχρόνιον ἔσεσθαι
41,2 φύλαξα παιδός σε τοῦ ἐμοῦ χρησίω γενέσθαι

(η) 203,2 μεϊέτε ὡς τοῦτον τῶν ἀνθρώπων εἶναι ἐμφανέα
209,3 ὡς ὡς οἱ ἀδόχες μεγάλη εἶναι ἡ ὄψις

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Conclusion

The value of chi square is significant; the null hypothesis is rejected; the equational subject normally precedes the equational complement in infinitival constructions.

5.68 The position of the vocative in relation to the verb in main clauses.

Examples

(a) 85,4 ἀνήρωτε, μὴ κτείνε Κροῖσον
117,5 οὕτως ἐσχα, ἐβασιλεύ, περὶ τοῦ κρήμματος τούτου

(b) 116,2 Ἀρτέμιδας, ἐγὼ ταῦτα τουὴς ὄστε ὡς καὶ
90,3 καὶ τοῦτον ἐσύξαι καὶ ἐμεῦ, Κροῖσος, καὶ
καὶ θλου παντὸς τόι ὧν ἐκάστοτε δέη.
Statistics

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<td>Vocative precedes</td>
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</tr>
<tr>
<td>Vocative follows</td>
<td>4 (9.30%)</td>
</tr>
<tr>
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<tr>
<td>Average</td>
<td>21.5</td>
</tr>
<tr>
<td>Chi square</td>
<td>28.49</td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the vocative normally precedes the verb in main clauses.

5.69 The position of the directional phrase in relation to the verb in main clauses.

Examples

(a) 171,5 καὶ οὕτως ἐκ τῆς ἡκείρου ἀκίκεντο
42,1 ἀλλὰς μὲν ἔτιψε ἀν σῶκ ἦνα ἐκ ἕθελον τοιόνδε

(b) 21,1 ὁ μὲν ὅτι ἀπόστολος ἐκ τῆς Ἐλληνης ἦν
70,2 οὕτως ὁ κρατήρ ὁυκ ἀκίκεντο ἐκ ξάρδις

(γ) 100,1 καὶ τάς τε δίκαις γράφοντες έσω παρ’ ἐκείνον ἐσπέρμασκουν

(δ) 30,2 παρ’ ἤμεας γὰρ κερί σεό λόγος ἀκίκεται πολλός
159,1 ἦλθε παρ’ ἤμεας ἵκετης Πακτῆς ὁ Λυδὸς
Statistics

directional phrase precedes 35 (22.44%)
directional phrase follows 121 (77.56%)
total 156
average 78
chi square 47.41

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the directional phrase normally follows the verb in main clauses.

5.70 The position of the directional phrase in relation to the verb in subordinate clauses.

Examples

(a) 176,1 ὡς ἐς τὸ Ἐκάθισμα προϊόν ἡλικεῖ ὁ Ἀρπαγος τὸν στρατόν
      65,2 ὡς ἐσημεν ἐς τὸ μέγαρον

(b) 166,1 ἐκείνος δὲ ἐς τὴν Κύριον ἐπίκλησε
      77,4 ὡς ἐπίκλησε ἐς τὰς ἑράτες

(γ) 53,1 εἰ στρατεύεται ἐκὶ Πέρας

(δ) 127,2 ὅτι πρῶτον ἤξεσιν παρ’ ἐκείνον ἤ Ἀστυάγης ἀντὸς βουλήσεται

Statistics

directional phrase precedes 18 (31.03%)
directional phrase follows 40 (68.97%)
Total: 58
Average: 29
Chi square: 8.34

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the directional phrase normally follows the verb in subordinate clauses.

5.71 The position of the directional phrase in relation to the verb in participial constructions.

Examples

(a) 132,1 ἔς κύρον καθαρόν ἀγαγων τῷ κτήνος
    1,4 ἐσβαλομένους δὲ ἔς τὴν νέα

(b) 167,3 ἔς τῷ Ἐρμίου καταφυγόντες
    67,2 πέμψαντες θεοπρόπους ἔς λελιοθά

(γ) 102,2 ἐπὶ τούτους ὡς ορτατευσόμενος
    208,- διαβησομένου ἐπ' ἐκείην

Statistics
Directional phrase precedes: 25 (17.86%)
Directional phrase follows: 115 (82.14%)
Total: 140
Average: 70
Chi square: 57.86

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the directional phrase normally follows
the verb in participial constructions.

5.72 The position of the directional phrase in relation to the verb in infinitival constructions.

Examples

(a) 71,2 ἐπὶ ἀνδρὰς τοιούτους ὁποιεύεσθαι
     191,5 ἐπέλθειν ἐς τὴν κόλλην

(b) 2,1 ἐκ Ἀλεξάπο τὰ οἰκεῖα εἰσῆλθαν
     24,6 χωρίσειν ἐκ Κόρινθου

(γ) 46,3 ἐπὶ Πέρσας ὁποιεύεσθαι
     77,3 ὁποιεύεσθαι ἐπὶ τῶν Πέρσας

(δ) 88,2 λέγειν τὸ τῶν οὐ

Statistics

directional phrase precedes 22 (26.51%)
directional phrase follows 61 (73.49%)

total 83

average 41.5

chi square 18.33

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the directional phrase normally follows the verb in infinitival constructions.

5.73 The position of the locative in relation to the verb in main clauses.
Examples

(a) $194,3$ ἐν ἔκαστω δὲ πλοίῳ ὄνος ζῶς ἐνεστὶ
$48,2$ ἤπειρε αὐτῶς ἐν λέβητι χαλκώ

(β) $165,1$ ἐν γὰρ τῇ Κύριῳ εἴκοσι ἔτεσι πρῶτον
tοῦτων ἐν θεοκροπίου ἀνεστήσαντο κόλιν
$56,3$ οἶκες ἐν Πῖνδῳ

(γ) $132,2$ ἐν γὰρ ὧν τοῖς ἐπισημήνει καὶ αὐτῶς
γίνεται
$209,2$ καὶ οὐδὸς καταλέλειπτο ἐν Πέρος

(δ) $104,2$ οὗ μέντοι οὗς ἔχει ταύτῃ ἐπεξέπαυον

Statistics

locative precedes 57 (48.72%)
locative follows 60 (51.28%)
total 117
average 58.5
chi square 0.08

Conclusion

The value of chi square is not significant; the null hypothesis is sustained; the locative is equally frequent before and after the verb in main clauses.

5.74 The position of the locative in relation to the verb in subordinate clauses.
Examples

(a) 51,3 ὦ τῇ Ἀργεῖ τῶν θησαυρῶν ἐστάσι
    190,1 ἐπεὶ δὲ ἐγένετο ἔλαιων ἄγχος τῆς κόλπως

(b) 5,2 ὡς ἦν τῷ Ἀργεῖ ἐμίσγετο τῷ ναυκλήρῳ τῆς νεός
    19,3 τὸν ἐνέπρησαν χώρης τῆς μιλησίας ἐν Ἁρσοσῳ

Statistics

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</tr>
<tr>
<td>chi square</td>
<td>0.12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is not significant; the null hypothesis is sustained; the locative is equally frequent before and after the verb in subordinate clauses.

5.75 The position of the locative in relation to the verb in participial constructions.

Examples

(a) 62,1 ἐν δὲ τούτῳ τῷ χῶρῳ ὥσπερ στρατοκεδαμόνευσοι
    134,1 ἐνυγχάνοντες δ’ ἄλληλοι ἐν τῇ ὁδῷ ὄντοςι

(b) 151,2 ἐν τῇ Λέσβῳ ὀλκευμένην
    170,2 μένουσι δὲ ὥσπερ ἐν τῇ Ἰωνίᾳ
The value of chi square is not significant; the null hypothesis is sustained; the locative is equally frequent before and after the verb in participial constructions.

5.76 The position of the locative in relation to the verb in infinitival constructions.

Examples

(a) 17,2 κατὰ χώραν ἔσταται

27,4 νησίωτας ἰππευμένους λαμβάνειν ἐν ἱππείῳ

(β) 94,3 συνεδείην ἱσχυρῆν ἀνδρὶ τὴν ἄνδριν πάσαν γενέσθαι.

(γ) 191,2 ἐσοέναι ταύτη ὡς τὴν πόλιν.
Statistics
locative precedes 14 (48.28%)
locative follows 15 (51.72%)
total 29
average 14.5
chi square 0.03

Conclusion
The value of chi square is not significant; the null hypothesis is sustained; the locative is equally frequent before and after the verb in infinitival constructions.

5.77 The position of the instrumental in relation to the verb in main clauses.

Examples

(a) 195,1 τὰς κεφαλὰς μνημησί αναδέοντα

64,2 ταύτην ὁ Πεισοίστρατος κατεστράφατο κολέμφω

Statistics
instrumental precedes 22 (46.81%)
instrumental follows 25 (53.19%)
total 47
average 23.5
chi square 0.19

Conclusion
The value of chi square is not significant; the null hypothesis is sustained; the instrumental is equally frequent before and after the verb in main clauses.
5.78 The position of the instrumental in relation to the verb in subordinate clauses.

Examples

(a) 205,2 Ὅς οἱ ὀλὼν ἔφε συνέχωρεν
     119,5 ἃ ἔσθε τῇ τῇ θολίῃ

Statistics

instrumental precedes  7 (53.85%)
instrumental follows  6 (46.15%)
total                13
average              6.5
chi square           0.00

Conclusion

The value of chi square is not significant; the null hypothesis is sustained; the instrumental is equally frequent before and after the verb in subordinate clauses.

5.79 The position of the instrumental in relation to the verb in participial constructions.

Examples

(a)  66,4 σχοίνῳ διαμετρήσαμενοι τῶν κεδίων
     200,= λεηγαντες ἕκτεσιν

(b)  57,2 τούτοις τεχναίρομένον
     116,2 ἐκπλαγείς ὡς τούτοις
### Statistics

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<td>31</td>
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Average: 31.5

Chi square: 0.02

### Conclusion

The value of chi square is not significant; the null hypothesis is sustained; the instrumental is equally frequent before and after the verb in participial constructions.

5.80 The position of the instrumental in relation to the verb in infinitival constructions.

### Examples

(a) 146,3 μη δὲ οὖν χύματι βῶσαι τὸν ῥωπής ὄμορ 
    202,2 μεθύσκεσθαι τῷ ὀδύμῳ

(b) 50,1 τὸν θεὸν μᾶλλον τι τοῦτοις ἀνακτήσεσθαι 
    24,3 οὐχ δὲν δὴ πείθειν αὕτην τοῦτοις

### Statistics

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<td>Instrumental follows</td>
<td>8</td>
<td>42.11%</td>
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<td>19</td>
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</table>

Average: 9.5

Chi square: 0.21
Conclusion

The value of chi square is not significant; the null hypothesis is sustained; the instrumental is equally frequent before and after the verb in infinitival constructions.

5.81 The position of the sociative in relation to the verb in main clauses.

Examples

(a) 61,2 ἔβουλεύσετο ἡμα τότε πασί

(β) 214,1 συνέβαλε Κύρω

(γ) 138,1 οὐδὲ συμμζηγεται τότε ἄλλοια Πέρσηοι

(δ) 171,6 τούτοις μὲν ὄη μέτεστι

171,5 οὔ μέντοι αὐτοὶ γε ὁμολογέουσι τούτοις.

ι Κάρες

Statistics

sociative precedes 3 (27.27%)
sociative follows 8 (72.72%)
total 11
average 5.5
chi square 1.45

Conclusion

The value of chi square is not significant; the null hypothesis is sustained; the sociative is equally frequent before and after the verb in main clauses.
5.82 The position of the sociative in relation to the verb in subordinate clauses.

Examples

(a) 171,6 ἰπὴν ἀρχατον, τοῦ ηµοσίων μὲν καὶ ξυλοῦσι, μέτετρι ὡς κασιγνήτωτοι ἐσθοί τοῖς Καρῳ

Statistics
sociative precedes 2 (100%)
sociative follows 0 (0%)
total 2
average 1
chi square -

Conclusion
The number of examples is too small for the calculation of a valid chi square. No conclusion can be drawn.

5.83 The position of the sociative in relation to the verb in participial constructions.

Examples

(a) 86,3 σὺν θεῷ ἐλπίμενον
    76,1 διαβὰς σὺν τῷ στρατῷ

(b) 108,1 συνοικεύοντος δὲ τῷ Καρβύγγη τῆς Μανδάνης

Statistics
sociative precedes 2 (33.33%)
sociative follows 4 (66.66%)
The number of examples is too small for the calculation of a valid chi square. No conclusion can be drawn.

5.84 The position of the sociative in relation to the verb in infinitival constructions.

Examples

(a) 27,3 ἔλθειν ἐπὶ λυδίων παιδός σὺν ἔκπολτοι.

(b) 1,4 τήν ὥς 'Ἰσθὺν σὺν ἀλλην ἄρκαιοθήναι

Statistics

sociative precedes 3 (25%)
sociative follows 9 (75%)
total 12
average 6
chi square 2.08

Conclusion

The value of chi square is not significant; the null hypothesis is sustained; the sociative is equally frequent before and after the verb in infinitival constructions.

5.85 The position of the ablative in relation to the verb in main clauses.
Examples

(a) 31,2 οἱ δὲ σφί βόες ἐκ τοῦ ἀγροῦ ὁδὸν παρεγίνοντο ἐν ὠρῇ.
81,− ἔπεμπε ἐκ τοῦ τεῖχους ἄλλοις ἄγγελοις

(β) 173,1 οἱ δὲ λίκνιοι ἐκ Κρήτης τρφχαῖον γεγόνασι
61,4 καὶ γὰρ Ἄργετοι μισθωτοὶ ἀξίκοντο ἐκ Πελοποννήσου

(γ) 108,2 μετεπέμψατο ἐκ τῶν Περσῶν τὴν θυγατέρα

(δ) 16,2 ἀπὸ μὲν γὰρ τούτων ὅπι ὡς ἠθέλε ἄκηλλαξε

Statistics

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<td>(52.94%)</td>
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<tr>
<td>chi square</td>
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</table>

Conclusion

The value of chi square is not significant; the null hypothesis is sustained; the ablative is equally frequent before and after the verb in main clauses.

5.86 The position of the ablative in relation to the verb in subordinate clauses.
Examples

(a) 50,2 ὡς δὲ ἐκ τῆς θυσίνης ἐγένετο

(b) 173,3 ὡς δὲ ἐκ Ἀθηναίων Ἀύξος ὁ Πανδίονος ...

Statistics

| Ablative preceded | 9 (47.37%) |
| Ablative follows  | 10 (52.63%) |
| Total             | 19         |
| Average           | 9.5        |
| Chi square        | 0.00       |

Conclusion

The value of chi square is not significant; the null hypothesis is sustained; the ablative is equally frequent before and after the verb in subordinate clauses.

5.87 The position of the ablative in relation to the verb in participial constructions.

Examples

(a) 193,4 ἐκ τῶν οἰκεῖσσαν κοινεύτες

(b) 62,1 ἐκ 'Επιτρής δὲ ὄρμηνθέντες

165,3 ἀερθέντες ἐκ τῶν ὀλυμποσάων
Statistics

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Conclusion

The value of chi square is not significant; the null hypothesis is sustained; the ablative is equally frequent before and after the verb in participial constructions.

5.88 The position of the ablative in relation to the verb in infinitival constructions.

Examples

(a) 186,1 ἐκ τοῦ ἔτερου φόρους ὡς τοῦτον διαβήναι
     24,5 ἀναχυρήσει ἐκ τῆς κρύμνης ὡς μέσην νέα

(b) 104,1 ἐκ ὧν τῆς Κολχίδος ὡς κολλὸν ἤπερβηναι
     ἡς τὴν Μηδικήν
     112,1 ἐπιφοιτήσειν γὰρ κατασκόπους ἐκ Ἰδράγου

(γ) 98,2 ἐκ πάντων Μήδων καταλέξασθαι
     125,3 ἀπίστασθαι ἀπὸ Μήδων
Statistics

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<td>chi square</td>
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</table>

Conclusion

The value of chi square is not significant; the null hypothesis is sustained; the ablative is equally frequent before and after the verb in infinitival constructions.

5.89 The position of the referential in relation to the verb in main clauses.

Examples

(a) 100,2 ταύτα μὲν κατὰ τὰς δίκας ἔκαθε   197, - συμβουλεύοντο περὶ τῆς νόθουν

(b) 5,2 περὶ δὲ τῆς Ἰους ὁμολογεῖσθαι Πέρσης 
     οὕτω φοίνικες   
     158, - ἐλέτευν περὶ Παχτήνυ

(γ) 5,3 ἑγὼ δὲ περὶ μὲν τούτων ὁμίλοι κρέων

(δ) 30,2 παρ' θυμέας γάρ περὶ σὲα λόγος ἀπίκτηται κολλός

(ε) 49, - κατὰ δὲ τὴν ἅματιάν τοῦ μαντηλίου ἤκόριστον ὁμίλοι 
     ἐχὼ ἐλπεῖν   
     209,3 ἐδίδον λόγον ἐνυπὸ περὶ τῆς ὁμίλοι
Statistics
referential precedes  14 (56%)
referential follows  11 (44%)
total  25
average  12.5
chi square  0.36

Conclusion
The value of chi square is not significant; the null hypothesis is sustained; the referential is equally frequent before and after the verb in main clauses.

5.90  The position of the referential in relation to the verb in subordinate clauses.

Examples

(a)  91,2 ὡς ἐν κατὰ τοὺς κατάς τοῦ Κροίου γένοιτο τὸ Σαρδίων καθός
       24,7 ἐν τῷ λέγοντεν περὶ Ἀρέσων

Statistics
referential precedes  2 (33.33%)
referential follows  4 (66.66%)
total  6
average  3
chi square  

Conclusion
The number of examples is too small for the calculation of a valid chi square. No conclusion can be drawn.
5.91 The position of the referential in relation to the verb in participial constructions.

Examples

(a) 95,2 οὗτοι περί τῆς ἔλευσινς μαχεσθέντοι
40, - γνώμην ἄρχοντων περί τοῦ ἐνυκτέου

(β) 158,2 το δεύτερον περί παράβολα ἐκείρησθέντοι

Statistics

referential precedes 5 (45.45%)
referential follows 6 (54.55%)
total 11
average 5.5
chi square 0.00

Conclusion

The value of chi square is not significant; the null hypothesis is sustained; the referential is equally frequent before and after the verb in participial constructions.

5.92 The position of the referential in relation to the verb in infinitival constructions.

Examples

(a) 19,2 το θεόν εκείρωθαι περί τῆς νούσου

(β) 95,1 περὶ Κύρου καὶ τριφασίας ἄλλας λόγων ὀδοὺς φήμαι.
(γ) 171,5 κατὰ μὲν δὴ καθαρὸς οὗτος Κρήτης λέγουσιν γενέσθαι

(δ) 39,1 πεσέ ἐνε φυλακῆν ἔχειν
210,3 πατὸς τὸν ἐμὸν νεώτερα βουλεύειν περὶ σέο

Statistics
referential precedes 4 (50%)
referential follows 4 (50%)
total 8
average 4
chi square

Conclusion
The number of examples is too small for the calculation of a valid chi square. The raw figures appear to support the null hypothesis.

5.93 The position of the temporal phrase in relation to the verb in main clauses.

Examples

(a) 108,1 τῷ πρῶτῳ ἔτει εἶδε ἀλλήν ὅπιν
31,2 οἱ δὲ σφί βοῦς ἐν τῷ ἄγρῳ οὗ παρεγίνοντο ἐν ὑπῆ

(b) 56,3 ἐπὶ μὲν γὰρ λευκαλόντως βασιλέως οἶκες γῆν τὴν θηλίτιν
14,2 οὕτως δὲ ὁ Γύνης πρῶτος βαρβάρων τῶν ἤμεν ὃς ἵμαν ἐς Δελφοὺς ἀνέβηκε ἀναθῆμα μετὰ τὴν τοῦ Γορδίου, ἔργον βασιλέα.
Statistics

temporal phrase precedes  223 (86.77%)
temporal phrase follows  34 (13.23%)
total  257
average  128.5
chi square  138.99

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the temporal phrase normally precedes the verb in main clauses.
5.94 The position of the temporal phrase in relation to the verb in subordinate clauses.

**Examples**

(a) 68,6 χρόνω δέ ώς ἀνέγνωσε  
192,2 ἄργυρίου μὲν προσήμεν ἐκάστης ὑμέρης ἀρτάβη μεστή  

(b) 11,2 ὡς ἡ μῆ πάντα πειθόμενος Κανδαβλὴ τοῦ λοιποῦ ἠδης τὰ μῆ σε ὕει.  

(γ) 77,1 ὡς τῇ υστεραίη οὖν ἐπειράτο ἐπιών ὁ Κύρος  

(δ) 5,4 τὰ δὲ ἐπ᾽ ἐμεὺ ἦν μεγάλα.  

(ε) 77,4 μὴ κατε ἁρα ἀγωνιοάμενος οὕτω παραπλησίως Κύρος ἐλάσῃ ἐπὶ Σάρδις.  
84,2 μὴ ἄλφ κατε  

(ζ) 26,2 ἢ τότε ἐπολιορκέστο  
188,2 ὡρη δὴν ἐλαύνῃ ἐκάστοτε  

(η) 85,1 τοῦ καὶ πρώτου ἐκεμνήσθην  
120,1 εἰ ἐπέζωσε καὶ μὴ ἀκέδανε πρότερον.  

**Statistics**

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>temporal phrase precedes</td>
<td>52 (82.54%)</td>
<td></td>
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</tr>
<tr>
<td>temporal phrase follows</td>
<td>11 (17.46%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>total</td>
<td>63</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>average</td>
<td>31.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>chi square</td>
<td>26.68</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Conclusion

The value of chi square is significant; the null hypothesis is rejected; the temporal phrase normally precedes the verb in subordinate clauses.

5.95 The position of the temporal phrase in relation to the verb in participial constructions.

Examples

(a) 74,2 τῇ ἔκτω ἔτει, συμβολής γενομένης
79,1 αύτή αὐθεντικοῦ Κροίου μετά τὴν μάχην
τὴν γενομένην ἐν τῇ Πτερίῳ

(b) 15, "Αρδύος δὲ τοῦ Γύγεως μετὰ Γύγην βασιλεύοντος
130,2 τότε δὲ ἔπει Ἀστυάγεος οἱ Πέρσαι τε καὶ ὁ
Κύρος ἐπαναστάντες τοῖς Μήδοισι

(γ) 84,2 μετὰ δὲ τοῦτο περιβαλμένης τῆς στρατιάς
82,8 οὗ γὰρ κομῶντες πρὸ τοῦτον ἀπὸ τοῦτον κομῶν

(δ) 156,1 ἀρρωδέως δὲ μῆ καὶ ἀρτερῶν κοτε οἱ Λυδοὶ,
ἡν τὸ παρεῦν ἥπεκοριμέσθαι, ἀποστάντες ἀπὸ
tῶν Περσέων ἀπόλυμαι,

(ε) 83, καὶ σφὶ ἧπι παρεκκενασμένοι
67,5 έξιῶντες ἐκ τῶν ἵππων αἱ ὑπὲρ οἱ πρεσβύτατοι

Statistics

temporal phrase precedes 111 (86.72%)
temporal phrase follows 17 (13.28%)
Conclusion

The value of chi square is significant; the null hypothesis is rejected; the temporal phrase normally precedes the verb in participial constructions.

5.96 The position of the temporal phrase in relation to the verb in infinitival constructions.

Examples

(a) 77.3 ἡμι τῷ ἑβδομαδικῷ στρατεύειν ἐκ τοῦ περὶ 
191.6 χορεύειν τοίς ἐπὶ τῶν χρόνων καὶ ἕν 

(b) 3.1 δευτέρα δὲ λέγουσι γενεῆ μετὰ ταύτα 
'Αλέξανδρον τὸν Πριάμου ἀκροάστα ταύτα 
ἐθελήσαι οἱ ἐκ τῆς 'Ελλάδος ὑιὸν ἀρχαγγέλου 
γενέσθαι γυναῖκα 
59.3 γενέσθαι οἱ μετὰ ταύτα τὸν Πεισίστρατον τούτον 

(γ) 146.3 καὶ παρέδοσαν τῇσι θυγατράσι μὴ κοτὲ 
ἅμοιτήσαι τοῖς ἀνδράσι 
32.7 μηδὲ καλέσειν καί ὄλπιον ἀλλ' εὐτυχέα 

(δ) 11.2 ἦ αὐτῶν σε αὐτίκα ὁ ἄκολουθος ἔτε 
86.6 οὐ δύνασθαι ἐξι τούτῳ πυρὸς ἐξικνητῆσαι
Statistics

temporal phrase precedes 53 (76.81%)
temporal phrase follows 16 (23.19%)
total 69
average 34.5
chi square 19.84

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the temporal phrase normally precedes the verb in infinitival constructions.

5.97 The position of the adverbial of manner in relation to the verb in main clauses.

Examples

(a) 214,1 καὶ δὴ οὕτως μὲν τρόπῳ τοιούτῳ τελευτᾷ
     180,1 ἠτετείχιστο μὲν γὰρ ἡ Βαβυλὼν τρόπῳ τοιῷδε

(b) 76,4 καὶ τὰ μὲν στρατόπεδα ἀμφότερα οὕτως ἦγγυς ὡστε
     5,2 περὶ δὲ τῆς Ἰουδαίας οὐκ ὁμολογέοντι Πέρσῃ
        οὕτως Φοινικῶν

(γ) 122,1 μεγάλως ἀσκάζοντο
     167,2 καὶ γὰρ ἐναγίζουσι οὐκ μεγάλως

Statistics
adverbial of manner precedes  84 (65.12%)
adverbial of manner follows  45 (34.88%)
total                  129
average                 64.5
chi square              11.79

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the adverbial of manner normally precedes the verb in main clauses.

5.98 The position of the adverbial of manner in relation to the verb in subordinate clauses.

Examples
(a) 193,5 τοὺς συχέων τρόπον θεραπεύοντι
(b) 120,1 οἱ τὸ ἐνύπνιον οἱ παῦτα ἐξερίνη  
   212,2 τῷ περ ἀυτοὶ ἐμπιστεύομενοι μαίνοντο οὕτως
(c) 38,2 εἰ καὶ δυναιμὴν ἐπὶ τῆς ἐμῆς γε κόρης  
   διακλέψαι.
(d) 89,3 ὡς σφέα ἀναγκαῖος ἔχει δεκατευθύναι τῷ ἄν
   31,4 οὐ μὴν ἐτίμησον μεγάλως

Statistics
adverbial of manner precedes  24 (52.17%)
adverbial of manner follows  22 (47.83%)
total  
average  
chi square  

Conclusion  
The value of chi square is not significant; the null hypothesis is sustained; the adverbial of manner is equally frequent before and after the verb in subordinate clauses. In this respect the word order of subordinate clauses differs from that of other clause types.

5.99 The position of the adverbial of manner in relation to the verb in participial constructions.

Examples

(a) 200,- ἄρτον τρόπον ὁπτήσας  
    189,3 τεταμιένας πάντα τρόπου  

(b) 68,3 τῆδε συμβαλλόμενος  
    64,2 καθήρας δὲ δ纵深

(γ) 76,1 κατὰ σιωπὴν πόλιν τὴν ἐν ἐδέσσας πόντον  
    μέλισσά κη κειμένη  
    191,4 ὑποενεστημότος ἀνδρὶ ὡς ἐς μέσον μηρὸν  
    μέλισσά κη

(δ) 21,1 σαφέσθω προκεκυμνένος πάντα λόγον  
    32,5 τελευτήσαντα καλῶς τὸν αἴώνα.
Statistics

<table>
<thead>
<tr>
<th>Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>adverbial of manner precedes</td>
<td>62 (71.26%)</td>
</tr>
<tr>
<td>adverbial of manner follows</td>
<td>25 (28.74%)</td>
</tr>
<tr>
<td>total</td>
<td>87</td>
</tr>
<tr>
<td>average</td>
<td>43.5</td>
</tr>
<tr>
<td>chi square</td>
<td>15.74</td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the adverbial of manner normally precedes the verb in participial constructions.

5.100 The position of the adverbial of manner in relation to the verb in infinitival constructions.

Examples

(a) 94.4 τολούμενον τρόπῳ διήγεται  
194.5 οὐκ οὖν τέ ἐστι πλέειν ὁδεγεῖται τρόπῳ

(b) 87.4 ἀλλὰ ταῦτα δαίμονι κοι φέλον ἡν οὕτω γενέσθαι  
94.4 τοιεῖτιν δὲ ἴδε πρὸς τόν λιμὼν

(γ) 58.4 οὐδαμά μεγάλως ἀνεξήγημαι  
108.5 χρῆ ὦν τὸ γε ἐμὸν ᾑπηρετέεσθαι ἐκτιμήδεως

Statistics

<table>
<thead>
<tr>
<th>Description</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>adverbial of manner precedes</td>
<td>37 (68.52%)</td>
</tr>
<tr>
<td>adverbial of manner follows</td>
<td>17 (31.48%)</td>
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<tr>
<td>total</td>
<td>54</td>
</tr>
<tr>
<td>average</td>
<td>27</td>
</tr>
<tr>
<td>chi square</td>
<td>7.41</td>
</tr>
</tbody>
</table>
Conclusion

The value of chi square is significant; the null hypothesis is rejected; the adverbial of manner normally precedes the verb in infinitival constructions.

5.101 The position of the future participle in relation to the verb in main clauses.

Examples

(a) 210,3 ἦς ἐς Πέρσας φυλάκων Κύρις τὸν παιδα Δαρετοῦ.

(b) 67,3 ἔπεμψεν αὖτις τὴν ἐς θεὸν ἐπερησμένους τὸν χάρον ἐν τῷ κέοιτο Ὀρέστης.

Statistics

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>future participle precedes</td>
<td>0 (0%)</td>
<td></td>
</tr>
<tr>
<td>future participle follows</td>
<td>15 (100%)</td>
<td></td>
</tr>
<tr>
<td>total</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>average</td>
<td>7.5</td>
<td></td>
</tr>
<tr>
<td>chi square</td>
<td>13.07</td>
<td></td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the future participle normally follows the verb in main clauses.

Note

It is not without interest that other participial constructions which are derived from final clauses also normally follow the verb. Most common are the periphrases made up of ὀδελῶν or βουλόμενος + INFINITIVE.
Statistics for these will not be quoted here.

5.102 The position of the future participle in relation to the verb in subordinate clauses.

Examples

(a) 158,2 ἐς δ’ τῷ δεύτερον κερὶ παραγεν ἐπειρησόμενοι
    ήσαν ἄλλοι θεοκρόκοι

98,3 ὡστε ἴσον, ἐκεῖτε ἡκουσαν, ἥμενοι
    ἐξοίτων παρὰ τὴν Δημόκρα καὶ αὐτοὶ δικαιοδομεῖοι.

Statistics

| future participle precedes | 1 (25%) |
| future participle follows | 3 (75%) |
| total                     | 4       |
| average                   | 2       |
| chi square                | -       |

Conclusion

The number of examples is too small for the calculation of a valid chi square. No conclusion can be drawn.

5.103 The position of the future participle in relation to the verb in infinitival constructions.

Examples

(a) 112,1 ἐπιφοιτήσειν γιὰ χαρακτόρους ἐξ Ἄραγον
    ἐπιστυμένους.

141,4 πέμπειν ὑγιέλους ἐξ Σάρατην δεησομένους
    ὧφις τιμωρεῖν.
Statistics

<table>
<thead>
<tr>
<th>Future Participle</th>
<th>Precedes</th>
<th>0 (0%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Follows</td>
<td>4 (100%)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Chi Square</td>
<td></td>
<td>-</td>
</tr>
</tbody>
</table>

Conclusion

The number of examples is too small for the calculation of a valid chi square. No conclusion can be drawn.

5.104 The position of the aorist participle in relation to the verb in main clauses.

Examples

(a) 102,1 ἀλλὰ στρατευόμενος ἐκ τοῦς Πέρσας πρώτοι στέψω τούτοις ἐκεύθυνο

136,2 παιδεύουσι δὲ τοὺς παιδᾶς ἀπὸ πενταέτεος δρακάμενοι μέχρι εἰκοσάετέος τρία μοῦνα

Statistics

<table>
<thead>
<tr>
<th>Aorist Participle</th>
<th>Precedes</th>
<th>362 (84.58%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Follows</td>
<td>66 (15.42%)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>428</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td>214</td>
</tr>
<tr>
<td>Chi Square</td>
<td></td>
<td>204.71</td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the aorist participle normally
precedes the verb in main clauses.

5.105 The position of the aorist participle in relation to the verb in subordinate clauses.

Examples

(a) 167,1 ἐν τῷ οί ἑωκαίες καταλευσθέντες ἔκέετο 145,- ἐγ τῆν κατέφυγον Ἰωνές ἁπ άχαιάν μάχην ἐσσώθέντες

Statistics

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>aorist participle precedes</td>
<td>52 (80%)</td>
</tr>
<tr>
<td>aorist participle follows</td>
<td>13 (20%)</td>
</tr>
<tr>
<td>total</td>
<td>65</td>
</tr>
<tr>
<td>average</td>
<td>32.5</td>
</tr>
<tr>
<td>chi square</td>
<td>23.40</td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the aorist participle normally precedes the verb in subordinate clauses.

5.106 The position of the aorist participle in relation to the verb in infinitival constructions.

Examples

(a) 119,7 ἐνεθεύτεν δὲ ἐμελλε, ὡς ἐγὼ δοξέω, ἀλλιώς εἶπεν τὰ κάντα. 9,1 ὡστε μηδὲ μάθετ' μιν ὄφθειςαν ὑπὸ σεβ.
Statistics

aorist participle precedes 83 (96.51%)
aorist participle follows 3 (3.49%)
total 86
average 43
chi square 74.42

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the aorist participle normally precedes the verb in infinitival constructions.

5.107 The position of the genitive absolute in relation to the verb in main clauses.

Examples

(a) 98,3 πειθομένων δὲ καὶ ταῦτα τῶν Μηδών οἰκοδομεῖ τείχεα μεγάλα

111,1 τότε καὶ κατὰ δαίμονα τίκτει οἰχομέγιον τοῦ βουκόλου ἐς κόλυν.

Statistics

genitive absolute precedes 109 (82.58%)
genitive absolute follows 23 (17.42%)
total 132
average 66
chi square 56.03
Conclusion

The value of chi square is significant; the null hypothesis is rejected; the genitive absolute normally precedes the verb in main clauses.

5.108 The position of the genitive absolute in relation to the verb in subordinate clauses.

Examples

(a) 117,5 ἐπείτε δὲ κοιήσαντος τούτου τὰ κελεύομενα ἐπείτεν τὸ καὶδίνον.

109,4 εἶ δ' ἐθελήσει τούτου τελευτήσαντος ὡς τὴν θυγατέρα ταύτην ἀναβῆναι ἢ τυραννίς

Statistics

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>genitive absolute precedes</td>
<td>15 (93.75%)</td>
</tr>
<tr>
<td>genitive absolute follows</td>
<td>1 (6.25%)</td>
</tr>
<tr>
<td>total</td>
<td>16</td>
</tr>
<tr>
<td>average</td>
<td>8</td>
</tr>
<tr>
<td>chi square</td>
<td>10.56</td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the genitive absolute normally precedes the verb in subordinate clauses.

5.109 The position of the genitive absolute in relation to the verb in participial constructions.
Examples

(a) 64,1 πελθυμένων δὲ τῶν Ἀθηναίων οὖτω δὴ Πεισίστρατος τὸ τρίτον σχῶν Ἀθήνας ἔρρισε τὴν τυραννίδα 97,1 πλεῦνος δὲ αείλ γινομένου τοῦ ἑπιφοιτέοντος, οἷα χυθομένων τὰς ὀίκας ἁποβαίνειν κατὰ τὸ ἐδώ.

Statistics

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>genitive absolute precedes</td>
<td>24 (92.30%)</td>
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<tr>
<td>genitive absolute follows</td>
<td>2 (7.69%)</td>
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<td>26</td>
</tr>
<tr>
<td>average</td>
<td>13</td>
</tr>
<tr>
<td>chi square</td>
<td>18.62</td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the genitive absolute normally precedes the verb in participial constructions.

5.110 The position of the genitive absolute in relation to the verb in infinitival constructions.

Examples

(a) 24,5 τελευτώντος δὲ τοῦ γόμου ῥύθαι μιν ἐς τὴν θάλασσαν ἐσφιάζ
81, τούτως δὲ ἐξέπεμπε τὴν ταχίστην ὤδεοθαὶ βοηθήσειν ὡς πολυπρόκειμένου Κροίσου.
Statistics

genitive absolute precedes 13 (72.22%)
genitive absolute follows 5 (27.78%)
total 18
average 9
chi square 2.72

Conclusion

The value of chi square is not significant; the null hypothesis is sustained; the genitive absolute is equally frequent before and after the verb in infinitival constructions.

5.111 The position of the infinitive in relation to the verb in main clauses.

Examples

(a) 80,2 τῇ δὲ καμήλῳ ἔπεσθαι τὸν κεκών λεών ἐκέλευε. 65,4 οἱ μὲν ὁ χίνης πρὸς τούτοις λέγουσι καὶ ἀπάθαι αὐτῷ τὴν πυθήν τὸν υπὸ κατεστέωτα κόσμου ἐπαρτήτησον

(b) 116,1 καὶ οἱ δὲ τοὺς χαρακτῆρ τοῦ προσώπου προσφέρομαι ἔδόκει ἐς ἑωτόν
74,4 ἄνευ γὰρ ἀναγκαίας ἡσυχίας συμβάσιμος ἡσύχασθαι σύν ἐθέλουσι συμμείνειν
Statistics

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>infinitive precedes</td>
<td>29</td>
<td>(9.93%)</td>
</tr>
<tr>
<td>infinitive follows</td>
<td>263</td>
<td>(90.07%)</td>
</tr>
<tr>
<td>total</td>
<td>292</td>
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<tr>
<td>average</td>
<td>146</td>
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</tr>
<tr>
<td>chi square</td>
<td>187.52</td>
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</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the infinitive normally follows the verb in main clauses.

5.112 The position of the infinitive in relation to the verb in subordinate clauses.

Examples

(a) 8.4 πάλαι δὲ τὰ καλὰ ἀνθρώποιοι ἔξευρηται ἐκ τῶν μανθάνειν δεὶ.
     80.4 τὸ ἱππικόν, τῷ δὴ τῷ καὶ ἐπείξε ἐλλάμψεσθαι ὁ ἀνόδος

Statistics

<p>| | | |</p>
<table>
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</thead>
<tbody>
<tr>
<td>infinitive precedes</td>
<td>9</td>
<td>(10.11%)</td>
</tr>
<tr>
<td>infinitive follows</td>
<td>80</td>
<td>(89.89%)</td>
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<tr>
<td>total</td>
<td>89</td>
<td></td>
</tr>
<tr>
<td>average</td>
<td>44.5</td>
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</tr>
<tr>
<td>chi square</td>
<td>56.64</td>
<td></td>
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</tbody>
</table>
Conclusion

The value of chi square is significant; the null hypothesis is rejected; the infinitive normally follows the verb in subordinate clauses.

5.113 The position of the infinitive in relation to the verb in participial constructions.

Examples

(a) 63,2 θαρσάειν τε κελεύοντες καὶ ἀπείγαν
116,5 συγγνώμην ἐωτῇ κελεύων ἔχειν ἀδήν

(b) 123,1 τείσασθαι οἰκιακὴ ἐκπεδώσων
103,2 τὴν κόλιν ταύτην θέλων ἔχειεν.

Statistics

<p>| | | |</p>
<table>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>infinitive precedes</td>
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<td>infinitive follows</td>
<td>78 (88.64%)</td>
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<tr>
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<td>88</td>
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<tr>
<td>average</td>
<td>44</td>
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</tr>
<tr>
<td>chi square</td>
<td>52.55</td>
<td></td>
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</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the infinitive normally follows the verb in participial constructions.

5.114 The position of the infinitive in relation to the verb in infinitival constructions.
Examples

(a) 76.3 πρὶν δὲ ἐξελαύνει γρμῆσαι τῶν στρατὸν
4.1 προτέρους γὰρ ἔφησον στρατευόμεθα ἐς τὴν Ἀιτίην.

(β) 59.3 οὖν δὲν τἀυτα παρακείμενοι Κλέως πελάσεσθαι
θέλειν τοῦ Ἡπειροῦ. 24.1 ἐκθυμῆσαι πλάσκοι ἐς Ἱπποκράτεα.

Statistics

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>infinitive precedes</td>
<td>14 (28.57%)</td>
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<tr>
<td>infinitive follows</td>
<td>35 (71.43%)</td>
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<tr>
<td>total</td>
<td>49</td>
</tr>
<tr>
<td>average</td>
<td>24.5</td>
</tr>
<tr>
<td>chi square</td>
<td>9.00</td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the infinitive normally follows the verb in infinitival constructions.

5.115 The position of the final clause in relation to the verb in main clauses.

Examples

(a) 122.3 οἱ δὲ τοιχῶν παραλαβόντες τὸ σώμα τοῦτο,

ηνα θεοτέρως δοκεῖ τοῖς Πέρσαις περιείναι

σφί ὅ παῖς, κατέβαλον φάτιν ὡς ἐχείμανον

Κύρων κανὼν ἐξεθρεψε.
Statistics

<table>
<thead>
<tr>
<th>Final Clause Precedes</th>
<th>1 (6.66%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Clause Follows</td>
<td>14 (93.33%)</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
</tr>
<tr>
<td>Average</td>
<td>7.5</td>
</tr>
<tr>
<td>Chi Square</td>
<td>9.60</td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the final clause normally follows the verb in main clauses.

5.116 The position of the final clause in relation to the verb in subordinate clauses.

Examples

(a) 159,4 ναϊ κελεύω ίνα γε άσεβήσαντες άσσουν ἀπόλησθε, ὡς μὴ τὸ λαύκον περὶ ἱκετέων ἑκδόσιος ἔλθητε ἐκὶ τὸ χρηστήριον.
Conclusion
The number of examples is too small for the calculation of a valid chi square. No conclusion can be drawn.

5.117 The position of the final clause in relation to the verb in participial constructions.

Examples

(a) 152,1 ὁ δὲ πορφύρων τε εἶμαι περιβαλόμενος ὡς ἐν πυθαγόμενοι κλῆστοι συνελθομεν ἡμεριντέων, καὶ καταστάς ἔλεγε πολλὰ τιμωρέων ἐνυτόχοι χρησίμων

Statistics
final clause precedes 0 (0%)
final clause follows 5 (100%)
total 5
average 2.5
chi square -

Conclusion
The number of examples is too small for the calculation of a valid chi square. The raw figures appear to suggest that the final clause normally follows the verb in participial constructions.

5.118 The position of the final clause in relation to the verb in infinitival constructions.
Examples

(a) 5,2 οὖν δὴ ἐθελοντὴν αὐτὴν τοὺς φοίνιξι
συνεκπλήσσει, ὥσ ἢν μὴ κατάθηλος γένηται

Statistics

final clause precedes 0 (0%)
final clause follows 9 (100%)
total 9
average 4.5
chi square -

Conclusion.
The number of examples is too small for the calculation of a valid chi square. The raw figures suggest that the final clause normally follows the verb in infinitival constructions.

5.119 The position of the conditional clause in relation to the verb in main clauses.

Examples

(a) 120,6 καὶ νῦν ἐὰν φοβερὸν τι ἐνωρίμεν, κἂν ἢν
σοι προεφάγομεν.
89,2 νῦν ἢν ποιησον ὅδε, εὖ τοι ἀφέσκει τὰ ἐγὼ
λέγω
Statistics
conditional clause precedes 32 (86.49%)
conditional clause follows 5 (13.51%) 
total 37
average 18.5
chi square 19.70

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the conditional clause normally precedes the verb in main clauses.

5.120 The position of the conditional clause in relation to the verb in subordinate clauses.

Examples

(a) 136,2 τούδε εἴνεξα τούτο οὕτω ποιέσται, ἢν

 δὴ ἀποθένη τρεσόμενος, μηδὲνιαν ἀσὴν ὑπ

 κατρὶ προσβάλῃ

164,1 προσχόμενος ξεκα ὡς σὲ καταχρα εἶ προβλονται

ἐφακεῖς προμαχέων ένα μοῦνν τοῦ τείχεος

ἐρεθίμα καὶ οἰκῆμα ὅν κατιάρωσιν

Statistics
conditional clause precedes 4 (80%)
conditional clause follows 1 (20%)
total 5
average 2.5
chi square
Conclusion
The number of examples is too small for the calculation of a valid chi square. No conclusion can be drawn.

5.121 The position of the conditional clause in relation to the verb in participial constructions.

Examples

(a) 207,7 ἴν γὰρ ἔγω γνώμῃς μὴ ἄκαρτω, κεῖνοι

Statistics
conditional clause precedes 3 (60%)
conditional clause follows 2 (40%)
total 5
average 2.5
chi square -

Conclusion
The number of examples is too small for the calculation of a valid chi square. No conclusion can be drawn.

5.122 The position of the conditional clause in relation to the verb in infinitival constructions.
Examples

(a) 89,1 οικαΐω, επι τι ονορ θέου, σημαίνειν σοι
208,- εντευλήμενός οί τιμήν τε αυτών καὶ ε'θ
κοιέειν, ήν η ἀλήθεια, ή ἐπι μεσογέτας
μη ὅρθωθεν

Statistics

<table>
<thead>
<tr>
<th>Description</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>conditional clause precedes</td>
<td>8</td>
<td>80%</td>
</tr>
<tr>
<td>conditional clause follows</td>
<td>2</td>
<td>20%</td>
</tr>
<tr>
<td>total</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>average</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>chi square</td>
<td>2.50</td>
<td></td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is not significant; the null hypothesis is sustained; the conditional clause comes before and after the verb with equal frequency in infinitival constructions.

5.123 The position of the causal clause in relation to the verb in main clauses.

Examples

(a) 90,1 ταῦτα ἀκουὼν ὁ Κύρος ὑπερήδετο, ὡς οἱ
ἐδόκεε εὖ ὑποτίθεοναι.

(b) 34,1 ἔλαβε ἐκ θεῶν νέμεις, μεγάλη Κροῦσον,
ὡς εἰκάσαι, ὃτι ἐνόμισε ἐγουτόν εἶναι
ἀνθρώπων ὑπόντων ὀλβιώτατον.
Statistics
causal clause precedes  0 (0%)
causal clause follows  13 (100%)
total               13
average            7.5
chi square           11.08

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the causal clause normally follows the verb in main clauses.

5.124 The position of the causal clause in relation to the verb in participial constructions.

Examples

(a) 216,3 συμφωνήν πολεμώντων διά οὐχ ήκετο ἔς το τυθήναι.

Statistics
causal clause precedes  0 (0%)
causal clause follows  4 (100%)
total               4
average            2
chi square        -

Conclusion
The number of examples is too small for the calculation of a valid chi square; the raw figures appear to suggest that the causal clause normally follows the verb in participial constructions.
5.125 The position of the causal clause in relation to the verb in infinitival constructions.

Examples

(a) 133,2 καὶ διὰ τούτο φασὶ Πέρσαι τοὺς Ἐλλήνας συνεμένους κειμέντας κανέσθαι, ἢτις ὁπι ἀπὸ δείπνου παραφρέσται οὐδὲν λόγου ἔχειν

Statistics

<table>
<thead>
<tr>
<th>Causal Clause Precedes</th>
<th>0 (0%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Causal Clause Follows</td>
<td>2 (100%)</td>
</tr>
<tr>
<td>Total</td>
<td>2</td>
</tr>
<tr>
<td>Average</td>
<td>1</td>
</tr>
<tr>
<td>Chi Square</td>
<td>-</td>
</tr>
</tbody>
</table>

Conclusion

The number of examples is too small for the calculation of a valid chi square. No conclusion can be drawn.

5.126 The position of the circumstantial clause in relation to the verb in main clauses.

Examples

(a) 27,1 ὡς δὲ ἢρα οἱ ἔν τῇ Ἀχαΐᾳ Ἐλλήνες κατεστράφησαν ἐς φόρου ἀδικωτήν, τὸ ἐνδεύτεν ἑπενόει νέας κοινωνίας ἐπιχειρήσει τοῖς νησιώταις.

186,3 ἐπιτείλησε ὡς ἐκ' αὐτῆς, ἐκεῖς μὲν ἤλθον γένοιτο, ξύλα τετράγωνα.
Statistics

circumstantial clause precedes  151 (96.18%)
circumstantial clause follows  6 (3.82%)
total  157
average  78.5
chi square  131.92

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the circumstantial clause normally precedes the verb in main clauses.

5.127 The position of the circumstantial clause in relation to the verb in subordinate clauses.

Examples

(a) 200,– ἠχός μοῦνον, τοῦτο ἐκεῖτε ἐν θηρεύουσινες αὐτήνωσι τοῦτο τῆλον, τοιεὶσι τάδε

Statistics

circumstantial clause precedes  10 (100%)
circumstantial clause follows  0 (0%)
total  10
average  5
chi square  8.10

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the circumstantial clause normally precedes the verb in subordinate clauses.
5.128 The position of the circumstantial clause in relation to the verb in participial constructions.

Examples

(a) 50,2 ὡς δὲ ἐκ τῆς θυσίας ἐγένετο, καταχειμένος χρυσὸν ἔκλετον ἡμικλίνεια ἐξ αὐτοῦ ἔξηλανε.

160,5 ἦν δὲ χρόνος οὗτος οὐκ ἤλιος γενόμενος, ὅτε χίλια οὔδεις ἐξ τοῦ Ἀταρνέος τοῦτον οὐντες οὐλᾶς κριθέων πρόχυσαν ἐκολέετο Θεόν οὔδενι οὔτε πέμματα ἐκέοσετο καρποῦ τοῦ ἐνθεῦτεν

Statistics

<p>| | |</p>
<table>
<thead>
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</thead>
<tbody>
<tr>
<td>circumstantial clause precedes</td>
<td>45(95.74%)</td>
</tr>
<tr>
<td>circumstantial clause follows</td>
<td>2 (4.26%)</td>
</tr>
<tr>
<td>total</td>
<td>47</td>
</tr>
<tr>
<td>average</td>
<td>23.5</td>
</tr>
<tr>
<td>chi square</td>
<td>39.34</td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the circumstantial clause normally precedes the verb in participial constructions.

5.129 The position of the circumstantial clause in relation to the verb in infinitival constructions.
Examples

(a) 141,2 ὡς δὲ ψηφοθήκα τῆς ἑλπίδος, λαβεῖν ἀμφίβλητρον καὶ περιβαλεῖν τὰ πλῆθος κολλὸν τῶν ἱχθύων καὶ ἐξειρύσαι

(β) 86,4 μετὰ δὲ, ὡς ἤμασκάξετο, εἰκεῖν.

Statistics

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>circumstantial clause precedes</td>
<td>16 (100%)</td>
</tr>
<tr>
<td>circumstantial clause follows</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>total</td>
<td>16</td>
</tr>
<tr>
<td>average</td>
<td>8</td>
</tr>
<tr>
<td>chi square</td>
<td>14.06</td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the circumstantial clause normally precedes the verb in infinitival constructions.

5.130 The position of the gapped verb in main clauses.

Examples

(a) 173,4 ὑμῖν οὐκ ὃ τὰ μὲν κατακόμβοι, τὰ δὲ κατακόμβους χρέωσι

131,3 καλέσας δὲ Ἄρσοστοι τὴν Ἀφροδίτην Μυλιννα, Ἀρδεόιοι δὲ Ἀλτιάτ, Πέροι δὲ Κύττροι.
Statistics

gapped construction precedes 5 (3.14%)
gapped construction follows 154 (96.86%)
total 159
average 79.5
chi square 139.63

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the gapped construction normally follows the full construction in main clauses.

5.131 The position of the gapped verb in subordinate clauses.

Examples

(a) 215,1 ὃσα μὲν γὰρ ἐς αἰχμὲς καὶ ἔροις καὶ συγάρις, χαλκῷ τὰ πάντα χρέωνται.
139,- καὶ τὸ δὲ ἄλλο σφὶ ἢ δὲ συμπέπτωσε γίνεσθαι, τὸ Πέρσας μὲν αὐτοῦς λέηθε, ἡμέας μέντοι οὖν.

Statistics

gapped construction precedes 8 (9.76%)
gapped construction follows 74 (90.24%)
total 82
average 41
chi square 53.12
Conclusion
The value of chi square is significant; the null hypothesis is rejected; the gapped construction normally follows the full construction in subordinate clauses.

5.132 The position of the gapped verb in participial constructions.

Examples

(a) 113,3 οὖν ὡς ἄλο καῦ τι καὶ οὐ κὺρον θεμένη
142,2 τὰ μὲν ὡς τοῦ ἡμεροῦ τι καὶ ἄγρον πεζόμενα, τὰ δὲ ὡς τοῦ θερμοῦ τι καὶ οὖχοδος.

Statistics

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>gapped construction precedes</td>
<td>5 (8.33%)</td>
</tr>
<tr>
<td>gapped construction follows</td>
<td>55 (91.67%)</td>
</tr>
<tr>
<td>total</td>
<td>60</td>
</tr>
<tr>
<td>average</td>
<td>30</td>
</tr>
<tr>
<td>chi square</td>
<td>41.67</td>
</tr>
</tbody>
</table>

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the gapped construction normally follows the full construction in participial constructions.
5.133 The position of the gapped verb in infinitival constructions.

Examples

(a) 209,1 καὶ γαμέων τῇ μὲν τῇ Ἀσίης, τῇ δὲ τῇ Ἕλλη.
Εὐρώπην ἐπιστάσειν.
210,3 ἐγὼ τοι παραδίδωμι χρῆσεις αὕτη τοῦτό ἐστι σὺ βούλειται.

Statistics

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>gapped construction precedes</td>
<td>9 (13.04%)</td>
</tr>
<tr>
<td>gapped construction follows</td>
<td>60 (86.96%)</td>
</tr>
<tr>
<td>total</td>
<td>69</td>
</tr>
<tr>
<td>average</td>
<td>34.5</td>
</tr>
<tr>
<td>chi square</td>
<td>37.70</td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the gapped construction normally follows the full construction in infinitival constructions.
II THE NOUN PHRASE

5.134 The position of the cardinal numeral in relation to the noun.

Examples

(a) 14,2 τριήκοντα τάλαντα
    16,1 ἕκτα διώδεκα

Statistics

cardinal numeral precedes 83 (66.94%)
cardinal numeral follows 41 (33.06%)
total 124
average 62
chi square 14.23

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the cardinal numeral normally precedes the noun.

5.135 The position of the ordinal numeral in relation to the noun.

Examples

(a) 2,1 τῆς δευτέρης ἡμέρης

(b) 47,1 ἐκατοστὴν ἡμέρῃ
    82,5 ἡμέρῃ δὲ δευτέρῃ
Statistics

<table>
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<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ordinal numeral precedes</td>
<td>18 (90%)</td>
</tr>
<tr>
<td>ordinal numeral follows</td>
<td>2 (10%)</td>
</tr>
<tr>
<td>total</td>
<td>20</td>
</tr>
<tr>
<td>average</td>
<td>10</td>
</tr>
<tr>
<td>chi square</td>
<td>12.80</td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the ordinal numeral normally precedes the noun.

5.136 The position of the demonstrative in relation to the noun.

Examples

(a) 1,1 τὴν Ὁλλασσαν
    9,1 λόγον τὴν

(b) 1,2 τοῦτον τὸν χρόνον
    14,3 ὁ θρόνος οὗτος

Statistics

<table>
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<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
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<td>demonstrative precedes</td>
<td>77 (47.53%)</td>
</tr>
<tr>
<td>demonstrative follows</td>
<td>85 (52.47%)</td>
</tr>
<tr>
<td>total</td>
<td>162</td>
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<tr>
<td>average</td>
<td>81</td>
</tr>
<tr>
<td>chi square</td>
<td>0.40</td>
</tr>
</tbody>
</table>
Conclusion

The value of chi square is not significant; the null hypothesis is sustained; the demonstrative is equally frequent before and after the noun.

5.137 The position of the ethnic adjective in relation to the inanimate noun.

Examples

(a) 56,2 Ἔλληνικόν Ἕθνος
192,3 μεθύμνου Ἀττικοῦ

Statistics

<table>
<thead>
<tr>
<th>Ethnic adjective precedes</th>
<th>42 (85.71%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnic adjective follows</td>
<td>7 (14.29%)</td>
</tr>
<tr>
<td>Total</td>
<td>49</td>
</tr>
<tr>
<td>Average</td>
<td>24.5</td>
</tr>
<tr>
<td>Chi square</td>
<td>25.00</td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the ethnic adjective normally precedes the inanimate noun.

5.138 The position of the ethnic adjective in relation to the personal noun.

Examples

(a) 61,4 Ἱπποτός σφ. ἄνὴρ
29,1 ἄνὴρ Ἀθηναῖος
Statistics
ethnic adjective precedes  7 (28%)
etnic adjective follows  18 (72%)
total  25
average  12.5
chi square  4.84

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the ethnic adjective normally follows the personal noun.

5.139 The position of the quantifier in relation to the noun.

Examples

(a) 132,3 ὀλίγοι χρόνοι
    9,2 ἡσυχίαν κολλήσει
5.140 The position of the adjective of material in relation to the noun.

Examples

(a) 71,2 ἀχυτίγως μὲν ἀναχυρίδας
     34,2 ἀλχυγί σιδηρέν

Statistics

<table>
<thead>
<tr>
<th>Description</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjective of material precedes</td>
<td>8</td>
<td>19.05%</td>
</tr>
<tr>
<td>Adjective of material follows</td>
<td>34</td>
<td>80.95%</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Chi square</td>
<td>16.10</td>
<td></td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the adjective of material normally follows the noun.

5.141 The position of the negative adjective in relation to the noun.

Examples

(a) 194,5 οὐδενι τρόπῳ
     4,3 λόγον οὐδένα
(b) 112,1 ὑπερμενή τέχνη
Statistics

negative adjective precedes 12 (46.15%)
negative adjective follows 14 (53.85%)
total 26
average 13
chi square 0.15

Conclusion

The value of chi square is not significant; the null hypothesis is sustained; the negative adjective precedes and follows the noun with equal frequency.

5.142 The position of the indefinite adjective in relation to the noun.

Examples

(a) 37,2 τινά δειλήν
59,4 φυλακῆς τινος

Statistics

indefinite adjective precedes 7 (63.64%)
indefinite adjective follows 4 (36.36%)
total 11
average 5.5
chi square 0.36

Conclusion

The value of chi square is not significant; the null hypothesis is sustained; the indefinite adjective precedes and follows the noun with equal frequency.
5.143 The position of the adjectives πάς, ἁπαζ, συνάπαζ in relation to the noun.

Examples

(a) 6,5 πάντες Ἑλληνες
78,1 τὸ προάστιον πᾶν

(β) 172,2 ἀκαντες Καννιοι
34,1 ἄνθρωπον ἀκάντων

Statistics

πάς etc. precedes 54 (66.66%)  
πάς etc. follows 27 (33.33%)  
total 81
average 40.5
chi square 9.00

Conclusions

The value of chi square is significant; the null hypothesis is rejected; the adjectives πάς etc. normally precede the noun.

5.144 The position of the adjective ἄλλος in relation to the noun.

Examples

(a) 26,3 ἄλλος αὐτίας
113,3 οὖνομα ἄλλο
Statistics

Δάλλος precedes 59 (95.16%)
Δάλλος follows 3 (4.84%)
total 62
average 31
chi square 50.58

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the adjective Δάλλος normally precedes the noun.

5.145 The position of the adjectives ἐκαστός, ἔτερος ἕκατερος, ἀμφότερος, μοῦνος, λοιπός in relation to the noun.

Examples

(a) 32, 4 τῇ ἔτερῃ ἤμερῃ
53, 3 τὰν δὲ μαντηλῶν ἄμφωτέρων

Statistics

ἐκαστός etc. precedes 20 (57.14%)
ἐκαστός etc. follows 15 (42.86%)
total 35
average 17.5
chi square 0.71
Conclusion
The value of chi square is not significant; the null hypothesis is sustained; the adjectives ἧμισυος etc. are equally frequent before and after the noun.

5.146 The position of the qualitative adjective in relation to the noun.

Examples

(a) 14,2 ἀληθείς εἶ δὲ λόγῳ
17,1 καρδιώς ἀληθείς

Statistics

qualitative adjective precedes 95 (41.67%)
qualitative adjective follows 133 (58.33%)
total 228
average 114
chi square 6.33

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the qualitative adjective normally follows the noun.

5.147 The position of the comparative and superlative adjectives in relation to the noun.
Examples

(a) 196,2 ἄλησίουνας καρδένους
     91,5 μητρὸς ἐμείσονος

(b) 196,5 ὁ μέν νυν καλλιστος νόμος
     31,5 ἀνδρᾶν ἀρέστων

Statistics

comparative/superlative precedes  4 (18.18%)
comparative/superlative follows    18 (81.82%)
total                            22
average                          11
chi square                       8.90

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the comparative or superlative adjective normally follows the noun.

5.148 The position of the relative clause in relation to its "antecedent".

Examples

(a) 5,4 τὰ γὰρ τὸ πάλαι μεγάλα ἦν, τὰ κολλὰ ἀβτῶν ὁμικρὰ γέγονε
     1,4 ὁνέσθαι τῶν φυτῶν τῶν ουὶ ἦν θυμὸς μάλλον
Statistics
relative precedes 20 (8.2%)
relative follows 224 (91.8%)
total 244
average 122
chi square 244.00

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the relative clause normally follows the "antecedent."

5.149 The position of the personal proper noun genitive in relation to the noun.

Examples

(a) 3,2 η δελη την ἁρχαγην
6,1 καις δε Ἄλβατεο

Statistics
personal noun precedes 65 (77.38%)
personal noun follows 19 (22.62%)
total 84
average 42
chi square 25.19

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the personal proper noun genitive normally precedes the noun.
5.150 The position of the reflexive personal pronoun genitive in relation to the noun.

Examples

(a) 75,1 ἐκεῖνος μητροκάτορα

35,3 ἀδελφεῖν ἐκεῖνος

Statistics
reflexive pronoun precedes 44 (89.8%)
reflexive pronoun follows 5 (10.20%)
total 49
average 24.5
chi square 31.04

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the reflexive personal pronoun genitive normally precedes the noun.

5.151 The position of the geographic proper noun genitive in relation to the noun.

Examples

(a) 14,4 Κολοφῶνος τὸ ὄστυ

189,3 τὸ χεῖλος τοῦ Γάνδεω

(b) 14,2 Φονγίς βασιλέα

7,2 τύραννος Χαρδίων
### Statistics

<table>
<thead>
<tr>
<th>Geographic Noun</th>
<th>Precedes</th>
<th>31 (68.88%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geographic Noun</td>
<td>Follows</td>
<td>14 (31.11%)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>45</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td>22.5</td>
</tr>
<tr>
<td>Chi Square</td>
<td></td>
<td>6.42</td>
</tr>
</tbody>
</table>

**Conclusion**

The value of chi square is significant; the null hypothesis is rejected; the geographic proper noun genitive normally precedes the noun.

5.152 The position of the ethnic adjective genitive in relation to the noun.

**Examples**

(a) 36,2 τῶν Μυσών ἄγγελοι
     83,1 τὸ ταξίς τῶν Ανδών

### Statistics

<table>
<thead>
<tr>
<th>Ethnic Adjective</th>
<th>Precedes</th>
<th>65 (79.27%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethnic Adjective</td>
<td>Follows</td>
<td>17 (20.73%)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>82</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td>41</td>
</tr>
<tr>
<td>Chi Square</td>
<td></td>
<td>28.10</td>
</tr>
</tbody>
</table>

**Conclusion**

The value of chi square is significant; the null hypothesis is rejected; the ethnic adjective genitive normally precedes the noun.
5.153 The position of the common noun genitive in relation to the noun.

Examples

(a) 1,3 τοῦ βασιλέου θυγατέρα
1,4 πρύμνην τῆς νεός

Statistics

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>common noun precedes</td>
<td>101</td>
<td>42.44%</td>
</tr>
<tr>
<td>common noun follows</td>
<td>137</td>
<td>57.56%</td>
</tr>
<tr>
<td>total</td>
<td>238</td>
<td></td>
</tr>
<tr>
<td>average</td>
<td>119</td>
<td></td>
</tr>
<tr>
<td>chi square</td>
<td>5.45</td>
<td></td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the common noun genitive normally follows the noun.

5.154 The position of the genitive of αὑτός (non-articular) in relation to the noun.

Examples

(a) 54,1 αὑτῷ τὸ κλῆσος
31,2 τὴν μητέρα αὑτῶν
Statistics

| Demonstrative | Precedes   | 13 (43.33%) |
|               | Follows    | 17 (56.66%) |
| Total         |            | 30          |
| Average       |            | 15          |
| Chi square    |            | 0.53        |

Conclusion

The value of chi square is not significant; the null hypothesis is sustained; the genitive of ἀντός is equally frequent before and after the noun.

5.155 The position of the demonstrative genitive in relation to the noun.

Examples

(a) 185,1 τοῦτος βασίλεια

Statistics

| Demonstrative | Precedes   | 12 (100%)  |
|               | Follows    | 0 (0%)     |
| Total         |            | 12         |
| Average       |            | 6          |
| Chi square    |            | 10.08      |

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the demonstrative genitive normally precedes the noun.
5.156 The position of the genitive in relation to the substantivised adjectival.

Examples

(a) 82,3 τριγλυκίους ἐκατέρων

(β) 92,1 τῶν κιόνων αἵ πολλαί
   5,4 τὰ πολλὰ αὐτῶν

(γ) 51,4 τῶν χε περιπραπτηρίων οὐδέτερον
   18,3 οὖδαμοι Ἰάων

(δ) 2,1 Ἑλλήνων τινὰς
   29,1 τίνα τῶν νόμων

(ε) 1,1 Περσέων μέν νυν οἱ λόγιοι
   48,2 τὴν κυρίην τῶν ἠμερέων

Statistics

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>genitive precedes</td>
<td>20</td>
<td>(20.20%)</td>
</tr>
<tr>
<td>genitive follows</td>
<td>79</td>
<td>(79.80%)</td>
</tr>
<tr>
<td>total</td>
<td>99</td>
<td></td>
</tr>
<tr>
<td>average</td>
<td>49.5</td>
<td></td>
</tr>
<tr>
<td>chi square</td>
<td>35.16</td>
<td></td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the genitive normally follows the substantivised adjectival.
5.157 The position of the appositional common noun in relation to the proper noun.

**Examples**

(a) 168, - πόλην Ἀβδηρα
   103,2 Ἁλυος ποταμος

(b) 103,3 βασιλεύς ὁ Σινθέων Μαδύης
   105,1 Ἡμμητιχός σφεως Αἱγύπτου βασιλεύς

**Statistics**

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>common noun precedes</td>
<td>17</td>
</tr>
<tr>
<td>common noun follows</td>
<td>62</td>
</tr>
<tr>
<td>total</td>
<td>79</td>
</tr>
<tr>
<td>average</td>
<td>39.5</td>
</tr>
<tr>
<td>chi square</td>
<td>25.63</td>
</tr>
</tbody>
</table>

**Conclusion**

The value of chi square is significant; the null hypothesis is rejected; the common noun normally follows the proper noun in apposition.
III THE ADJECTIVE PHRASE

5.158 The position of the genitive standard in relation to the comparative.

Examples

(b) 66,1 'Αρχάδων κρέσσονες
65,1 κατυπερτέρους Τενεπτέρων

Statistics
standard precedes 10 (40%)
standard follows 15 (60%)
total 25
average 12.5
chi square 1.00

Conclusion
The value of chi square is not significant; the null hypothesis is sustained; the genitive standard is equally frequent before and after the comparative.

5.159 The position of the genitive standard in relation to the superlative.

Examples

(a) 8,4 πασέων χυμαλικῶν καλλίστην
108,3 πιστότατον τε Μηλίων
Statistics

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>standard precedes</td>
<td>35</td>
<td>(56.45%)</td>
</tr>
<tr>
<td>standard follows</td>
<td>27</td>
<td>(43.55%)</td>
</tr>
<tr>
<td>total</td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>average</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td>chi square</td>
<td>1.03</td>
<td></td>
</tr>
</tbody>
</table>

**Conclusion**

The value of chi square is not significant; the null hypothesis is sustained; the genitive standard is equally frequent before and after the superlative.

5.160 The position of the instrumental of measure in relation to the comparative and superlative.

**Examples**

(a) 32,3 μηνι μακρότερον
    178,3 μέξων τρισί δακτύλοις

(b) 134,2 μακρῷ τὰ πάντα ἀριστοὺς
    60,3 εὔηθεστατον, ὡς ἐγὼ εὐφρίωκα, μακρῷ

Statistics

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>measure precedes</td>
<td>16</td>
<td>(80%)</td>
</tr>
<tr>
<td>measure follows</td>
<td>4</td>
<td>(20%)</td>
</tr>
<tr>
<td>total</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>average</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>chi square</td>
<td>7.20</td>
<td></td>
</tr>
</tbody>
</table>
Conclusion
The value of chi square is significant; the null hypothesis is rejected; the instrumental of measure normally precedes the comparative and superlative.

5.161 The position of the genitive modifier in relation to the adjective.

Examples

(a) 133,2 λόγου άξιον
   98,2 άξιον τῆς βασιλείας

(b) 107,2 ἀνδρὸς αὑράιν
   212,2 ἀκληπτος αἵματος

Statistics

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>genitive precedes</td>
<td>6 (40%)</td>
</tr>
<tr>
<td>genitive follows</td>
<td>9 (60%)</td>
</tr>
<tr>
<td>total</td>
<td>15</td>
</tr>
<tr>
<td>average</td>
<td>7.5</td>
</tr>
<tr>
<td>chi square</td>
<td>0.60</td>
</tr>
</tbody>
</table>

Conclusion
The value of chi square is not significant; the null hypothesis is sustained; the genitive modifier precedes and follows the adjective with equal frequency.

5.162 The position of the modal adverb in relation to the adjective.
Examples

(a) 4,1 μεγάλως αλλιώς
52,1 χρύσεον τῶν ὅμοιως

Statistics

modal adverb precedes 16 (80%)
modal adverb follows 4 (20%)
total 20
average 10
chi square 7.20

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the modal adverb normally precedes the adjective.

5.163 The position of the accusative and dative of respect in relation to the adjectival.

Examples

(a) 14,1 ἀρκετάν ἔξ
35,1 οὐ καθαρὸς χείρας

(b) 51,1 μεγάδεξ μεγάλους
35,1 ἤρπε μὲν χενεῖ
Statistics

**accusative/dative of respect precedes** 18 (69.23%)

**accusative/dative of respect follows** 8 (30.77%)

**total** 26

**average** 13

**chi square** 3.85

**Conclusion**

The value of chi square is significant; the null hypothesis is rejected; the accusative and dative of respect normally precede the adjectival.
IV THE ADVERB PHRASE

5.164 The position of the genitive in relation to the adverb and adverbialised adjective.

Examples

(a) 30,4 τοῦ βίου εὖ ἤκοντι
    24,7 ἀνακός δὲ ἔχειν τὸν κορυφέων

(β) 187,2 ἐμὲν ὕστερον
    130,3 οὕστερον τούτῳ

(γ) 103,2 Ἀλυσος πτωμοῦ ἡνω
    142,2 ἡνω αὐτῆς

Statistics

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>genitive precedes</td>
<td>4 (11.43%)</td>
</tr>
<tr>
<td>genitive follows</td>
<td>31 (88.57%)</td>
</tr>
<tr>
<td>total</td>
<td>35</td>
</tr>
<tr>
<td>average</td>
<td>17.5</td>
</tr>
<tr>
<td>chi square</td>
<td>20.83</td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the genitive normally follows the adverb and adverbialised adjective.

5.165 The position of the case word in relation to the preposition or postposition.
Examples

(a) 30,2 ἰδεινής εἶνεκέν

30,1 παρὰ Κοσσάσσον

case word precedes  35 (2.25%)
case word follows  1520 (97.75%)
total                1555
average              777.5
chi square           1418.15

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the case word normally follows the preposition.

Note

The examples where the case word precedes include 28 instances of εἶνεκέν/εἶνεκέν. The balance is made up of postposed πέρι; e.g. 32.1 ἄνθρωπων χρημάτων πέρι.
5.166 The statistics which have been presented so far are based on tokens (i.e. occurrences) of variable patterns in Herodotus I. But for the study of the compound word a different approach is required because each individual compound presents its component elements in an order which is invariable. Thus it is possible in Greek to say

\[
\text{ἀρτοφαγέω} \\
\text{δημοκρατίη}
\]

etc.,

but not

\[
\text{*φαγαρτέω} \\
\text{*χρατοδημίη}
\]

etc.
because the order of elements cannot be reversed. For this reason the statistics which will be brought forward for the compound word will be based not on tokens but on types (i.e. lexical entries) drawn from Powell's Lexicon. Examples and statistics follow.

5.167 The position of the subject in relation to the verbal element in compound words.
Examples

(a) δημοκρατέομαι (δήμος κρατείται)
φθινόπωρον (φθείνει ὥρθη)

Statistics
subject precedes 9 (90%)
subject follows 1 (10%)
total 10
average 5
chi square 4.90

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the subject normally precedes the verbal element in compound words.

5.168 The position of the direct object in relation to the verbal element in compound words.

Examples

(a) ἀγαλματοποιώς (ἀγάλματα κοιτεῖν).
δώσιδιχος (δίδοναι δίκην)

Statistics
direct object precedes 221 (91.7%)
direct object follows 20 (8.3%)
total 241
average 120.5
chi square 167.64
Conclusion

The value of chi square is significant; the null hypothesis is rejected; the direct object normally precedes the verbal element in compound words.

Note

Due to problems of analysis proper names have not been included in the statistics for compound words. It must nevertheless be noted that sequences in which the object follows the verbal element are not uncommon among proper nouns; e.g. Πειοίστρατος.

It would seem likely that the proper noun preserves a sequence that is earlier than that found in common nouns. In general proper names tend to be conservative and to preserve archaisms. Support for this view may be found in Andrriotis (1939: 104) who points out that the OV type developed at the expense of the VO type during the classical period. The significance of this fact will be explained in a later chapter. Lehmann (1969: 13) regards the VO pattern in the proper noun as presenting a sequence which is stylistically marked. Stylistic marking is not uncommon in archaisms.

5.169 The position of the adverb in relation to the verbal element in compound words.

Examples

(a) ἀγχίστροφος (ἄγχιστρέφειν)
Statistics

<table>
<thead>
<tr>
<th>Adverb Position</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adverb precedes</td>
<td>45</td>
<td>100%</td>
</tr>
<tr>
<td>Adverb follows</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>45</td>
<td></td>
</tr>
</tbody>
</table>

Average: 22.5
Chi square: 45.00

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the adverb normally precedes the verbal element in compound words.

Note

Compounds which commence with a prepositional prefix (e.g. ἐκπί-, προπί-) have not been included in the statistics because it is well known that their order is invariably modifier + head in Greek.

5.170 The position of the numeral in relation to the nominal element in compound words.

Examples

(a) δεκαέτης (δέκα ἑτη)

Statistics

<table>
<thead>
<tr>
<th>Numerical Position</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numeral precedes</td>
<td>74</td>
<td>100%</td>
</tr>
<tr>
<td>Numeral follows</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>74</td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>37</td>
<td></td>
</tr>
<tr>
<td>Chi square</td>
<td>74.00</td>
<td></td>
</tr>
</tbody>
</table>
Conclusion

The value of chi square is significant; the null hypothesis is rejected; the numeral normally precedes the nominal element in compound words.

5.171 The position of the adjective in relation to the nominal element in compound words.

Examples

(a) ἀράβωλοις (ἀράβη πόλις)

ἀνδραγαθίη (ἀνήρ ἀγαθός)

Statistics

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>adjective precedes</td>
<td>127 (97.69%)</td>
</tr>
<tr>
<td>adjective follows</td>
<td>3 (2.31%)</td>
</tr>
<tr>
<td>total</td>
<td>130</td>
</tr>
<tr>
<td>average</td>
<td>65</td>
</tr>
<tr>
<td>chi square</td>
<td>118.28</td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the adjective normally precedes the nominal element in compound words.

5.172 The position of the genitive in relation to the nominal element in compound words.

Examples

(a) ἀλγίποδας (ἀλγὸς πόδες)
Statistics

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>genitive precedes</td>
<td>45 (100%)</td>
</tr>
<tr>
<td>genitive follows</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>total</td>
<td>45</td>
</tr>
<tr>
<td>average</td>
<td>22.5</td>
</tr>
<tr>
<td>chi square</td>
<td>45.00</td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the genitive normally precedes the nominal element in compound words.

5.173 The position of the adverb in relation to the nominal element in compound words.

Examples

(a) ὁ κυριεύων (ὁ κυριεύων)

(b) ἔξωπος (ἔξω πός)

Statistics

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>adverb precedes</td>
<td>42 (100%)</td>
</tr>
<tr>
<td>adverb follows</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>total</td>
<td>42</td>
</tr>
<tr>
<td>average</td>
<td>21</td>
</tr>
<tr>
<td>chi square</td>
<td>42.00</td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the adverb normally precedes the nominal element in compound words.
5.174 Now that the evidence has been presented some inferences may be made.

5.175 In the first place it is reasonably clear from the Greek examples cited that most, if not all modifier/head sequences are reversible. The only significant exception is the behaviour of compound words which all exhibit fixed order. Admittedly there are some gaps in the data; but these should not be given the status of rules. In matters of word order, above all else, the argument from silence is hazardous, for some of the sequences have a very low frequency and the portion of text used is relatively small. This conclusion may appear negative, but is nevertheless important.

5.176 But what positive conclusions can be reached from the preceding data?

5.177 At the outset attention must be drawn to the problem of order in the deep structure. This can best be observed by inspecting the placement of heavy modifiers, i.e. modifiers containing a verb; for heavy modifiers are less mobile than others, and more liable to remain in the original position which they occupied in the base.

5.178 Now in the study of the verb phrase it was established that the noun clause object normally follows the verb in main clauses, participial constructions and infinitival constructions. (In subordinate clauses
the number of examples was too small for the calculation of a valid chi square). To this may be added the evidence of the nominative participial complement which normally follows the verb in main clauses, whereas in other clause types the number of examples was too small for the calculation of a valid chi square; and also of the accusative participial complement which normally follows the verb in main clauses, subordinate clauses and participial constructions; in infinitival constructions examples were again too few to permit a conclusion. Also relevant here is the treatment of gapping, which is normally to the right in all clause types. In the light of this evidence it is reasonable to conclude that the structure is: head + modifier, i.e. the VO type.

5.179 What of the noun phrase? Here the critical modifier to inspect is the relative clause - which normally follows its head: and this provides yet further evidence for the head + modifier order in deep structure.

5.180 The adjective phrase. This is seldom found to incorporate heavy modifiers. However it is possible to quote the behaviour of the formula τῶν ἰμάτια τώμαν which is attached to superlatives. This formula invariably follows its superlative head. Thus far the evidence is unanimous.

5.181 But there remains the adverb phrase which does not occur with heavy modifiers. Nevertheless the modifiers which are found with adverbs, i.e. their subordinate case words, overwhelmingly prefer the postposed position.
5.182 It would therefore seem reasonable to state that the relevant evidence from the verb phrase, the noun phrase, the adjective phrase and the adverb phrase supports a single inference: modifiers follow their heads in the deep structure. If this is correct it follows that the deep structure of Greek is sequenced from left to right. In other words Greek is a VSO language in its deep structure, a conclusion which is supported by the placement of the conjunction at or near to the front of the sentence.

5.183 However there is some counterevidence which must be dealt with. In the compound word the dominant pattern is modifier + head. In the instance of the subject and object with a verb the modifier + head sequence is statistically preferred; so also in the adjective + noun group; but in other compound word types there are no examples of postposed modifiers at all. How can this situation be explained?

5.184 An answer can be framed in historical terms. The compound word, as stated previously, tends to be conservative and often retains archaic sequences which have been superseded elsewhere. Furthermore, from a synchronic viewpoint, the compound word is not so much a syntactic, as a lexical phenomenon.

5.185 Accordingly evidence from this area is not really admissible for the establishment of deep structure. So the conclusion must stand. The deep structure order is head + modifier.
5.186 It would be tempting, in view of this conclusion, to draw an inference about the stylistic significance of modifier + head sequences. These run counter to the deep structure. Are they not stylistically marked? A positive answer to this question would be plausible, but incorrect. There is in fact no systematic marking of modifier + head sequences in Greek. The problem of markedness must be raised, not in connection with the deep structure of the language, but at a more superficial level, i.e. the level of surface structure, which now requires attention.

5.187 As far as the surface structure is concerned it has been shown by the statistics, that there are three possible manifestations of the head / modifier combination: (1) The modifier normally precedes its head, but sometimes follows; e.g. the temporal phrase in relation to the verb. (2) The modifier normally follows its head, but sometimes precedes; e.g. the directional phrase in relation to the verb. (3) The modifier precedes and follows its head with about equal frequency, i.e. at random; e.g. the instrumental in relation to the verb.

5.188 When the question of markedness is raised here, it will be clear that whatever their position, type (3) modifiers are always unmarked. Modifiers of types (1) and (2) on the other hand, are stylistically marked when they violate the appropriate statistical norm. This view is contrary to that of Dover (1960:5)
who says: "It is easy, but wrong, to equate 'statistically normal' with 'natural' and 'statistically abnormal' with 'distorted', 'inverted' etc." The truth of the matter is that norms do exist and can be Identified statistically. After all, if an author uses a marked form more often than the unmarked term of the same opposition, then the originally marked form will lose its markedness and be felt as normal. The principle of crying "wolf" applies in literature as well as in life.

5.189 To proceed: three levels of word order behaviour have now been identified:

(1) The word order of the deep structure
(2) The normal (unmarked) surface word orders
(3) The abnormal (marked) surface word orders.

5.190 With regard to the word order of the deep structure more will be said later. The immediate concern of chapter VI, which now follows, will be to interpret the two levels of surface order within a theoretical framework. It will be assumed, in accordance with the theoretical stance adopted in chapter II, that transformations convert deep structure first of all into normal surface orders, and that further transformations convert normal surface orders into marked surface orders.
6.1 It has been shown in the preceding chapter that inflected modifiers may precede or follow their heads, but many modifiers show a more or less pronounced preference for either the preceding or the following position. How is this information to be interpreted?

6.2 A crucial point to consider is that the tendency to precede or to follow varies in strength from modifier to modifier. To take some examples from the main clause, the subject of the verb shows, overall, a tendency to precede of 71.31%, but the circumstantial clause shows a tendency to precede of 96.18%. Similarly the directional phrase shows a tendency to follow its verb of 77.56%, whereas the infinitive shows a tendency to follow its verb of 90.07%.

6.3 The result of such variations in strength of tendency is that some elements are more likely to appear at the front of the sentence than others; e.g. the circumstantial clause is more likely to begin the sentence than is the subject. Similarly some elements are more likely to appear at the back of the sentence than others; e.g. the infinitive is more likely to come at the end of the sentence than is the directional phrase.
6.4 In order to explain the data it is useful to recognize that there is a polarity in the Greek sentence, i.e. the Greek sentence has two fixed termini, the front and the back. When words are deployed in the sentence it is with reference to these termini or poles. Some constructions are naturally drawn towards the back and others towards the front, as if attracted by a magnet. But not all constructions are attracted with equal strength. In theoretical terms the situation may be restated as follows.

6.5 The front of the Greek sentence carries a positive charge. Some of the inflected elements are negatively charged and are, in consequence, drawn towards the front of the sentence. The strength of the attraction is determined by the strength or load of the negative charge on the element in question. A quantitative indication of the strength of the charge can be obtained from the percentages quoted in the previous chapter.

6.6 Conversely, the back of the Greek sentence carries a negative charge. Some of the inflected elements are positively charged and are accordingly attracted towards the back of the sentence with a strength which depends on the power of the positive charge on the elements concerned.

6.7 But what of those elements which precede and follow their heads with almost equal frequency? Elements of this kind (e.g. the instrumental), can be described as carrying two charges, one positive, the other negative, which cancel each other out. Whether such elements
Type 1: negatively charged modifier

Type 2: positively charged modifier

Type 3: ambivalently charged modifier

Figure 8
precede or follow their heads is indeterminate and
depends upon a random factor.

6.8 As for the heads of the constructions, these
carry no charge at all, but float in the middle position
between positively and negatively charged elements.

6.9 To sum up, three kinds of modifier have
been identified;
type (1): negatively charged;
type (2): positively charged;
type (3): ambivalently charged.

6.10 To elaborate an analogy it might be said that
the various modifiers are in orbit, so to speak, about
their heads to which they are attracted by a kind of
centripetal force rather like gravity; but they are
also subject, according to their charge, to the
centrifugal attraction of the front of the sentence
(type 1), or of the back of the sentence (type 2), or of
both sentence poles simultaneously (type 3). Hence the
shape of the orbits in Figure 8.

6.11 It must be noticed also that in the diagrams
even modifiers of type (1) and type (2) have orbits which
carry them around both sides of their heads, although
one side of the orbit predominates. The reason for this
is that none of the modifiers obeys an absolute law,
which confines it entirely to one or other side of its
head. The modifiers are subject in their order behaviour
to what are merely statistical tendencies, or norms.
Sometimes they appear on the "wrong" side of their heads.
An explanation for this phenomenon will be offered later in the chapter.

6.12 To facilitate grammatical description it will be useful to append to each modifier a numerical subscript in braces, which identifies its polarity and the strength of the charge which it carries. To take an example from type (1), the subject of a main verb may be represented thus: \texttt{SUBJ\{-71.31\}}.

Similarly for a type (2) with a main verb, e.g. the directional function: \texttt{DIR\{+77.56\}}. The values of the subscripts appended here to types (1) and (2) are taken from the percentage norms of chapter V. But type (3), in view of its special behaviour, must be allocated an etiquette value of ±1. Thus the direct-object function in main clauses will be shown as: \texttt{DOBJ\{±1\}}. Both plus and minus signs are attached.

6.13 It remains to consider the weighting of the construction head. This will be given a numeric subscript of zero. E.g. \texttt{V\{0.00\}}.

6.14 Once these conventions have been adopted it becomes possible for transformational rules to deal with the problem of sequencing multiple modifiers, i.e. constructions where two or more modifiers are attached to the same head. This is achieved by placing the elements of the construction in ascending order of their numerical subscripts. Before the appropriate rule can be applied however an adjustment must be made to the subscript value of any ambivalent (type 3) modifier.
The subscript of such modifiers is ambiguous and shows both a positive and a negative sign. Before proceeding further it is necessary to cancel one of the signs. This can be done by a random deletion device of the form:

\[
\text{IF} ( \text{MODSIGN}^I = \pm) \text{ THEN }
\]

\[
\text{RANDELETE} ( + \text{ OR} - \text{ OF MODSIGN}^I )
\]

6.15 It is now possible to apply a shunting rule to impose the appropriate order. A full account of this rule will be provided in chapter XII. For the moment it will be sufficient to look at the basic operation involved which takes the form of comparison with conditional reordering of adjacent construction elements.

\[
\text{IF} ( \text{SUBS}^I > \text{SUBS}^I + 1 ) \text{ THEN }
\]

\[
\text{FRONT} ( \text{ELEM}^I + 1 )
\]

If applied the appropriate number of times under appropriate conditions an operation of this kind will produce sequences such as

\[
\text{SUBJ}{\{-71.31\}} + \text{DOBJ}{\{-1\}} + \text{V}{\{0.00\}} + \text{DIR}{\{+77.56\}}
\]

\[
\text{SUBJ}{\{-71.31\}} + \text{V}{\{0.00\}} + \text{DOBJ}{\{+1\}} + \text{DIR}{\{+77.56\}}
\]

6.16 It may be helpful at this point to turn away from technicalities and pursue a more homely analogy. In many respects the Greek sentence is comparable to a rather disorderly queue of persons waiting to buy tickets to a sporting event. Inevitably the more aggressive individuals shoulder themselves to the front of the queue, the more docile go meekly to the back, while various others are left in the middle. But the arrangement of persons in the queue is never entirely
static. Likewise the Greek sentence is not static but is best regarded as a dynamic system which is partially unstable.

6.17 Attention must now be focussed on another fundamental aspect of modifier behaviour. Although most inflected modifiers show a polarity towards either the front or the back of the sentence, it is also true that, as has been demonstrated by the statistics in the previous chapter, even the most strongly polarised elements sometimes occur on the "wrong" side of their heads. In other words Greek word order tendencies are, within statistical limits, reversible. A diachronic explanation of this phenomenon has already been suggested. But the problem must now be handled in synchronic terms.

6.18 In proposing a synchronic explanation of the reversibility of head/modifier relationships it becomes necessary to invoke the intervention of the author. The author who constructs a Greek sentence operates with elements which have polarities which, for the most part, he respects. However it must be recognised that, at least in Greek, the author has much arbitrary control over his instrument of expression. He can, at will, reverse the polarities of syntactic elements. He can, if he wishes, move negatively charged elements towards the back of the sentence, or shift positively charged elements to the front. In other words he can reverse the signs on the subscripts before the shunting rule which sequences subscripts is applied. The actual weight of the charges remains the same but the
polarity is reversed by a rule of the form

\text{IF}(\text{MODSIGN}_I = + \text{ OR } -) \text{ THEN} \text{REVERSE}(\text{MODSIGN}_I).

A consequence of this procedure is that modifiers with a strong tendency towards the front of the sentence develop an equally strong tendency towards the back and vice versa.

6.19 To return now to the analogy of the queue, the author is like a zealous official or policeman who appears and makes some arbitrary adjustments. E.g. he may move an aggressive individual from the front to the back of the queue, or he may shift one of his friends from the back to the front.

6.20 So the author, as we see him, is rather like a \textit{deus ex machina} who can intervene at any moment and impose his will. There is only one evident restriction on the godlike freedom of the author, and that is statistical not absolute. As has been demonstrated in chapter V the reversal of head/modifier groups falls within certain statistical limits. For each head/modifier group the number of reversed sequences must not exceed a certain percentage of the occurrences. This does not limit the author's freedom to produce inversion in any particular instance, but it does limit his behaviour \textit{en masse}. So his freedom is not absolute.

6.21 It might be argued that this proposal regarding author intervention weakens the theory which has been
advanced. Indeed it might be regarded as providing a loophole for all examples which are not explained by the theory in its basic form. But this is not really the case. In ancient Greek the author or speaker does enjoy an unusual freedom to manipulate the order of words, and this freedom must be recognised. The theory, together with the rider proposed, makes it possible to draw an important distinction. It makes it possible to discriminate between a normal or unmodified order, which is conventional, and instances where the author has intervened deliberately for effect.

6.22 In stylistic terms the normal order is to be regarded as unmarked, whereas the inverted or modified order is marked. The implication of this terminology is that the marked sequences produce some special effect over and above what is necessarily produced by the unmarked sequences. The view proposed here is that the effect of using the marked order is to heighten the literary embellishment of the prose and to intensify the style. From the viewpoint of the dynamic model the result of invoking a marked order is to increase the tension within the sentence as a system. For the element which has thus been placed in a marked position is felt to belong in some other part of the sentence from that which it has been forced to occupy. The source of such tension in the text is to be found in the mind of the author. As the author writes he becomes emotionally involved with his subject matter and energy builds up in his psyche. This accumulating energy is discharged into
the text where some of it is used to produce inversions of word order. When a reader scans the text he encounters resistance due to the difficulty of decoding abnormal sequences and interprets this as a sign of elevated style. Thus from marked word order and other stylistic cues he is able to relive the emotional experience of the author. (Cf. Wollheim 1971:45).

6.23 The adoption of a theory of this kind makes it possible to formulate a prediction about Greek style. If syntactic inversion is frequent in a passage of ancient Greek, that passage will be written in a relatively elaborate style. If inversion is absent or rare, the style will be relatively plainer and simpler.

6.24 For the purpose of comparing passages in different styles it will be useful to establish a statistic which measures the degree of inversion in a given passage of text. This statistic, which will be referred to here as the I-Index (Inversion-Index) can be calculated by dividing the number of inversions in the passage chosen by the number of verbs in the same passage. This procedure will produce a decimal fraction which lies between one and zero. The use of this statistic may be illustrated by comparing two passages from Herodotus. The first passage is in the heightened style of dramatic dialogue; the second is in simple historical narrative. The inverted elements have been underlined.
6.25 The texts and statistics follow

Passage (1)

11,1f. ὁ δὲ σὺν δοκεῖν αὕτην τὰν πρηχθέντων ἐπισταθαι ἦλθε καλεόμενος. ἔθεε γὰρ καὶ πρόοθε, ὠκῶς ἡ βασίλεια καλέοι, φοιτᾶν. ὡς δὲ ὁ Γύγης ἄπικετο, ἔλεγε ἡ γυνὴ τάδε· νῦν τοι ὁμόν ὅδων καρεουσέων, Γύγη, δίδωμι αὐρεσιν, ὁχοτέρην βούλεαι τραπέσθαι· ἢ γὰρ Κανδαύλεα ἀποκτείνας ἔμε τε καὶ τὴν βασιλικὴν ἔχε τὴν λυόν, ἢ αὐτὸν σε αὐτίκα οὕτω ἀποθηκοὺσεν δεῖ, ὡς ἢ μὴ πάντα πειθόμενος Κανδαύλῃ τοῦ λοιποῦ ἴδης τὰ μὴ σε δεῖ.

Number of verbs 21
Number of inverted modifiers 5
I-Index 0.24

Passage (2)

166,2f. οἱ δὲ ψωκαὶες πληρώσαντες καὶ αὐτοὶ τὰ πλοῖα, ἐόντα ἄριθμὸν ἐξῆκοντα, ἀντίαχον ἐς τὸ σαρδόνιου καλεόμενον πέλαγος. συμμισογόνων δὲ τῇ ναυμαχίῃ Καδμείν τὶς νίκη τοῖς ψωκαὶεῖς ἐγένετο. αἱ μὲν
6.26 In its present form the theory asserts solely that marked word orders affect the general style of a passage of text. It would nevertheless be possible to make a stronger claim and to assert that whenever the author uses a marked sequence, he does so with a specific purpose in view; to assert, that is, that each inverted sequence has its own motivation and requires its own explanation. To take this stand would be bold but hazardous. In practice, it is seldom possible to identify the author's intention at each step. There is also a theoretical problem. For in the present state of knowledge such explanations of individual examples would tend to be ad hoc and therefore beyond the scope of the scientific method.

6.27 In any case the above proposal regarding author intervention makes it possible to draw a clear
dividing line between traditional behaviour and individual choice. For the relative frequency of marked sequences is one of the significant determinants of idiolect, i.e. of personal style.
7.1 An important feature of the syntax of natural languages which limits the freedom of word order is what will be referred to here as the syntactic integrity constraint. For the purposes of the argument this constraint may be formulated as follows: Modifiers are united with their heads, or, alternatively: Modifiers are not separated from their heads by material which does not belong to the same construction.

7.2 Under the requirements of this constraint it follows that given a sentence containing a head A and its modifier (a), and also containing an item (b) from another construction, then one expects to find sequences such as:
(a) + A + (b)
A + (a) + (b)
(b) + (a) + A
(b) + A + (a)
but one does not expect sequences such as:
(a) + (b) + A
and
A + (b) + (a)

7.3 To take some concrete instances, it may be said that the article, for example, is not customarily separated from its noun in natural languages, nor is the object separated from its verb. Such paired elements are
7.4 To avoid misunderstanding, however, one proviso must be made. If a head carries multiple modifiers, two or more of which are on the same side of their head, it is obvious that only one of these modifiers can be adjacent to its head. Thus where A is a head and \( (a_1), (a_2) \) are modifiers of A, sequences such as
\[
(a_1) + (a_2) + A
\]
and
\[
A + (a_1) + (a_2)
\]
are to be regarded as normal. It is nothing unusual therefore for an article to be separated from its noun by an adjective which qualifies that noun, or for an object to be separated from its verb by an adverb which is also taken with that verb. The interpolation of other such modifiers at the same level does not violate the constraint.

7.5 On the other hand if an article is separated from its noun by e.g. a verb, or if an object is separated from its verb by an adjective which does not stand in direct functional subordination to that verb, then a transgression against the syntactic integrity constraint has occurred.

7.6 One of the consequences of violating the syntactic integrity constraint is a complication in the constituent structure of the sentences concerned. It is normal in tree diagrams of constituent structure for the branches not to cross or overlap. But when the syntactic integrity constraint has been violated the branches of
Figure 9

Figure 10
the tree cross to produce what might well be referred
to as "tangled trees." (Cf. Staal 1967:15)

To take an example:

ο βασιλεύς ὁφι νέον Ἰππόν

The normal tree diagram for this sentence can be seen
in Figure 9. But if the sentence is put through a
transformation designed to violate the integrity of
NP² the result is:

ο βασιλεύς νέον ὁφι Ἰππόν.

which is diagrammed in Figure 10. As can be seen the
branches cross at the point marked X. Such sentences
have a confusing structural complexity which must be
unscrambled or decoded before their meaning can be
understood.

7.7 How well is the syntactic integrity constraint
observed in Greek? Once again we find that Greek escapes
a restriction which operates in other languages. One of the
characteristic peculiarities of Greek is the phenomenon
of Spaltung or syntactic split, by which modifiers are
separated from their heads. Violations of the constraint
fall into several classes.

(1) In Greek any inflected modifier may be separated
from its head by the insertion of an uninflected post-
positive conjunction such as μέν, δέ, ὅδε, γάρ, ὅν
etc. This is routine at the front of the sentence.

(2) Some temporal conjunctions such as ἐπέλειτε,
ἐπέδει, ὡς and ὅκως may be inserted between an
inflected modifier and its head. This occurs only at the
front of the clause.
(3) Some prepositions, i.e. ἐν, περὶ and ἐν τῶν ἔργα ἡμῶν may be inserted between the modifier and head of a noun phrase.

(4) Many (perhaps all) inflected modifiers may be separated from their heads by the insertion of enclitic pronouns, verbs and verb phrases etc.

7.8 Of these classes numbers (1) and (4) are less distinct than might appear at first glance. For the position of both postpositive particles and enclitics is determined by their tendency to follow a word which carries stress. In this matter the verb belongs with the enclitics; for the Indo-European main verb often behaved as an enclitic (Wackernagel 1892: 427). Insertion of expanded verb phrases may be regarded as an analogical extension on the model of the simple verb. Type (2) on the other hand arises through the desire to place an inflected word at the front of the sentence for the sake of concatenation. Type (3) is different again and is a symptom of the changeover from a postpositional to a prepositional pattern. The inserted preposition is an intermediate stage.

7.9 In view of the diversity of its forms a unified explanation of Spaltung will not be attempted. Instead some comments on the stylistic distribution of certain varieties of the phenomenon can be offered.

7.10 It is noteworthy, first of all, that the practice of splitting compound verbs between adverbial
prefix and root, a procedure traditionally known as tmesis, is almost entirely confined to verse and is most prevalent in the Homeric epics: e.g.:

Iliad I, 40

κατὰ πίονα μηδ' ἔκηα

The inserted elements have been underlined. In Herodotus this procedure is rare, and is best regarded as a moribund poeticism. Also Homeric is the practice of inserting subordinate conjunctions into their clauses: e.g.

Iliad I, 57:

οι δ' ἐκεῖ ὄν ἤγερθεν

Again the inserted element is underlined.

7.11 The insertion of prepositions into noun phrases is likewise Homeric. E.g.:

Iliad I, 12:

θοᾶς ἐπὶ νῆς.

7.12 Finally the interpolation of inflected words such as verbs is most common in the poets, especially Homer. E.g.

Iliad I, 23:

ἄγλαδ ἐξοθαί ἐκοινα

Iliad I, 41:

τόδε μοι κρήνων ἓλθωρ

This last procedure is common in prose with stylistic pretensions (Lindhamer 1908:73f.), rare in simpler writers, and rarest of all in the language of prose inscriptions.
7.13 It would appear therefore from the surviving documents that in the early historical period at least some varieties of syntactic split were already felt to be archaic and artificial. Support for the view that in Classical Greek the phenomenon was already on the wane can be found in its subsequent disappearance in the transition to Modern Greek. In any case the antiquity of its origins can be seen from parallel usages in Latin and Sanskrit.

7.14 In the next chapter the sundering of head/modifier combinations by extraneous elements will be given a statistical treatment with exemplification from the text of Herodotus I.
CHAPTER VIII

STATISTICS FOR SYNTACTIC SPLIT

8.1 The purpose of this chapter is to present a representative range of examples and statistics to illustrate syntactic split and to indicate its relative frequency in relation to the corresponding unsplit constructions. The statistical approach will be similar to that adopted in chapter V. A null hypothesis will again be tested, namely that split and unsplit constructions are of equal frequency. Any chi square of over 3.84 will again be an indication that the null hypothesis can safely be rejected.

8.2 The collection of examples has been made as complete as possible within the limits of the data. It follows that constructions treated in chapter V but omitted here do not occur with Spaltung in Herodotus I. For the sake of clarity in interpreting the examples the relevant wedge elements in each split construction have been underlined.

8.3 Before proceeding to the examples and statistics it is necessary to point out that this chapter will not be concerned with banal occurrences of post-positive particles such as ὅ, γάρ or ὅν between inflected words. These can be found on every page of every ancient author and scarcely require exemplification here.
8.4 Nevertheless the types of Spaltung which remain are varied and numerous. They may be conveniently classified into two groups:
(a) Spaltung with an uninflected wedge element or conjunction equivalent.
(b) Spaltung with an inflected wedge element.
Of the two categories group (b) is the larger and more widespread.

I SPLIT BY UNINFLECTED WEDGE ELEMENTS

8.5 First to be considered is the phenomenon of tmesis, by which a postpositive particle separates a prepositional prefix from the root of a finite verb in a main clause.

Examples

(a) 66,1 ἀνά τε ἔδραμον αὐτίκα

(β) 194,4 νομέας μὲν τὸν πλοίον καὶ τὴν καλάμην πᾶσαν ἀπ' τὸν ἐκήρυξαν

(The reading cited is from ms. C. Other readings:

βTransactional αποκεκήρυξαν AB: ἀπινεκήρυξαν;
dP απεκήρυξαν. Cf. II,47,1: ἀπ' τὸν ἐβαψε)

The rarity of this construction can be seen when its frequency is compared with the frequency of finite verbs in main clauses which contain a prepositional prefix in Herodotus I.
Statistics

<table>
<thead>
<tr>
<th>examples with tmesis</th>
<th>2 (0.34%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>examples without tmesis</td>
<td>590 (99.66%)</td>
</tr>
<tr>
<td>total</td>
<td>592</td>
</tr>
<tr>
<td>average</td>
<td>296</td>
</tr>
<tr>
<td>chi square</td>
<td>584.03</td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the finite verb with a prepositional prefix is not normally split by tmesis.

Note

The number of examples without tmesis is not a count but an estimate.

8.6 The splitting of the compound noun phrase by the insertion of a preposition or postposition.

Examples

(a) 81, - χρόνον ἐπὶ μαχρὸν

(β) 167,4 φωκαίη μὲν νυν πέρι τῆς ἐν Ἰωνίη

(γ) 4,3 Λακεδαίμονίης ἐγνεχεν γυναικῶς

(δ) 19,3 χώρης τῆς Μιλησίης ἐν Ἀσσινᾶφ

Statistics

<table>
<thead>
<tr>
<th>split compound noun phrases</th>
<th>15 (5.81%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>unsplit compound noun phrases</td>
<td>243 (94.19%)</td>
</tr>
<tr>
<td>total</td>
<td>258</td>
</tr>
<tr>
<td>average</td>
<td>129</td>
</tr>
<tr>
<td>chi square</td>
<td>201.49</td>
</tr>
</tbody>
</table>
Conclusion
The value of chi square is significant; the null hypothesis is rejected; the compound noun phrase is normally unsplit by the preposition.

8.7 The splitting of the circumstantial clause by the insertion of the subordinate conjunction.

Examples

(a) 17,2 ὁ δὲ τὰ τε δὲνόρεα καὶ τὸν καρπὸν τὸν ἐν τῇ ἔν οὐκ ὁφεῖτε, ἀπαλλάσσετο οὕτω

(b) 43,1 τοιούτοις ἔχετε οὕτος ἀμείψατο Κροῖσον, ήσαν μετὰ ταῦτα

Statistics
split circumstantial clauses 11 (4.78%)
unsplit circumstantial clauses 219 (95.22%)
total 230
average 115
chi square 188.10

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the circumstantial clause is normally not split by the subordinate conjunction.

8.8 The splitting of the indirect question by the insertion of the subordinate interrogative.
Example

(a) 193,4 ἐκ δὲ κέγχρου καὶ σηκόμου ἄσου τι δένδρον μέγαθος γίνεται ἑξεκιστάμενος μνήμην οὐ ποιήσομαι

Statistics

<p>| | |</p>
<table>
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<tr>
<td>split indirect questions</td>
<td>1 (1.61%)</td>
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<tr>
<td>unsplit indirect questions</td>
<td>61 (98.39%)</td>
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<td>31</td>
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<tr>
<td>chi square</td>
<td>58.06</td>
</tr>
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</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the splitting of the indirect question by the insertion of the interrogative is not normal.
II SPLIT BY INFLECTED WEDGE ELEMENTS:

(A) THE VERB PHRASE

8.9 Before proceeding to specific examples it is necessary to point out that main clauses and subordinate clauses will be excluded from the data. The reason for excluding main clauses is that it is not theoretically sound to talk about splitting of the main clause because all subordinate elements are part of it and accordingly cannot be treated as wedges. This applies not only to nominal constructions but also to verbal constructions such as subordinate clauses and participial groups which have been embedded into the main clause by recursion. The only elements which exist at a high enough level to split the main clause are the coordinating conjunctions. But, as has already been said, the behaviour of these is well known and does not require treatment here. Of course it might be said that parenthesis also splits the main clause; but this thesis is not concerned with parenthesis.

The subordinate clause has been excluded for a different reason. The splitting of the subordinate clause by the subordinate conjunction has already been dealt with and is in fact the only kind of Spaltung to which the subordinate clause is prone. So subordinate clauses can be safely omitted. Examples and statistics for participial and infinitival constructions now follow.
8.10 The splitting of the subject from the verb in participial constructions by the insertion of a verb or verb phrase or noun phrase or prepositional phrase or adverb.

Examples

(a) 158,2 ἐκείρησόμενοι ἤλθαν ἄλλοι θεοκρόποι
24,1 τούτον τὸν Ἀρίωνα λέγοντα τὸν κολλόν τοῦ χρόνου διατρίβοντα παρὰ Περιάνδρῳ

(β) 62,4 ἐνθάδε τε θεὶς κομὴ χρεώμενος παρίσταται Πελοπονήσῳ Ἀμφίλυς ὁ Ἀκαρνᾶς
17,3 ἐνθευτέν όρμωμένοι τὴν γῆν σκείρειν τε καὶ ἐγράφεσθαι οἱ Μιλήσιοι

(γ) 31,1 ὁ Σόλων τὸν Κροῖσον εἴτε πολλά τε καὶ ἀλβία

(δ) 14,2 οὕτως ἐν τῷ Κορινθίων θησαυρῷ σταθμὸν ἔχοντες τρίηκοντα τάλαντα

(e) 20,2 ἐγὼ οὕτω ἀκούομαι γενέσθαι

Statistics
split subjects 97 (15.7%)
unsplit subjects 521 (84.3%)
total 618
average 309
chi square 290.90
Conclusion

The value of chi square is significant; the null hypothesis is rejected; the combination of subject and verb in participial constructions is normally unsplit.

8.11 The splitting of the subject from the verb in infinitival constructions by the insertion of a verb or verb phrase.

Examples

(a) 76,3 πρὶν δὲ ἐξελαύνειν ἀρμῆσαι τὸν στρατὸν
   69,2 ὡμέας γὰρ τυγθάνομαι προεστᾶν τῇς Ἑλλάδος

(b) 90,2 εἰ ἐξακατάν τοὺς εὗ ποιεύντας νόμος ἐστὶ σι
   195,2 ἄνευ γὰρ ἐπισήμου σοὶ σφι νόμος ἐστὶ ἔχειν
      σχῆματον

Statistics

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>split subjects</td>
<td>54 (14.75%)</td>
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<tr>
<td>unsplit subjects</td>
<td>312 (85.25%)</td>
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<tr>
<td>total</td>
<td>366</td>
</tr>
<tr>
<td>average</td>
<td>183</td>
</tr>
<tr>
<td>chi square</td>
<td>181.87</td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the combination of subject and verb in infinitival constructions is normally unsplit.
8.12 The splitting of the direct object from the verb in participial constructions by the insertion of a verb or verb phrase or noun phrase.

Examples

(a) 44,2 φωνεά τού παιδός ἔλανθανε βόσχων

(β) 65,1 τούς μέν νυν Ἀθηναίους τοιαῦτα τὸν χρόνον τούτων ἐπινεθάνετο ὁ Κροίσος κατέχοντα

(γ) 48,1 ταῦτα οἱ Ἀυδοὶ θεοπλώας τῆς Πυθῆς

Statistics

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<table>
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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>split objects</td>
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<tr>
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<td>502</td>
<td>99.01%</td>
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<tr>
<td>total</td>
<td>507</td>
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<tr>
<td>average</td>
<td>253.5</td>
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<tr>
<td>chi square</td>
<td>487.20</td>
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</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the combination of object and verb in participial constructions is normally unsplit.

8.13 The splitting of the direct object from the verb in infinitival constructions by the insertion of a verb or verb phrase or other inflected element.

Examples

(a) 29,1 μὴ τινα τῶν νόμων ἀναγκασθή λύσαι

32,9 σκοπεῖν ἢς χρὴ παντὸς χρήματος τῆς τελευτήν
Statistics

<p>| | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>split objects</td>
<td>35 (14.4%)</td>
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<tr>
<td>unsplit objects</td>
<td>208 (85.6%)</td>
</tr>
<tr>
<td>total</td>
<td>243</td>
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<tr>
<td>average</td>
<td>121.5</td>
</tr>
<tr>
<td>chi square</td>
<td>123.16</td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the combination of direct object and verb in infinitival constructions is normally unsplit.

8.14 The splitting of the noun clause object from the verb in infinitival constructions by the insertion of a verb or "verb" phrase.

Examples

(a) 32,9 σκοπέειν δὲ χρὴ παντὸς χρήματος τὴν τελευτὴν κῇ ἀποβῆσεται

(b) 57,1 ἦντινα δὲ γλῶσσαν ἠκούσαν οἱ Πελασγοὶ, ὅπως ἔχει ἀμφεῖρεσ ἐκεῖν
Statistics

<table>
<thead>
<tr>
<th>Description</th>
<th>Count</th>
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</thead>
<tbody>
<tr>
<td>split noun clause objects</td>
<td>3 (15%)</td>
</tr>
<tr>
<td>unsplit noun clause objects</td>
<td>17 (85%)</td>
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<td>10</td>
</tr>
<tr>
<td>chi square</td>
<td>9.80</td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the combination of noun clause object and verb in infinitival constructions is normally unsplit.

8.15 The splitting of the passive "subject" from the verb in participial constructions by the insertion of a verb or verb phrase.

Examples

(a) 98,6 καταχειρισμένους ἔχων τοὺς προμαχέωνας

83,− Κροίσφ βοηθέειν πολιορκεσμένην

(b) 46,1 Κροίσφ δὲ ἐκτὸς ὧν ἦταν ἐν πένθει μεγάλῳ

κατήστα τοῦ παιδὸς ἐστερημένον
Statistics

<p>| | |</p>
<table>
<thead>
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</thead>
<tbody>
<tr>
<td>split passive &quot;subjects&quot;</td>
<td>21 (26.25%)</td>
</tr>
<tr>
<td>unsplit passive &quot;subjects&quot;</td>
<td>80 (79.21%)</td>
</tr>
<tr>
<td>total</td>
<td>101</td>
</tr>
<tr>
<td>average</td>
<td>50.5</td>
</tr>
<tr>
<td>chi square</td>
<td>34.47</td>
</tr>
</tbody>
</table>

**Conclusion**

The value of chi square is significant; the null hypothesis is rejected; the combination of passive "subject" and verb in participial constructions is normally unsplit.

8.16 The splitting of the passive "subject" from the verb in infinitival constructions by the insertion of a verb or verb phrase.

**Examples**

(a) 4,4 τὴν δὲ Εὐφράπην καὶ τὸ Ἑλληνικὸν ἔχει κεχωρίσθαι

(b) 89,3 φειδέα ἀναγκαῖος ἔχει δεκατευθήναι

Statistics

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<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>split passive &quot;subjects&quot;</td>
<td>2 (13.33%)</td>
</tr>
<tr>
<td>unsplit passive &quot;subjects&quot;</td>
<td>13 (86.67%)</td>
</tr>
<tr>
<td>total</td>
<td>15</td>
</tr>
<tr>
<td>average</td>
<td>7.5</td>
</tr>
<tr>
<td>chi square</td>
<td>8.07</td>
</tr>
</tbody>
</table>
Conclusion
The value of chi square is significant; the null hypothesis is rejected; the combination of passive "subject" and verb in infinitival constructions is normally unsplit.

8.17 The splitting of the personal dative from the verb in participial constructions by the insertion of a verb.

Example

(a) 59,2 τίς οἱ τυγχάνει ἐὼν παῖς

Statistics
split personal datives 2 (2.7%)
unsplit personal datives 72 (97.3%)
total 74
average 37
chi square 66.22

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the combination of personal dative and verb in participial constructions is normally unsplit.

8.18 The splitting of the personal dative from the verb in infinitival constructions by the insertion of a verb or verb phrase or prepositional phrase.
Examples

(a) 110,3 τάδε τοι κελεύεσθε εἰπεῖν
(b) 116,5 συγγνώμην ἐως τῷ κελεύον ἔχειν αὐτόν
(γ) 39,1 ἐμὲ τοι δίκαιον ἐστι φράζειν
(d) 39,2 φης τοι τῷ δινειρον ὡς ὀλγής σιδηρέης

Statistics

split personal datives 9 (4.55%)
unsplit personal datives 189 (95.45%)
total 198
average 99
chi square 163.64

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the combination of personal dative and verb in infinitival constructions is normally unsplit.

8.19 The splitting of the equational subject from the verb in participial constructions by the insertion of a verb or verb phrase or noun or personal pronoun or prepositional phrase.

Examples

(a) 68,4 φύσας τοὺς ἀνέμους εὕροισθε ἥδωτας
(b) 73,3 τοὺς ξυίθας τοὺτοις τὸ μὲν πρῶτον κερίετε ἐβ' ὡς ἥδωτας ἵκετας.
Statistics

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<table>
<thead>
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<tbody>
<tr>
<td>split equational subjects</td>
<td>18</td>
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<tr>
<td>unsplit equational subjects</td>
<td>60</td>
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<tr>
<td>total</td>
<td>78</td>
</tr>
<tr>
<td>average</td>
<td>39</td>
</tr>
<tr>
<td>chi square</td>
<td>22.62</td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the combination of equational subject and verb in participial constructions is normally unsplit.

8.20 The splitting of the equational subject from the verb in infinitival constructions by the insertion of a verb or ethnic adjective.

Examples

(a) 1,1 ἄλειψας αὐτίνοις σαίτι γενέσθαι

(b) 51,3 μν Ἀδριάνος Ἀδριανοῦ τοῦ Χαμίου ἔργον εἶναι
Statistics
split equational subjects  10 (19.23%)
unsplit equational subjects  42 (80.77%)
total  52
average  26
chi square  19.69

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the combination of equational subject and verb in infinitival constructions is normally unsplit.

8.21 The splitting of the equational complement from the verb in participial constructions by the insertion of a verb.

Examples
(a) 155,4 γυναίκας ἀντ' ἄνδρων ἀρετὴ γεγονότας
(b) 191,2 διαβατὸν τὸ βέβηρον ἤδωντας γενόμενον

Statistics
split equational complements  3 (3.16%)
unsplit equational complements  92 (96.84%)
total  95
average  47.5
chi square  83.38

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the combination of equational...
complement and verb in participial constructions is normally unsplit.

8.22 The splitting of the equational complement from the verb in infinitival constructions by the insertion of a verb or verb phrase.

Examples

(a) 207,2 ἀδάνατος δοκεῖ ἔλναι

(b) 99,2 ἄτεροδος σφί δοκεῖ ἔλναι

Statistics

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<table>
<thead>
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</thead>
<tbody>
<tr>
<td>split equational complements</td>
<td>10 (13.89%)</td>
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</tr>
<tr>
<td>unsplit equational complements</td>
<td>62 (86.11%)</td>
<td></td>
</tr>
<tr>
<td>total</td>
<td>72</td>
<td></td>
</tr>
<tr>
<td>average</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>chi square</td>
<td>37.56</td>
<td></td>
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</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the combination of equational complement and verb in infinitival constructions is normally unsplit.

8.23 The splitting of the directional phrase from the verb in participial constructions by the insertion of a verb phrase.

Example

(a) 139,- ἐς τοῦτο διξήμενος εὑρήσεις τελευτώντα τῶν Περσέων τὰ ὄνοματα
Statistics
split directional phrases 1 (0.71%)
unsplit directional phrases 139 (99.29%)
total 140
average 70
chi square 136.03

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the combination of directional phrase and verb in participial constructions is normally unsplit.

8.24 The splitting of the directional phrase from the verb in infinitival constructions by the insertion of a verb or verb phrase.

Examples

(a) 119,2 ἔναι τε κελεύων ἐς Ἀστυάγεος

(b) 27,3 ἐς Χάρδις τε καὶ ἐπὶ σὲ ἐν νόῳ ἔχοντες στρατεύεσθαι

Statistics
split directional phrases 3 (3.61%)
unsplit directional phrases 80 (96.39%)
total 83
average 41.5
chi square 71.43
Conclusion
The value of chi square is significant; the null hypothesis is rejected; the combination of directional phrase and verb in infinitival constructions is normally unsplit.

8.25 The splitting of the locative phrase from the verb in participial constructions by the insertion of a verb.

Examples

(a) 142,1 ἐν τῇ καλλίστῃ ἐκτύφλανου ἠδρινούμενοι πόλις

Statistics

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<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>split locative phrases</td>
<td>1 (1.05%)</td>
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<tr>
<td>unsplit locative phrases</td>
<td>94 (98.95%)</td>
</tr>
<tr>
<td>total</td>
<td>95</td>
</tr>
<tr>
<td>average</td>
<td>47.5</td>
</tr>
<tr>
<td>chi square</td>
<td>91.04</td>
</tr>
</tbody>
</table>

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the combination of locative phrase and verb in participial constructions is normally unsplit.

8.26 The splitting of the locative phrase from the verb in infinitival constructions by the insertion of a verb phrase.
Examples

(a) 183,2 ἐπὶ γὰρ τοῦ χρυσέου βασιλείου ὄψιν ἔκκειται.
θύειν δὲ μὴ γαλαθηνὰ μοὐρα

Statistics

<table>
<thead>
<tr>
<th>Split</th>
<th>Unsplit</th>
<th>Total</th>
<th>Average</th>
<th>Chi Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locative</td>
<td>1 (3.45%)</td>
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<td>14.5</td>
<td>25.14</td>
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<td>Phrases</td>
<td>96.55%</td>
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</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the combination of locative phrase and verb in infinitival constructions is normally unsplit.

8.27 The splitting of the ablative phrase from the verb in infinitival constructions by the insertion of a verb.

Examples

(a) 116,4 ἔς ἐωτοῦ τε ἔκειν γεγονέναι.
164,2 ἐπαγαγεῖν ἐκείνον ἐκέλευον τὴν στρατηγὴν ἀπὸ τοῦ τείχους
Statistics
split ablative phrases  3 (15%)
unsplit ablative phrases  17 (85%)
total  20
average  10
chi square  9.80

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the combination of ablative phrase and verb in infinitival constructions is normally unsplit.

8.28 The splitting of the temporal phrase from the verb in infinitival constructions by the insertion of a verb or verb phrase.

Examples

(a) 124,2 σε καὶ πάλαι δοκεῖ χάντα ἐκμεμαθηκέναι

(b) 87,1 ἐνθαῦτα λέγεται ὑπὸ Δυνάτων Κροίσου μαθόντα τὴν Κύρου μετάγνωσιν, ὡς δὲρα πάντα μὲν ἄνδρα σβεννύντα τὸ πῦρ, δυναμένους δὲ σοκέτι καταλαβεῖν, ἐπιβιβάζονται τὸν Ἁπόλλωνα

Statistics
split temporal phrases  5 (7.25%)
unsplit temporal phrases  64 (92.75%)
total  69
The value of chi square is significant; the null hypothesis is rejected: the combination of temporal phrase and verb in infinitival constructions is normally unsplit.

8.29 The splitting of the adverbial phrase of manner from the verb in participial constructions by the insertion of a verb.

Example

(a) 140,1 ἀνεφές ἤχω περὶ αὐτῶν εἶπος εἶπεν

Statistics

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<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>split adverbial phrases</td>
<td>1 (1.15%)</td>
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<tr>
<td>unsplit adverbial phrases</td>
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<td>total</td>
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</tr>
<tr>
<td>chi square</td>
<td>83.05</td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the combination of adverbial phrase of manner and verb in participial constructions is normally unsplit.

8.30 The splitting of the adverbial phrase of manner from the verb in infinitival constructions by the insertion of a verb or verb phrase.
Examples

(a) 21,1 οὔτω λέγουσι γενέσθαι

(b) 122,3 θειοτέρως δοξῇ τοῖς Πέρσαις περιείγαντι σφί δ' παῖς

Statistics

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</thead>
<tbody>
<tr>
<td>split adverbial phrases</td>
<td>5 (9.26%)</td>
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</tr>
<tr>
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<td>49 (90.74%)</td>
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</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the combination of adverbial phrase of manner and verb in infinitival constructions is normally unsplit.

8.31 The splitting of the genitive absolute from the verb in infinitival constructions by the insertion of a verb.

Example

(a) 191,3 τὸ ἀρχαῖον δέσπρων διαβατῶν εἶναι ἐποίησε ὑπονοοῦσαντος τοῦ ποταμοῦ

Statistics

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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>split genitive absolutes</td>
<td>1 (5.56%)</td>
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<tr>
<td>unsplit genitive absolutes</td>
<td>17 (94.44%)</td>
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<tr>
<td>total</td>
<td>18</td>
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</table>
The value of chi square is significant; the null hypothesis is rejected; the combination of genitive absolute and verb in infinitival constructions is normally unsplit.

### (B) THE NOUN PHRASE

8.32 The splitting of the article from the noun usually by the insertion of enclitic pronouns and verbs, but also by an adverb.

#### Examples

(a) 85,3 τῶν τῆς Περσέων

(b) 115,2 οἱ γὰρ μὲ ἐκ τῆς κόμης κατέδειξ

(γ) 207,2 τῶν ἀνθρωπίων δοῦλοι κρημάτων

(d) 51,3 οὐ γὰρ τὸ συντυχὼν φαίνεται μοι ἦργον εἶναι

(e) 111,1 ἦς τὴν αὐτὴν ὕπισθος ὀδὸν

### Statistics

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<td>unsplit articular constructions</td>
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<tr>
<td>chi square</td>
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</tbody>
</table>
Conclusion

The value of chi square is significant; the null hypothesis is rejected; the combination of article and noun is normally unsplit.

Note

The number of unsplit articular constructions is not a count but an estimate.

8.33 The splitting of the cardinal numeral from the noun by the insertion of a verb or enclitic or adverb.

Examples

(a) 68,4 ὑὸ ὄρεων φύσας
202,3 στόμασι δὲ ἑκερεύγεται τεσσεράκοντα

(b) 145,- ὄνοδεσκα δὲ μοὴ δοξέονσι πόλιας

(γ) 145,- ὄνοδεσκα ἡν αὐτῶν μέρεα

(δ) 193,3 τεσσερῶν εὐχετέως δακτύλων

Statistics

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<th>Value</th>
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<td>7.26%</td>
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</tr>
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<tr>
<td>average</td>
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</tr>
<tr>
<td>chi square</td>
<td>90.61</td>
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</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the combination of cardinal numeral and noun is normally unsplit.
8.34 The splitting of the ordinal numeral from the noun by the insertion of a verb or enclitic.

Examples

(a) 3,1 δευτέρη δε λέγουσι γενετή

(b) 197,- δευτερος δε σοφις δε ελλος σφι νομος

Statistics

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<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>split ordinal numerals</td>
<td>3 (15%)</td>
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<tr>
<td>unsplit ordinal numerals</td>
<td>17 (85%)</td>
</tr>
<tr>
<td>total</td>
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<td>average</td>
<td>10</td>
</tr>
<tr>
<td>chi square</td>
<td>9.80</td>
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Conclusion

The value of chi square is significant; the null hypothesis is rejected; the combination of ordinal numeral and noun is normally unsplit.

8.35 The splitting of the demonstrative from the noun by the insertion of verbs, verb phrases, enclitics, noun phrases and prepositional phrases.

Examples

(a) 19,1 τοιονδε γενεσθαι κρηγμα

216,1 νομοις δε χρεωνται τοιολιδε
(β) 153,2 ταύτα ἐς τοὺς πάντας Ἐλληνας ἀπέρριψε ὁ Κύρος
tὰ ἔκπεια
209,1 ὅσιον ἐδώκεν ἐν τῶν Μακεδονέων τῇ χώρῃ
tοιήνοε
(γ) 197,- ὁδὲ ἀλλος αὐτὸς νόμος
38,2 τὸν τε γάμον τοῦ τούτον
(δ) 200,- νόμοι μὲν ὅ ὑ ποὺ Ἄρβυλωνίσιας οὕτω
(ε) 114,1 πρήγμα ἐς αὐτὸν τοιήνοε

Statistics
split demonstratives 18 (11.11%)
unsplit demonstratives 144 (88.89%)
total 162
average 81
chi square 98.00

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the combination of demonstrative and noun is normally unsplit.

8.36 The splitting of the ethnic adjective from the noun by the insertion of a verb.

Examples

(a) 92,3 Κασίρης ἵν γυναικὸς
192,3 μέτρον ἐστὶ Περσικῶν
Statistics
split ethnic adjectives 2 (2.70%)
unsplit ethnic adjectives 72 (97.30%)
total 74
average 37
chi square 66.22

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the combination of ethnic adjective and noun is normally unsplit.

8.37 The splitting of the quantifier from the noun by the insertion of a verb, or verb phrase, or verb phrase with enclitic or prepositonal phrase or adverb.

Examples

(a) 61,3 μεγάλα παρασχόντων χρήματα
     27,3 ίππον συνωνεόται μυρίην

(b) 32,5 πολλών εἶναι ἀνθρώπων
     181,5 νηῶς ἔπεστι μέγας

(γ) 199,1 θεραπείη δὲ σφι ἔκπυεθ ἐπεταῖ πολλῆ

(δ) 14,4 μέγα ἀπ’ αὐτοῦ ἄλλο ἔργον
     14,1 ἀναθήματα ἐκ ἀληφοῦς οὐκ ὄλγα

(ε) 171,5 χρόνυς κατερον πολλῆ
Statistics
split quantifiers 24 (20.87%)
unsplit quantifiers 91 (79.13%)
total 115
average 57.5
chi square 39.03

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the combination of quantifier and noun is normally unsplit.

8.38 The splitting of the adjective of material from the noun by the insertion of a verb or enclitic.

Examples

(a) 181,5 τράπεζα παράκειται χρυσή

(b) 183,2 βωμός εστι χρύσεος

(γ) 14,1 χρυσήρες οι ἀριθμόν εἰς χρύσεοι

Statistics
split adjectives of material 5 (11.9%)
unsplit adjectives of material 37 (88.1%)
total 42
average 21
chi square 24.38

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the combination of adjective of material and noun is normally unsplit.
8.39 The splitting of the negative adjective from the noun by the insertion of a verb, or verb with an enclitic or verb phrase or prepositional phrase.

Examples

(a) 32,4 οὐδὲν δμοιον προσάγετε πρήγμα
115,3 λόγον ἐγει οὐδένα

(β) 216,2 οὗτος δὲ ἡλικίας σφι πρόκειται ἀλλοι μὲν οὐδεῖς

(γ) 181,5 δικαίμα δὲ σύν ἥνι οὐδέν

(δ) 14,4 οὐδὲν γὰρ μέγα ἀπ' αὐτοῦ ἀλλο ξρογον

Statistics

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<td>split negative adjectives</td>
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<td>73.08%</td>
</tr>
<tr>
<td>total</td>
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<td>average</td>
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<td></td>
</tr>
<tr>
<td>chi square</td>
<td>5.54</td>
<td></td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected the combination of negative adjective and noun is normally unsplit.

8.40 The splitting of the indefinite from the noun by the insertion of a verb or a verb phrase with an enclitic or a prepositional phrase.
Examples

(a) 19,1 τι τοιούτο γενέσθαι κρήμμα

(β) 9,1 τι τοι ἐκ αὐτῆς γένησθαι βλάβος

(γ) 41,2 τινὲς κατ᾽ ὑδὸν κλύσεις κακοβργοί

Statistics

split indefinites 3 (27.27%)

unsplit indefinites 8 (72.73%)

total 11

average 5.5

chi square 1.45

Conclusion

The value of chi square is not significant; the null hypothesis is sustained; the combination of indefinite and noun may be split or unsplit with equal frequency.

8.41 The splitting of πᾶς, ἀπός etc. from the noun by the insertion of a verb or verb phrase or noun phrase or demonstrative or adverb.

Examples

(a) 125,8 πάντες ἀπτείαται Πέρσαι

(b) 93,4 αἱ θυγατέρες πορνεύονται κάσαι

(β) 173,1 τὴν γὰρ Κρήτην ἔγιγνε τὸ παλαιὸν κάσαν

(γ) 126,2 τὰ τε αἰλόλια καὶ τὰς κοίμινας καὶ τὰ θέουλια ἐκ Κύπρος κάνει τοῦ πατρὸς
(δ) 193,2 χωρέων αὐτή πασέων

(ε) 143,2 τοῦ παντὸς τότε Ἑλληνικοῦ γένεος

Statistics

<p>| | |</p>
<table>
<thead>
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</thead>
<tbody>
<tr>
<td>split πᾶς etc.</td>
<td>10 (12.35%)</td>
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<tr>
<td>unsplit πᾶς etc.</td>
<td>71 (87.65%)</td>
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</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the combination of πᾶς etc. and the noun is normally unsplit.

8.42 The splitting of ἄλλος from the noun by the insertion of a verb or verb phrase or verb with an enclitic or an enclitic.

Examples

(a) 59,4 ἄλλα ἀποδεικμένος μεγάλα ἔργα

(b) 194,5 ἄλλα τρόπῳ τῷ αὐτῷ ποιεῖται πλοῖα

(γ) 216,2 οὖρος δὲ ἡλικίας σφί πρόκειται ἄλλος μὲν οὐδείς

(δ) 197,2 ἄλλος σφὶ νόμος
Statistics
split ἄλλος 10 (16.13%)
unsplit ἄλλος 52 (83.87%)
total 62
average 31
chi square 28.45

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the combination of ἄλλος and the noun is normally unsplit.

8.43 The splitting of the adjectivals ἐκαστος, ἕτερος, ἐκάτερος, ἀμφότερος, μοδνος, λοιπος from the noun by the insertion of a verb or verb phrase or noun phrase.

Examples
(a) 48,1 μοδνον εἶναι ματήνον
       62,3 τὸ ὅπε δὲ πλῆθος τοῦ στρατοῦ ἀπαλλάσσοςθαι ἐκάτερον

(b) 38,2 μοδνος τυγχάνεις ἕων παῖς

(γ) 54,1 κατ' ἄνδρα δύο στατήριστ ἐκαστον

Statistics
split adjectivals 4 (11.43%)
unsplit adjectivals 31 (88.57%)
total 35
average 17.5
chi square 20.83
Conclusion
The value of chi square is significant; the null hypothesis is rejected; the combination of the above adjectivals and the noun is normally unsplit.

8.44 The splitting of the qualitative adjective from the noun by the insertion of a verb or verb phrase or an adjectival or prepositional phrase.

Examples

(a) 5,4 τὴν ἀνθρωπηνὴν ὡς ἐπιστήμην εὐθαυσονίην
     53,1 στρατὸν ἀνδρῶν προσέρχετο φίλον

(b) 178,3 τοῦ μετρίου ἐστὶ πήχεος
     107,2 οἰκίης μὲν ἄνωτα ἀγαθῆς

(γ) 59,2 γυναιξὶ μὴ ἀγαθοῖς τεχνοποιοῦν

(δ) 124,3 τῶν τις δοξίμων ἄλλος Μήδων

(ε) 202,1 νήσους δὲ ἐν αὐτῷ λέσβη μεγάθεα παραπλησίας

Statistics
split qualitative adjectives 25 (10.96%)
unsplit qualitative adjectives 203 (89.04%)
total 228
average 114
chi square 138.96
Conclusion

The value of chi square is significant; the null hypothesis is rejected; the combination of the qualitative adjective and the noun is normally unsplit.

8.45 The splitting of the comparative and superlative adjectives from the noun by the insertion of a verb or verb phrase or adverb.

Examples

(a) 98,5 τὸ δ' αὑτῶν μέγιστὸν ἔστι τεῖχος
    175,- κρήγματα παρέσχει πλείστα

(b) 27,2 γνώμην Ἁνώτα διόρθ Πρωτηνέα ἀποδέκασθαι
    "Ἰωσί χρησιμιοτάτην"

(γ) 117,1 λόγον ἀδικοχ και ἐλάσσοω

Statistics

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<tbody>
<tr>
<td>split comparatives</td>
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<tr>
<td>unsplit comparatives</td>
<td>16 (72.73%)</td>
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<tr>
<td>superlatives</td>
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<tr>
<td>total</td>
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</tr>
<tr>
<td>chi square</td>
<td>4.55</td>
<td></td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the combination of comparative or superlative adjective with the noun is normally unsplit.
8.46 The splitting of the relative from the "antecedent" by the insertion of a verb or verb phrase or nominal or adjectival, or prepositional phrase.

Examples

(a) 19,3 ἢ τὸν νηὸν τῆς Ἀθηναίης ἀναρρώσωσι τὸν ἐνέκρισαν χώρης τῆς Μιλησίης ἐν Ἀσσοῦ.

(b) 8,4 πάλαι δὲ τὰ καλὰ ἀνθρώποι ἐκεύρηται, ἐκ τῶν μανθάνειν δεῖ.

(γ) 25,2 Γλαύκου τοῦ Χλοίου ποίημα, δὲ μονος δὴ πάντων ἀνθρώπων σιδήρου κόλπησιν ἔξευρε.

(δ) 6,2 βαρβάρων πρῶτος τῶν ἡμεῖς θάμεν

(ε) 138,1 δὲ δὲ τῶν ἀστῶν λέπρην ἢ λεύκην ἔχη, ἐς πόλιν οὗτος οὐ κατέρχεται

Statistics

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<tbody>
<tr>
<td>split relatives</td>
<td>60 (24.59%)</td>
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<td>unsplit relatives</td>
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Conclusion

The value of chi square is significant; the null hypothesis is rejected; the combination of relative and antecedent is normally unsplit.
8.47 The splitting of the personal proper noun genitive from the noun by the insertion of a verb or verb and enclitic, or verb phrase.

Examples

(a) 24,8 Ἄριονος ἐστὶν ἀνάθημα χάλκεον
(b) 2,3 Ἰούς τῆς Ἀργείης ἔδωκαν σοι δίκας τῆς ἀραγῆς
(γ) 59,5 δορυφόροι μὲν οὐκ ἔγενοντο Πελοποννήσου

Statistics

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<td>split personal proper nouns</td>
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<td>unsplit personal proper nouns</td>
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<tr>
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<tr>
<td>chi square</td>
<td>68.76</td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is not significant; the null hypothesis is rejected; the combination of personal proper noun genitive and noun is normally unsplit.

8.48 The splitting of the reflexive pronoun genitive from the noun by the insertion of a verb.

Example

(a) 115,2 σφέων αὐτῶν ἐστὶς τῶν βασιλέων
Statistics
split reflexive pronoun 1 (2.04%)
unsplit reflexive pronouns 48 (97.96%)
total 49
average 24.5
chi square 45.08

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the combination of the reflexive pronoun genitive and the noun is normally unsplit.

8.49 The splitting of the geographic proper noun genitive from the noun by the insertion of a verb.

Examples

(a) 7,2 βασιλεὺς ἐγένοτο Σαρδίων

(b) 184, - τῆς δὲ Βαβυλῶνος ταύτης πολλοί μὲν καὶ καὶ ἄλλοι ἐγένοτο βασιλέες

Statistics
split geographic proper nouns 3 (6.67%)
unsplit geographic proper nouns 42 (93.33%)
total 45
average 22.5
chi square 33.80

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the combination of geographic proper noun genitive and noun is normally unsplit.
8.50 The splitting of the ethnic adjective genitive from the noun by the insertion of a verb or verb phrase.

Examples

(a) 185,1 τὴν Μήδων ἀρχὴν

13,1 βασιλέα εἶναι Λυδῶν

(β) 51,3 Ἀκεδαμιονίων φαμέγων εἶναι ἀνάθημα

Statistics

split ethnic adjective 6 (7.32%)
unsplit ethnic adjective 76 (92.68%)
total 82
average 41
chi square 59.76

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the combination of ethnic adjective genitive and noun is normally unsplit.

8.51 The splitting of the common noun genitive from the common noun by the insertion of verbs, verb phrases, nouns, demonstratives and adverbs.

Examples

(a) 4,2 ἀνόρην ἀδίκων νομίζειν ἔργον εἶναι

6,3 καταστροφή ἔγενετο τῶν κολίων

(β) 17,3 ἐπέστης μὴ εἶναι ἔργον

178,2 τὸ μὲν νῦν μέγας τοσοῦτον ἔστι τοῦ ἐκτεας
Statistics

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<td>split genitives</td>
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<tr>
<td>unsplit genitives</td>
<td>221 (92.86%)</td>
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<tr>
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<td>238</td>
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<td>average</td>
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<td>174.86</td>
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Conclusion

The value of chi square is significant; the null hypothesis is rejected; the combination of common noun genitive and common noun is normally unsplit.

8.52 The splitting of the genitive word from the substantivised adjectival by the insertion of a verb, verb phrase or personal pronoun.

Examples

(a) 86,5 τῆς δὲ πυρῆς ἡ ἀμένης καίεσθαι τὰ περιέσχατα
     48,1 ἡκαστα ἀναπτύσσων ἑπόρα τῶν συγγραμμάτων

(b) 11,1 οὐδὲν δοξέων αὐτήν τῶν πρηκθέντων

(γ) 120,3 τῶν λογίων ἐνίαν ἐνία
Statistics
split genitive words 8 (8.08%)
unsplit genitive words 91 (91.92%)
total 99
average 49.5
chi square 69.59

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the combination of genitive word and substantivised adjectival is normally unsplit.

8.53 The splitting of the common noun from the proper noun in apposition by the insertion of an enclitic or verb phrase or noun.

Examples

(a) 105,1 Ψαμμήτιχος οφεις Αλγυκτον βασιλεὺς

(β) 111,5 Μανδάνης τε εἰς παῖς τῆς 'Ασινάγεως θυγατρὸς καὶ Καμβύσεως τοῦ Κύρον.

(γ) 91,6 'Αστυάγεως θυγάτηρ τοῦ Μῆδων βασιλέως

Statistics
split appositions 4 (5%)
unsplit appositions 76 (95%)
total 80
average 40
chi square 64.80
Conclusion

The value of chi square is significant; the null hypothesis is rejected; the apposition of common noun and proper noun is normally unsplit.

(C) The Adjective Phrase

8.54 The splitting of the genitive standard from the comparative by the insertion of a verb or verb phrase.

Examples

(a) 126,6 Ἄρα ἐναὶ οἷ φαυλοτέρους
    204,2 πλέον τι ἐναὶ ἀνθρώπου

(b) 60,3 τοῦ βαρβάρου ἣνεος τὸ Ἐλληνικὸν ἔδυ
    καὶ δεξιώτερον

Statistics

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<td>12.5</td>
</tr>
<tr>
<td>chi square</td>
<td>6.76</td>
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</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the combination of genitive standard and comparative is normally unsplit.
8.55 The splitting of the genitive standard from the superlative by the insertion of a verb or verb phrase or proper noun or demonstrative and enclitic.

Examples

(a) 30,2 πάντων εὔδεκ αλβιώτατον
111,3 θηριωδεστάτον ειη τῶν ὄρεων

(b) 67,5 τῶν ἀστῶν ἔξισταν ἐξ τῶν ἵππεων αἰει
οἱ πρεσβύτατοι
203,1 εὐρυτάτη ἐστι σύρῃ ἐμφυτῆς

(γ) 209,2 ἢν τῶν παιδών άνρεστὸς πρεσβύτατος

(δ) 214,5 καλλαί λόγων λεγομένων οὗτοι μοι ὁ πιθανώτατος
εἰρηται.

Statistics

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<tbody>
<tr>
<td>split standard</td>
<td>12 (19.35%)</td>
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<tr>
<td>unsplit standard</td>
<td>50 (80.65%)</td>
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</tr>
<tr>
<td>total</td>
<td>62</td>
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<tr>
<td>average</td>
<td>31</td>
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<tr>
<td>chi square</td>
<td>23.29</td>
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</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the combination of genitive standard and superlative is normally unsplit.

8.56 The splitting of the accusative or dative of measure from the comparative or superlative by the insertion of verbs or verb phrases.
Examples

(α) 98,4 τοις προμαχασμένοι μονύμνεσθε ὥσπερ ὑψηλότερος

(β) 134,1 πολλῷ ἐν εἰδέοτερος ὁ γεννήστερος

(γ) 143,2 πολλῷ δὴ ἢ την ἀδηλέστατον

Statistics

split accusative or dative of measure 4 (20%)
unsplit accusative or dative of measure 16 (80%)
total 20
average 10
chi square 7.20

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the combination of the accusative or dative of measure with the comparative or superlative is normally unsplit.

8.57 The splitting of the genitive modifier from the adjective by the insertion of a verb or verb phrase.

Examples

(α) 192,4 τῶν ἀλλων ἀνθρώπων ἀντιλείπει
187,5 ἀκληπτός τε ἐκ τῶν χρημάτων

(β) 1,1 αὐτίνους ἡμέρας γενέσθαι τῆς διαφορῆς
Statistics
split genitive modifiers 5 (33.33%)
unsplit genitive modifiers 10 (66.66%)
total 15
average 7.5
chi square 1.67

Conclusion
The value of chi square is not significant; the null hypothesis is sustained; the combination of genitive modifier and adjective may be split or unsplit with equal frequency.

8.58 The splitting of the modal adverb from the adjective by the insertion of a verb or enclitic.

Examples

(a) 11,1 μάλιστα ὃποιος πιστοὺς ἔστητο
185,2 οὗτως ὃ ἔστησε σχολίων

(b) 189,2 οὗτως ὃς ἐσθενέα κοιήσειν

(γ) 33,2 κάρτα δὲ ἐμαθεὶς ἐίναι

Statistics
split modal adverb 5 (25%)
unsplit modal adverb 15 (75%)
total 20
average 10
chi square 5.00
Conclusion
The value of chi square is significant; the null hypothesis is rejected; the combination of modal adverb and adjective is normally unsplit.

8.59 The splitting of the accusative or dative of respect from adjectivals by the insertion of a verb, verb phrase, or noun.

Examples
(a) 170,3 τὸ ἀνέχαθεν γένος ἔόντος Φοίνικος

(β) 60,3 τοῖς πρώτοις ἀρχομένοις εἶναι Ἑλλήνων σοφίην

(γ) 50,3 σταθμὸν τάλαντα δέκα

Statistics

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<td>split accusative of respect</td>
<td>3 (11.54%)</td>
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<tr>
<td>unsplit accusative or dative of respect</td>
<td>23 (88.46%)</td>
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<td>15.38</td>
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Conclusion
The value of chi square is significant; the null hypothesis is rejected; the combination of accusative or dative of respect with adjectivals is normally unsplit.
(D) THE ADVERB PHRASE

8.60 The splitting of the adverb phrase with the genitive etc. by the insertion of verbs.

Examples

(a) 24,7 ἀνακώς δὲ ἔχειν τῶν πορεμέων

(b) 91,6 ἔνερθε ἐκὼν τοῖς ἀκασὶ

Statistics

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<tr>
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<td>20.83</td>
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</table>

Conclusion

The value of chi square is significant; the null hypothesis is sustained; the adverb phrase with the genitive is normally unsplit.

8.61 The splitting of the prepositional or postpositional phrase by the insertion of an enclitic pronoun or verb phrase.

Examples

(a) 108,2 ἐκ γύρο ὧν τῆς ὑπος

(b) 30,1 αὐτῶν δὴ ὧν τοῦτων καὶ τῆς θεωρίης ἐκδημήσας ὁ Σόλων ἐκνεχεν
### Statistics

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<td>Chi square</td>
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### Conclusion

The value of chi square is significant; the null hypothesis is rejected; the prepositional phrase is normally unsplit.

#### 8.62 Data have now been presented to illustrate Spaltung in the verb phrase, the noun phrase, the adjective phrase and the adverb phrase. Some rare examples of tmesis (splitting of the compound word) have also been brought forward. Syntactic split has been shown to be so pervasive that it would seem reasonable to conclude that most if not all modifier/head constructions are liable to undergo it.

#### 8.63 A striking feature of the examples is that when an inflected element is inserted it is the verb, especially the main verb, which is the preferred wedge. This fact testifies to the great mobility of the verb in surface syntax. It also supports the view that in Greek the main verb is not stressed; for if it were its intrusion into lower level constructions would be felt as a rude interruption. A perceptible accent on the verb would also tend to inhibit its mobility and drive it towards the front of the sentence. (Cf. Chapter XI).
A careful scrutiny of the examples will show that one significant restriction is normally upheld. It may be formulated as follows: Elements which carry the same inflectional categories as either the modifier or the head of the construction eligible for split are not permissible as wedges.

Unfortunately there are a few exceptions to this rule. The exceptions all occur in noun phrases and adjective phrases. The relevant material is quoted above as follows:

8.51 (β) 178,2 (noun phrase)
8.51 (β) 216,4 (noun phrase)
8.54 (β) 60,3 (adjective phrase)
8.55 (γ) 209,2 (adjective phrase)
8.56 (β) 134,1 (adjective phrase)
8.58 (β) 189,2 (adjective phrase)
8.59 (γ) 50,3 (adjective phrase)

All the examples except the last are associated with equational constructions. The reasons for this are not clear. Since no other special conditions can be identified it becomes necessary to modify the rule to accommodate the exceptions. This can be done by making the restriction include not only inflectional categories but also syntactic function. The reformulated rule follows:

Elements which carry the same inflectional categories and syntactic function as either the modifier or the head of the eligible construction are not permissible as wedges.
8.68 Due to this modification of the rule the abbreviation ICATS used in chapter XII may now be read as: "inflectional categories and syntactic function."

It should be remembered nevertheless that in most instances of split it is the inflectional morphology which prevents semantic confusion.

8.69 It is also probable that in general wedge material becomes less acceptable as it increases in length. But it is difficult to specify an upper limit because of the parallelism with parentheses which are sometimes remarkably long.

8.70 Finally, the statistics in this chapter have a clear message to communicate. Almost without exception the split form of each construction is much rarer than its unsplit counterpart. Spaltung is clearly not normal. It is best regarded as a stylistic alternative which can be invoked, but only within certain statistical limits. How this situation may be interpreted will be shown in the chapter which follows.
CHAPTER IX

THEORETICAL IMPLICATIONS OF SYNTACTIC SPLIT

9.1 Under normal conditions in natural languages modifiers are placed adjacent to their heads or are separated from them only by other modifiers which are attached to the same head. One might say that modifiers are drawn towards their heads by a kind of centripetal force. But in Greek, as has been shown, modifiers may, on occasion, be separated from their heads. How is this situation to be explained?

9.2 It has already been argued in chapter VI that the Greek sentence exhibits a polarity with regard to word order. The front of the sentence is positively charged and the back of the sentence is charged negatively.

9.3 This theory, in the form proposed, is adequate to account for syntactic split. One need only make the supposition that modifiers are charged positively or negatively with some independence of their heads. It will then be clear that positively charged modifiers will be attracted towards the back of the sentence with a consequent tendency to separation from their heads. Negatively charged modifiers, on the contrary, will be drawn towards the front of the sentence with a tendency to separation from their heads also.

9.4 The picture which emerges, therefore, is that of elements subject to conflicting forces. All modifiers are drawn towards their heads; but they are also drawn
away from their heads and towards the front or back of the sentence.

9.5 A further question arises. Why does the centrifugal tendency sometimes override the centripetal tendency?

9.6 The answer to this question again requires the invocation of author intervention. The normal order, the unmarked order, is that in which modifiers are united with their heads. But when the author wishes to introduce additional stylistic colour he "floats" the modifier, and frees it from its head. The result is a marked sequence which produces heightened literary style. Here, as with inversion, the use of a stylistically marked word order produces a tension in the sentence. Again there is the implicit feeling that the word-sequence has been manipulated and that reversion to unmarked order would release the tension of the prose. Again the author has a degree of arbitrary control. As in chapter VI the condition of a given passage of text can be statistically described. By calculating the number of split modifiers and dividing it by the number of verbs a decimal fraction is obtained which quantifies the degree of Spaltung.

9.7 The statistic so obtained, which will be referred to here as the S-Index or Spaltung-Index, may be used to compare the use of marked word order in two passages of Herodotus, the first written in the heightened emotional style which is found in dramatic
passages of direct speech, the second in a simpler, more straightforward narrative style. Inserted material has been underlined.

Passage (1)

38,lf. ὃ παῦ, οὕτε δειλίνην οὕτε ἄλλο ὁδὸν ἄϕαρ

Passage (2)

161,-Χτοὶ μὲν νὰν Πακτύνην ἐξέδωσαν, Μαξάρης δὲ μετὰ τὰτα ἐστρατεύετο ἐπὶ τοὺς συμπολιορχῆσαντας ἰδᾶλον, καὶ τοῦτο μὲν Πριπνέας ἐξηνοροποδίσατο, τοῦτο
9.8 The difference between the passages cited is sufficiently clear. On a wider scale the S-Index, like the I-Index, could be used to quantify word order differences between different authors, i.e. as a descriptor of idiolect.

9.9 An interesting consequence follows from the finding that both inversion of modifier/head sequences and syntactic split can be measured by indices such as the I-Index and the S-Index. Whereas style has traditionally been regarded as a matter of varieties (poetic, prosaic, solemn etc.) the use of stylistic indices suggests not a qualitative but a quantitative concept of style. In other words one need not describe a given text as written in such and such a style; instead it is possible to place the text on a sliding scale, and to specify not what kind of style is being used, but how much style is being used. Style thus becomes a matter of degree of complexity and can be measured with reference to the appropriate parameters.
A quantitative concept of style is particularly appropriate in the era of the rise of transformational grammar; for most aspects of the surface complexity of texts are describable in terms of the application of optional transformational rules. Such rules are applied with different frequency in different texts. In general the more applications of transformational rules the more complex the style. Or, let it be said, the more applications of transformational rules the more "style" there is in the passage. In other words it is now possible to equate "style" with "complexity of surface structure". And such complexity can now be measured.
10.1 Dover (1960) followed by Morin (1961) has presented a case for the existence of lexical determinants. To be precise, these scholars have made the claim that certain words referred to by them as 'preferential' tend to occur at the front of their sentence or clause. The list as it appears in Dover (1960: 20-23) is as follows:

(i) Interrogatives
(ii) Negatives
(iii) The demonstrative pronoun ὦ
(iv) Words which relate successive clauses as a whole one to another, e.g. κρώτων, ἔκειτα, εἶνα, ὦμος

(v) ἐγώ, ἐμέ, ἐμοῦ, ἐμοί (ἐγώικε etc.)
(vi) ὦν, ἡμᾶς, ἡμεῖς, in the nominative case.
(vii) ὡςος, τοσοῦτος, τοτοῦτος, τῆλεκοῦτος (οὕτως)
(viii) ὡς(ος) (ὁπτωσι)
(ix) ἐκεῖνος
(x) ὃσῳ, ἐντοῦτοι, ἐντυπούσι, ἐντεῦθεν
(xi) ἐκεῖ, ἐκεῖνος, ἐκεῖθεν
(xii) νῦν (νυνί, νυγνῆ)
(xiii) τότε
(xiv) αὐτός = 'self'
(xv) ὦ αὐτός
Before proceeding to a critical discussion of Dover's list it will be useful to apply the chi square test to each word or word group in order to determine whether it does show a tendency towards the front of the clause or not. The null hypothesis will of course be that the words tested precede and follow the verb with approximately equal frequency. The data will be taken from main clauses in Herodotus I. In the examples the words which are being tested will be underlined.

10.3 (i) The position of the interrogative in relation to the verb in main clauses.

Examples

(a) 8,3 τίνα λέγεις λόγον ὅθεν ἰδιέα

(b) 30,4 κοίλῃ δὴ κρίνεις Τέλλου εἶναι ὀλβιώτατον:

Statistics

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<td>total</td>
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average 6
chi square 10.08

Conclusion
The value of chi square is significant; the null hypothesis is rejected; the interrogative normally precedes the verb in main clauses.

10.4 (ii) The position of the negatives ὡθ(κ) and μὴ in relation to the verb in main clauses.

Examples

(a) 11.4 ὡθ ὄν καὶ ἔτι ἔτεθε 
(b) 85.4 ὄνθες ἢ, μὴ κτείνε ἴποτον

Statistics

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<tr>
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Conclusion
The value of chi square is significant; the null hypothesis is rejected; the negative normally precedes the verb in main clauses.

10.5 (iii) The position of the demonstrative pronoun ὁ in relation to the verb in main clauses.
Examples

(a) 87.3 ὁ δὲ εἶπε
51.1 ἀπέστημε ἐς Δελφοὺς καὶ τάδε ἀλλα ἡμα τοῖς

Statistics

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<td>111.29</td>
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</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; the demonstrative ὁ normally precedes the verb in main clauses.

10.6 (iv) The position of words which relate successive clauses as a whole to one another in relation to the verb in main clauses.

Examples

(a) 79.2 ὡς οἱ παρὰ δόξαν ἔσχε τὰ πρῆγματα ἢ ὡς αὐτῶς κατεδόξας, ὡμοὶ τοὺς Λαυδοὺς ἔξηγε ἐς μάχην

(β) 118.1 πρῶτα μέν, κατὰ περ ἡκουσε αὐτῶς πρὸς τοῦ βουκόλου τὸ πρῆγμα, πάλιν ἀπηγέετο τῷ
The value of chi square is significant; the null hypothesis is rejected; the relator normally precedes the verb in main clauses.

10.7 (v) The position of ἐγώ etc. in relation to the verb in main clauses.

Examples

(a) 8,4 ἐγώ δὲ κείθομαι ἐξείλημεν εἴναι πασέων γυναίκων καλλίστην
    110,3 ἐπορᾶν δὲ ἐκκείμενον τέταγμα ἐγώ
Statistics

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<td>4 (12.5%)</td>
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</table>

chi square = 5.79

Conclusion

The value of chi square is significant; the null hypothesis is rejected; ἐστι etc. normally precedes the verb in main clauses.

10.8 (vi) The position of σὺ etc. in relation to the verb in main clauses.

Examples

(a) 124,1 σὺ νυν Ἀκτυάχα τὸν οἰκετόν φοινικὰ τεῦχει.
    45,2 εἶξ ὡς σὺ σὺ μου τοῦδε τοῦ κακοῦ οὐδιὸς

Statistics

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</table>

chi square = 5.79

Conclusion

The value of chi square is significant; the null hypothesis is rejected; σὺ etc. normally precedes the verb in main clauses.
10.9 (vii) The position of ὅτος etc. in relation to the verb in main clauses. 

Examples

(a) 5,3 ταῦτα μέν νυν Πέρσαι τε καὶ Ὑπαντείκες λέγοντι
     2,1 εἴησαν δ᾿ ὧν ὅτοι Κρήτης.

Statistics

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Conclusion

The value of chi square is significant; the null hypothesis is rejected; ὅτος etc. normally precedes the verb in main clauses.

10.10 (viii) The position of ὅτως etc. in relation to the verb in main clauses.

Examples

(a) 14,1 τὴν μὲν ὅτι τυραννίδα ὅτως ἔσχον οἱ Μερνάδαι
     13,2 ἀνετέλε τῇ τὸ χρηστήριον καὶ ἐβασίλευσε ὅτως ἙΛυκῆς.
Statistics
οὗτος etc. precedes 52 (89.66%)
οὗτος etc. follows 6 (10.34%)
total 58
average 29
chi square 36.48

Conclusion
The value of chi square is significant; the null
hypothesis is rejected; οὗτος etc. normally precedes
the verb in main clauses.

10.11 (ix) The position of ἐκεῖνος in relation
to the verb in main clauses.

Examples

(a) 100,1 καὶ ἐκεῖνος διακρίνων τὰς ταφερομένας
ἐκπέμπεσε.
32,6 ὥς δὲ τοιοῦτο προέχει ἐκεῖνος

Statistics
ἐκεῖνος precedes 7 (70%)
ἐκεῖνος follows 3 (30%)
total 10
average 5
chi square 0.90

Conclusion
The value of chi square is not significant; the null
hypothesis is sustained; ἐκεῖνος may precede or follow
the verb in main clauses with equal frequency.
10.12 (x) The position of ἐνταῦθα etc. in relation to the verb in main clauses. (ὁσπὸρο does not occur in Herodotus I).

**Examples**

(a) 48,1 ὡς δὲ καὶ ἄλλοι οἱ περιπεμφθέντες παρήσων φέροντες τὸν χρηματίζ, ἐνταῦθα ὁ Κροῖσος ἔκαστα ἀνακτόρων ἐκόρα τῶν συγγραμμάτων.

95,1 ἐπιθυμηται ὡς ἢ τὸ ἐνθέτευν ἢμῖν ὁ λόγος τῶν τὸν Ἁριστον ὡς ὧν τὴν Κροῖσον ἀρχὴν κατέλειβα

**Statistics**

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**Conclusion**

The value of chi square is significant; the null hypothesis is rejected; ἐνταῦθα etc. normally precedes the verb in main clauses.

10.13 (xi) The position of ἔκει in relation to the verb in main clauses. (ἐκεῖσος and ἔκειτεν do not occur in main clauses in Herodotus I).
Example

(a) 121, εἴλαθαν δὲ ἔξερσε κατέρα τε καὶ μητέρα εὑρήσεις

Statistics

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<td>average</td>
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<tr>
<td>chi square</td>
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</table>

Conclusion

The number of examples is too small to permit the calculation of a valid chi square. No conclusion can be drawn.

10.14 (xii) The position of ἔνν ἀν. etc. in relation to the verb in main clauses.

Example

(a) 30,2 ἔνν ἔ

Statistics

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Conclusion

The value of chi square is significant; the null hypothesis is rejected; etc. normally precedes the verb in main clauses.

10.15 (xiii) The position of τότε in relation to the verb in main clauses.

Example

(a) 11.1 τότε μὲν δὴ οὗτος οὐδὲν δηλώσασα ἰσχύειν εἶχε.

Statistics

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Conclusion

The value of chi square is significant; the null hypothesis is rejected; τότε normally precedes the verb in main clauses.

10.16 (xiv) The position of αὐτός "self" in relation to the verb in main clauses.

Examples

(a) 79,2 αὐτός ἀγγελος Κροίοφ ἔληλυθε
    48,2 ὃμοι ἐπεξε, αὐτός ἐν λέβητι χαλκεῷ
Statistics

αὐτός - "self" precedes 29 (82.86%)
αὐτός "self" follows 6 (17.14%)
total 35
average 17.5
chi square 15.11

Conclusion

The value of chi square is significant; the null hypothesis is rejected; αὐτός "self" normally precedes the verb in main clauses.

10.17 (xv) The position of ὅ αὐτός in relation to the verb in main clauses.

Examples

(a) 159,2 ὅ ἄ τίς τῶν αὐτῶν σφί χρησιμόν ἔφασεν

111,1 ἦσ τῇ ἄ τῃ ὸπίσω ὦδὸν

Statistics

ὁ αὐτός precedes 16 (66.66%)
ὁ αὐτός follows 8 (33.33%)
total 24
average 12
chi square 2.67

Conclusion

The value of chi square is not significant; the null hypothesis is sustained; ὅ αὐτός may precede or follow the verb in main clauses with approximately equal frequency.
10.18 (xvi) The position of ἄλλος in relation to the verb in main clauses.

Examples

(a) 62,1 ἄλλοι τε ἐκ τῶν δήμων προσέρχεσαν

46,3 παρὰ Ἀμμων ἀπέστειλε ἄλλους χρησιμένους

Statistics

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ἄλλος precedes</td>
<td>36 (55.38%)</td>
<td></td>
</tr>
<tr>
<td>ἄλλος follows</td>
<td>29 (44.62%)</td>
<td></td>
</tr>
<tr>
<td>total</td>
<td>65</td>
<td></td>
</tr>
<tr>
<td>average</td>
<td>32.5</td>
<td></td>
</tr>
<tr>
<td>chi square</td>
<td>0.75</td>
<td></td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is not significant; the null hypothesis is sustained; ἄλλος may precede or follow the verb in main clauses with approximately equal frequency.

10.19 (xvii) The position of ἐτερος in relation to the verb in main clauses.

Examples

(a) 181,1 ἐτερος ὡς ἐσώθην τεῖχος περιέχει

134,1 προσκύνητων προσκυνεῖ τὸν ἐτερος
Statistics

ητερος precedes 4 (57.14%)
ητερος follows 3 (42.86%)
total 7
average 3.5
chi square -

Conclusion
The number of examples is too small for the calculation of a valid chi square; no conclusion can be drawn.

10.20 (xviii) The position of άμφοτεροι in relation to the verb in main clauses.
Examples

(a) 31,2 δεδομότας τε άμφοτεροι ήμοιως ἦσαν.

5,4 ἐπιμνήσας άμφοτέρων ήμοιως

Statistics

άμφοτεροι precedes 6 (60%)
άμφοτεροι follows 4 (40%)
total 10
average 5
chi square 0.40

Conclusion
The value of chi square is not significant; the null hypothesis is sustained; άμφοτεροι may precede or follow the verb in main clauses with approximately equal frequency.
10.21 (xix) The position of πολύς etc. in relation to the verb in main clauses.

Examples

(a) 5,4 τα πολλα αυτων ομιχρα γηγονε.
   14,1 έστι οι πλειστα εν Δελφοις.

Statistics

<table>
<thead>
<tr>
<th></th>
<th>etc. precedes</th>
<th>etc. follows</th>
</tr>
</thead>
<tbody>
<tr>
<td>πολύς</td>
<td>31 (59.62%)</td>
<td>21 (40.38%)</td>
</tr>
<tr>
<td>total</td>
<td>52</td>
<td></td>
</tr>
<tr>
<td>average</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>chi square</td>
<td>1.92</td>
<td></td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is not significant; the null hypothesis is sustained; πολύς etc. may precede or follow the verb in main clauses with approximately equal frequency.

10.22 (xx) The position of πολλακις in relation to the verb in main clauses.

No examples occur in Herodotus I.

10.23 (xxi) The position of εις in relation to the verb in main clauses.

Example

(a) 142,4 ή δε μικ εν τη ηπειρω ιδρυται, 'Ερυθραί.
Statistics

ôôô etc. precedes 10 (100%)
ôôô etc. follows 0 (0%)
total 10
average 5
chi square 10.00

Conclusion

The value of chi square is significant; the null hypothesis is rejected; ôôô normally precedes the verb in main clauses.

10.24 (xxii) The position of ôôô etc. in relation to the verb in main clauses.

Examples

(a) 30,2 ἔρετο ὁ Κρονός τάδε

20,7 Μιλήσει τῇ τάδε προστιθέτοι τούτοισι

Statistics

ôôô etc. precedes 30 (27.03%)
ôôô etc. follows 81 (72.97%)
total 111
average 55.5
chi square 23.43
Conclusion

The value of chi square is significant; the null hypothesis is rejected; κἀκε etc. normally follows (not precedes) the verb in main clauses.

10.25 (xxiii) The position of κἀκε etc. in relation to the verb in main clauses.

Examples

(a) 6,3 κἀκες Ἐλληνες ἦσαν ἐλεύθεροι.

45,2 ἐξει, ὦ ξεινη, παρὰ σεῦ κἀκεαν τὴν δίκην

(β) 120,6 οὖν κἀκεσκ, ἦμεν σέο τε καὶ τῆς σῆς ἀρχῆς προσκέεον ἐστί

Statistics

κἀκε etc. precedes 31 (45.59%)
κἀκε etc. follows 37 (54.41%)
total 68
average 34
chi square 0.53

Conclusion

The value of chi square is not significant; the null hypothesis is sustained; κἀκε etc. may precede or follow the verb in main clauses with approximately equal frequency.

10.26 Now that the data have been tested statistically it is necessary to eliminate a number of the entries on Dover's list. Thus (xi) ἔκει etc., (xvii) ἔτερος, and (xx) πολλάκις do not provide sufficient examples
for a valid statistical test by chi square. More
significant is the elimination of (ix) ἐκεῖνος,
(xv) ὁ ἀντίς, (xvi) ἔλλας, (xviii) ἄμφοτεροι,
(xix) καλός etc. and (xxiii) κῦς etc. all of which
appear to be equally frequent before or after the verb
and do not reveal any measurable tendency to move
towards the front, rather than the back of the sentence.
The remaining items tested do favour the front position
(with the exception of (xxii), ὅδε etc., which is
evidently attracted towards the back of the sentence.)
The crucial question must now be put. Do the data
provide sufficient evidence to support a theory of
lexical determinants?

10.27 Dover does not state very explicitly what
he means by a "lexical" determinant, but if his view is
to be taken seriously it presumably makes the claim
that individual words carry their own order properties
regardless of syntax. I.e. each word is a law unto
itself. In theoretical terms the lexical determinant
hypothesis is less attractive than the syntactic
determinant hypothesis because it provides a lower level
of generalisation: for syntactic functions dominate a
great range of lexical material. It is therefore desirable
to undertake a critical review of the lexical items
which remain in order to ascertain whether their
sequential behaviour can be explained in syntactical
terms. Needless to say if a syntactic explanation is
possible the theory of lexical determinants will be
abandoned.
10.28 First of all it is convenient to examine nos. (i) and (ii), the interrogative and negative. These words are not really normal lexical items but are better regarded as syntactic markers. Viewed within the framework of transformational grammar they are grammatical elements which are not taken from the lexicon but are introduced by optional transformational rules which apply immediately after the deep structure has been generated.

10.29 To convert a sentence or clause to the interrogative mode it is necessary first of all to replace the stem of a selected word in a verbal modifier by the interrogative. This can be achieved by a rule of the form:

\[
\text{IF} (\text{CONDITION}) \quad \text{THEN} \\
\text{INTERROGATIVISE} (\text{WORD}^J \text{ OF VMOD}^I)
\]

The conditions under which the rule applies will be dealt with in chapter XII (paragraphs 15 and 29.4)). The next step is the setting of the subscript with a view to later sequencing. In the case of main clauses the subscript will be set at a real number between zero and -100, symbolised here by \( \Phi \).

\[
\text{SET} (\text{SUBS}^I = \Phi)
\]

In subordinate clauses, however, the subscript must be set at -100:

\[
\text{SET} (\text{SUBS}^I = -100)
\]

These preliminaries make it possible for the interrogatives to be processed later by the rule which sequences subscripts.
10.30 The negative is produced by means of transformations which insert ὧν or ἦτε to the left of the verb. E.g.

ONEGATIVISE (CLAUSE)
inserts ὧν to the left of the verb and

MNEGATIVISE (CLAUSE)
inserts ἦτε to the left of the verb. When a clause introduced by ἦτε is required additional transformations are needed to move ἦτε to the front of the sentence and to delete the subordinate conjunction:

IF (NOT # + ἦτε) THEN
FRONT (#)
UNTIL (# + ἦτε)
DELETE (SCONJ)

10.31 Since vocabulary is not normally introduced in this way and at this level by transformational rules it seems reasonable to regard both interrogative and negative as syntactic rather than lexical entities.

10.32 The next category to be dealt with is that of the relators: "words which relate successive clauses as a whole one to another." Dover does not provide a complete list; but the examples which he quotes (ὥς ὀν, ἐπειτα, ἓτα, ὅμως) make it clear that this is not really a lexical category but a collection of semantically heterogeneous material. What these words have in common is not similarity of meaning but identical syntactic function. To deal with the relators it is necessary to set up an optional transformational rule which can be activated if a suitable adverbial occurs
in the clause. Take e.g. the rule:

\[
\text{IF}(\text{VMOD}^I = \text{RADVERBIAL}) \text{ THEN } \\
\text{RELATORISE(VMOD}^I) \text{ AND } \\
\text{SET(SUBS}^I = -99.99)
\]

The effect of this is to label the selected adverbial as a relator and to assign it a subscript of -99.99 which will ensure that it is placed near the front of the sentence and immediately after any element with a subscript of -100. These operations can hardly be termed "lexical".

10.33 In reviewing Dover's "preferentials" the relators are of special importance because it is probable that some of his other items which appear further down the list may also on occasion be assigned the RELT function and appear at the front of the sentence for this reason. So for example the adverbs ὄχι, ἐνπαθος etc., νῦν etc., and τότε also often perform the function of relating successive sentences and marking stages in the narrative.

10.34 It remains to consider the demonstratives ὁ, ὄχι etc., ὁδε etc., together with ὁντός "self", ἐδε and the personal pronouns ἔγω etc. and ὅ etc. The first point which must be made here is that when nouns and other nominals are found naturally in a text the majority of occurrences derive from the SUBJ function. Thus it is evident from an examination of the statistics in chapter V that examples of SUBJ are more frequent than DOBJ or IOBJ or any other syntactic
function governed by the verb. In Herodotus I the
relevant figures are:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>SUBJ</td>
<td>2299 occurrences</td>
</tr>
<tr>
<td>DOBJ</td>
<td>1444 occurrences</td>
</tr>
<tr>
<td>IOBJ</td>
<td>448 occurrences</td>
</tr>
</tbody>
</table>

10.35 It follows that for nominal words taken at
random the majority of occurrences will be as subject
of a verb, with the result that placement before the
verb will predominate. In this connection it will be
noticed that ὁ, ἔμεντι, ἔμεντο, item (vi) on
Dover's list, specifically excludes the oblique cases.

10.36 Another relevant consideration is that in
Greek it is not normal for a verb to appear at the front
of its sentence or clause in the surface structure. The
figures for all verbs with one or more modifiers are
as follows:

(1) Main clauses:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>initial verbs</td>
<td>246 (12.88%)</td>
</tr>
<tr>
<td>non-initial verbs</td>
<td>1644 (87.12%)</td>
</tr>
<tr>
<td>total</td>
<td>1910</td>
</tr>
<tr>
<td>average</td>
<td>955</td>
</tr>
<tr>
<td>chi square</td>
<td>1052.74</td>
</tr>
</tbody>
</table>

(2) Subordinate clauses:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>initial verbs</td>
<td>251 (27.31%)</td>
</tr>
<tr>
<td>non-initial verbs</td>
<td>668 (72.69%)</td>
</tr>
<tr>
<td>total</td>
<td>919</td>
</tr>
<tr>
<td>average</td>
<td>459.5</td>
</tr>
<tr>
<td>chi square</td>
<td>189.22</td>
</tr>
</tbody>
</table>
(3) Participial constructions:
initial verbs 458 (28.64%)
non-initial verbs 1141 (71.36%)
total 1599
average 799.5
chi square 291.74

(4) Infinitival constructions:
initial verbs 100 (12.11%)
non-initial verbs 726 (87.89%)
total 826
average 413
chi square 474.43

Conclusion
The values of chi square are significant for all four
clause types; the verb is normally preceded by one or
more modifiers (usually NPs).

10.37 The implication of this conclusion is that
if a range of nominals was taken at random a majority
of them would probably show some preference for the
position preceding the verb. So the behaviour of
Dover's and Morin's "preferentials" does not on the
whole constitute good evidence for lexical determinants.
To make a plausible case for these it would be necessary
to demonstrate that a range of words showed a tendency,
not simply to appear near the front of the sentence,
but to occur normally in positions contrary to those
associated with their syntactic functions. E.g. if the
nominatives σύ, ἡμετέρος and ἡμετέρος normally followed
the verb, in spite of being derived from a subject
function, this would be significant and might support a
theory of lexical determinants. But nothing of this kind has been demonstrated.

10.38 Some comments must now be made about the behaviour of certain demonstratives. Particularly aberrant is the placement of ὁδὲ etc., which shows a strong propensity to follow the verb and move towards the end of the sentence. The reason for this is obvious. For ὁδὲ, in most instances, refers forward to the sentence which follows. In other words ὁδὲ is prophoric. Conversely the demonstratives ὁ and ὃς ὅς etc. are anaphoric; i.e. for the most part they refer back to the preceding sentence. How can this phenomenon be dealt with in a modern syntactic description of Greek? The simplest solution is to posit transformational rules which move anaphorics towards the front of the sentence and move prophorics towards the back of the sentence:

(a) IF (NOT # + ANAPHORIC) THEN FRONT (ANAPHORIC)
(b) IF (NOT PROPHORIC + #) THEN BACK (PROPHORIC)

The same rules may operate one or more times depending on circumstances.

10.39 Finally a peculiarity concerning ὃς ὅς which deserves mention. Powell in his entry for ὃς AI2 lists 82 examples where ὃς is found with asyndeton, i.e. deletion of the coordinate conjunction. Of these no less that 80 show ὃς at the front of the sentence.
Statistics

<table>
<thead>
<tr>
<th>Fronted</th>
<th>οὐτος</th>
<th>80 (97.56%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unfronted</td>
<td>οὐτος</td>
<td>2 (2.44%)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>82</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td>41</td>
</tr>
<tr>
<td>Chi Square</td>
<td></td>
<td>74.20</td>
</tr>
</tbody>
</table>

Conclusion

The value of chi square is significant; the null hypothesis is rejected; οὐτος is normally fronted when it occurs with asyndeton.

10.40 The appropriate explanation here appears to be that when οὐτος reaches the front of its sentence an optional rule may be used to delete the conjunction: IF(# + οὐτος) THEN DELETE(MCONJ).

10.41 Before closing this chapter it is not without interest to note that the list of words studied by Dover and Morin is not in any way a random or representative selection of lexical items. In fact the list is dominated by words which may be grouped, for the most part, under grammatical headings:

(1) demonstratives: e.g. οὐτος
(2) personal pronouns: e.g. ἐγὼ
(3) quasi-pronominals: e.g. ἄλλος.

These are not "full" words but are better regarded as "empty" words which hover on the boundary between lexicon and syntax.
10.42 The general conclusion of the chapter is that a theory of lexical determinants is not really necessary to explain the order behaviour of Dover and Morin's "preferentials." The theory of syntactic determinants is theoretically preferable and also more plausible in the light of the data.
CHAPTER XI

THE FRONT OF THE SENTENCE AND FRONTING

11.1 As has been stated already the Greek sentence has two poles or termini, its beginning and its end. But there is some reason to believe that of the two the beginning is the more important.

11.2 From the viewpoint of information theory a message consists of a sequence of units of information. A consequence of linear temporal presentation is that the first unit of the string is the most unpredictable and has the highest information value while successive elements as the message proceeds become increasingly more predictable and redundant.

11.3 Obviously an author writing Greek may intuitively exploit such a situation by placing more important items before those that are less important. In this way he exploits the law of information theory. Practice of this kind has led to the opinion that in Greek the more emphatic words come first and that the Greek sentence "usually goes down-hill" (Bluck 1962: 119). Similar views have been stated by scholars such as Goodell (1890:27) Loepfe (1940:50f.) and Moorhouse (1959: 70). An illustration of this kind of descending arrangement may be seen in the first five words of the preface of Herodotus:

'Ἡροδότου Ἀλικαρνησσός ἱστορίας ἡκόπεξις ἢδε...
11.4 There are also other reasons for attributing special weight to the front of the Greek sentence, the most important being the likelihood that the front of the Greek sentence carried a sentence stress. The evidence is as follows:

(1) Emphasising particles such as μέν, ὅ, γάρ, δῶ etc. most often follow immediately on the front of the sentence.

(2) There is a tendency for enclitics to occupy the second position in the sentence (Delbruck 1893 - 1900: III, 47). This tendency is known as "Wackernagel's Law." Often both an enclitic or postpositive connective and an enclitic pronoun come together in the second position. When this occurs, the connective takes precedence and comes before the enclitic pronoun (Delbruck 1893 - 1900: III, 51).

11.5 From facts (1) and (2) it follows that the front of the Greek sentence carries a stress, for the placement of both enclitics and postpositives implies an expiratory accent on a preceding word: (Cf. Moorhouse 1959: 150f.).

11.6 To these indications may be added the position of the interrogative, which must have been stressed:

(3) The interrogative normally comes at the front of the sentence in Greek (Thomson 1939: 147); likewise the sentence negative, also presumably stressed:

(4) The sentence negative normally comes at the front of the sentence in Greek (Moorhouse 1959: 71).
11.7 Further evidence:

(5) The usually unaccented εἰμι and φημί are accented when they occur at the start of the sentence (Moorhouse 1959:22);

(6) When two items are singled out for antithesis in a μὲν ... δὲ construction, the items in question occur at the fronts of their sentences (Cf. Thomson 1939:147).

11.8 In the light of this information it would be reasonable to expect that material placed at the front of the Greek sentence should be emphatic. However, since the publication of Dover's book it is no longer possible to uncritically use the word emphasis in talking about Greek word order. For as Dover (1960:32f.) points out the word emphatic is ambiguous and may refer to either "words which are the focus of the speaker's emotion" or "words which are essential to the clarity of his argument." There are also other difficulties: "Emphasis is necessarily a matter of degree" and "To a remarkable extent, individuals may disagree about the location of 'emphasis' in a given passage of Greek". In the face of these problems Dover comes up with a new criterion which he regards as more objective.

11.9 According to Dover (1960: 34f) the primary determinant of Greek word order is that nuclei precede concomitants. By a nucleus (or logical predicate) he means that which is indispensable and unpredictable; by a concomitant (or logical subject) he means that which is dispensable or predictable.
11.10 He illustrates these distinctions by the analogy of a telegram. The logical predicate (nucleus) represents the words which would be expressed in sending a telegram; the logical subject (concomitant) represents what would be left out. From Dover's discussion it is evident that he is not concerned with syntax. He does not mean dispensable or predictable in a grammatical sense. The distinction he is making is based, not on formal criteria, but on meaning. He also distinguishes verbal from material context (Dover 1960:35): "Words are not dispensable or predictable solely by virtue of their relation to the verbal context; their relation to their material context is also relevant." By the material context he means the situation and circumstances in which a statement is made. In the case of continuous literary documents, however, the material context, in so far as it is given at all, is given by the meaning of the surrounding text. In fact it is reasonably clear from Dover's telegram analogy that the essence of his distinction is semantic. Thus Dover's logical subject (nucleus) refers to the core of meaning in a sentence which is essential to the understanding of that sentence and which cannot be predicted from the context, i.e. from the meaning of the sentences which precede.

11.11 What Dover apparently does not realise, however, is that his views about "logical" determinants imply a mechanism that is syntactic. For if essential items are to appear at the front of the sentence and non-essential items are to follow, this will require a
transformational shunting rule of the form:

\[ \text{IF}(X + Y) \text{ AND } \text{IF}(Y >> X) \text{ THEN } \text{FRONT}(Y); \]

where the sign \( >> \) is read as "is more essential than".

For the rule to become fully operational a definition of semantic units within the framework of a theory of semantics would also be required. But is the rule really necessary?

11.12 Whether such a rule is in fact necessary depends upon whether Dover's theory about "logical" determinants is true or false. The theory itself is attractive because it achieves a high level of generalisation, indeed a level of generalisation higher than that achieved by the syntactic determinants discussed in previous chapters. But is Dover's theory valid? In order to find an answer to this question it will be useful to consider some examples, and then to apply a statistical test. First the examples.

11.13 Examples of essential material

(a) 38,2 eίτε γάρ μοι μούγγος τυγχάνεις ἄν παῖς. 

(b) 10,2 καὶ ἡ γυνὴ ἔπορε μίν ἐξιόντα. 

(γ) 32,4 οὔτω ἄν, ὡς Κροίος, καὶ τοῦ οὐρανοῦ ἡμιφορή.

The examples show that essential material may be placed at the beginning, middle or end of the sentence.
Examples of redundant material

(a) 8,1 οὖσσος δὴ ὧν ὁ Κανδαύλης ἠράσθη τῆς ἐωτοῦ γυναιξάς, ἔρασθείς δὲ ἐνομιξέ οἱ εἶναι γυναῖκα πολλὸν πασέως καλλίστην.

(β) 23,- Περίανδρος δὲ ἦν Κυψέλου παῖς, οὖσσος ὁ τῷ Θρασυβούλῳ τὸ χρηστήριον μὴνες ἐτυράννενε δὲ ὁ Περίανδρος Κορίνθου

(γ) 64,2 πρὸς τε έτι τούτοις τὴν ἡσυχίαν δὴλον καθήρας ἐκ τῶν λογίων, καθήρας δὲ ἐδε

The examples show that redundant material may be placed at the beginning, middle or end of the sentence.

11.14 Another relevant consideration here is that some sentences consist entirely of essential matter, e.g.

(a) 32,9 πολλοὶς γὰρ δὴ ὑποδέξας δείλον ὁ θεὸς προρρίζους ἀνέτρεψε

Others, on the contrary, are entirely redundant, e.g.

(β) 46,3 ταῦτα μὲν νῦν τὰ Ἑλληνικὰ μαντήματα ἐς τὰ ἀπέκεμψε μαντευούμενος Κροίσος.

11.15 Furthermore, it is necessary to admit that it is not always a straightforward matter to divide sentences into essential and redundant parts. Essential matter, in
particular, can be very difficult to identify. Since redundant material is easier to isolate, the procedure adopted here for the purpose of testing Dover's theory statistically, has been to classify all clearly non-redundant material as essential. In this way the theory is given more than a fair chance.

11.16 The data used for the test consisted of a stratified sample of fifty sentences, one from each fourth chapter in Herodotus I. The front of each sentence was classified, wherever possible, according to the criterion stated above, as either essential or redundant. The statistical test applied was again the chi square. The null hypothesis tested was that essential and redundant material is equally frequent at the front of the sentence. The statistics follow:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>essential material at front</strong></td>
<td><strong>16 (37.21%)</strong></td>
</tr>
<tr>
<td><strong>redundant material at front</strong></td>
<td><strong>27 (62.79%)</strong></td>
</tr>
<tr>
<td><strong>total</strong></td>
<td><strong>43</strong></td>
</tr>
<tr>
<td><strong>average</strong></td>
<td><strong>21.5</strong></td>
</tr>
<tr>
<td><strong>chi square</strong></td>
<td><strong>2.81</strong></td>
</tr>
</tbody>
</table>

**Conclusion**

The value of chi square is not significant; the null hypothesis is sustained; essential and redundant material is equally frequent at the front of the sentence.
11.18 In the light of this conclusion Dover's theory of "logical" determinants must be rejected, at least in so far as the Greek of Herodotus is concerned.

11.19 This result is not really as surprising as at first sight it might seem. One need only consider the results attained in chapter V. In sentences with a transitive or intransitive verb the subject normally precedes the verb. Yet it is the verb which most often carries the essential meaning of the sentence. In continuous narrative the subject often remains the same in two or more successive sentences, i.e. the subject becomes redundant. The same is true of equational sentences where most of the meaning is carried by the complement, which normally follows the subject. Chapter V also established that quite a range of syntactic entities have claims on the front of the sentence. Once again it must be said that the primary determinants of word order in the Greek sentence are syntactic.

11.20 While the front of the sentence is under discussion it will be convenient to deal with another syntactic phenomenon associated with the front of the sentence, namely the mechanism of topicalisation. The topic of a sentence is that which the sentence is about — often but not always identifiable with the grammatical subject. Some languages have distinct grammatical forms for both subject and topic. E.g. Japanese indicates the subject by postposed ga and the topic by postposed wa. But in Greek there is no special form for the topic.
11.21 But when a speaker or writer of ancient Greek wishes to indicate that some word other than the subject is to be regarded as the topic of the sentence he moves the topic-word to the front. (Cf. Ammann 1924: 150).

Examples

(a) 80,4 κάμηλον ἦπερος φοβεῖται καὶ οὕτω διέχεται οὔτε τὴν ἱδέην αὐτῆς ὀρέων οὔτε τὴν ὀδύμην ὀσφραινόμενος.

(b) 93,1 θώματα δὲ γῆ λυθὴ εἰς συγγραφὴν οὐ μάλα ἔχει.

(γ) 133,2 σύντοιοι δὲ ὁλύγοιοι χρέωνται

(δ) 135,1 γαμέσωσι δὲ ἑκατόν αὐτῶν πολλὰς μὲν κουριδίας γυναῖκας

(ε) 23,1 ἄμφοτεροι δὲ ὁ Περίανδρος Κορίνθου

It can be seen from examples (δ) and (ε) that in Greek even the verb may be topicalised. Verbs of ruling and commanding are often so treated in Herodotus.

11.22 Before passing on to more general conclusions it will be opportune to mention, that although the front of the Greek sentence appears not to be "emphatic" per se, there is one situation in which material at the front of the sentence is foregrounded. This happens when there is verbal anaphora, i.e. when two successive main clauses begin with the same verb. It has already been mentioned that the verb does not normally appear at the
front of the sentence. Consequently the repeated front position for the same verb is striking.

Examples:

(a) 76,2 καὶ εἶλε μὲν τῶν Πιτερίων τὴν κόλιν καὶ ἢνδραποδισάτα, εἶλε δὲ τὰς κεριοικίδιας αὐτῆς κάσας

(β) 112,2 τέτοχα γὰρ καὶ ἔγῳ, τέτοχα δὲ τεθνεός.

(γ) 137,1 αἰνέω μὲν νῦν τόνδε τὸν νόμον, αἰνέω δὲ καὶ τόνδε

11.23 Although verbal anaphora is particularly bold it is not the only kind of anaphora used by Herodotus:

(a) 103,1 καὶ πρῶτος τε ἔλοχισε καὶ τέλεα τοὺς ἐν τῇ Ἀσίᾳ καὶ πρῶτος διέταξε χωρὶς ἑκάστους εἶναι

(β) 155,3 τὰ μὲν γὰρ πρῶτον ἔγῳ τε ἔπρηξα καὶ ἔγῳ κεφαλῆς ἀναμέζας φέρω

As example (β) shows movement right to the front of the sentence is not always necessary.

11.24 Also relevant to the question of word order is the use of identical words at the end of a preceding sentence and the beginning of a following sentence (anadiplosis) E.g.
A discussion of anaphora and anadiplosis leads naturally to consideration of the use of juxtaposition with the figura etymologica whereby two cognate words are juxtaposed within their clause. E.g.

(a) 14,2 ἐς Δελφοὺς ἀνέθηκε ἀναθήματα

(b) 48,2 ὁμοῦ ἤψευ αὕτῳ ἐν λέβητι χαλκῶν χαλκεόν ἐπίθεσιν ἐπιθεῖς

When these rhetorical figures are required they can be produced by fronting and backing rules operating under appropriate conditions (12.30. (6)).

11.26 The degree to which a text has been complicated by rhetorical figures such as anaphora, anadiplosis and juxtaposition of cognates may be quantified. Thus the number of rhetorical order figures used may be divided by the number of verbs in the passage to give the R-Index, or Rhetorical Index. The use of the R-Index may be illustrated by comparing its application to two passages of text, the former in a solemn portentous style, the latter in simple narrative. Rhetorical figures
of word order have been underlined.

Passage (1)

114, 1 ἔπαιξε ἐν τῇ κόμη ταύτῃ ἐν τῇ ἡσυχᾳ καὶ αἱ βουχολίαι αὐταί, ἔπαιξε δὲ μετ’ ἄλλων ἠλίκων ἐν ὀδόφ. καὶ οἱ παιδες παίζοντες εἶλοντο ὑποτῶν βασιλέα εἰναι τούτων δὴ τὸν τοῦ βουχόλου ἐπίκλησιν παῖδα. ὁ δὲ αὐτῶν διέταξε τοὺς μὲν οἰκίας ὁλιγομέειν, τοὺς δὲ δορυφόρους εἰναι, τὸν δὲ κοῦ τινα αὐτῶν ὀφθαλμὸν βασιλέος εἰναι, τῷ δὲ τίνι τὰς ἀγγελίας ἐσφέρειν ἑδίδον γέρας, ὡς ἐκάστη ἔργον προστάσσων.

Number of verbs 13
Number of rhetorical figures 3
R-Index 0.23

Passage (2)

844 ὅ ὅν ὁ Ἰρονίδης οὖτος ὁ Μάρδος λόγῳ τῇ προτεραίᾳ τῶν τινα λυδῶν κατὰ τούτο τῆς ἀκρομάλας καταβάντα ἐπὶ κυνέην ἀνωθεν καταχυλισθέως καὶ ἀνελόμενον ἐφράσθη καὶ ἐς θυμὸν ἔβάλετο. τότε δὲ ὁ ἀυτὸς τε ἀνεβεβήκεε
11.27 The same texts may be used also to illustrate a Gapping Index or G-Index. This is obtained by dividing the number of gapped words in the passage by the number of verbs.

**Passage (1)**

<table>
<thead>
<tr>
<th>Number of verbs</th>
<th>13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of gapped words</td>
<td>2</td>
</tr>
<tr>
<td>G-Index</td>
<td>0.15</td>
</tr>
</tbody>
</table>

**Passage (2)**

<table>
<thead>
<tr>
<th>Number of verbs</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of gapped words</td>
<td>0</td>
</tr>
<tr>
<td>G-Index</td>
<td>0.00</td>
</tr>
</tbody>
</table>

11.28 Students of Herodotean language will be aware that the question of whether the author's style is subject to variation has been under debate since the time of Mure. Mure himself (1857: 516 - 517) saw no sign of stylistic variation in Herodotus. "His style preserves, amidst all the varieties of his subject, a consistent and harmonious uniformity." But Aly (1929: 44 & 63), who had a special interest in Herodotus and also in the history of early Greek prose, took the view that
Herodotus had two different styles, a scientific style and a narrative style. Aly's view did not go unchallenged, however. For Thomson (1935: 33) in his book *The Art of the Logos* returned to the position taken by Mure: "An attempt has been made to show that he employs not one style but several; the attempt, I think, is a failure ... Herodotus ... narrates fact and fable in exactly or almost exactly the same style."

11.29 This thesis is not the appropriate place for a full treatment of this difficult problem. However it can be said that the four indices which have been proposed, namely the I-Index, the S-Index, the R-Index and the G-Index have a contribution to make in future research. It has already been shown that some variation on these parameters does occur and can be objectively quantified. So the views of Mure and Thomson are no longer tenable.

11.30 In general uniformity of word order behaviour may be expected to increase with increasing sample size. Significant variation will be most evident when a comparison is made between passages which are relatively short in length. This conclusion is somewhat different from the view expressed by Dover (1960: 30-31) who argues for variation on a wider scale. Some discussion and further references may be found in Immerwahr (1966: 46 - 55).
12.1 The argument of this thesis is now almost complete. But before turning to the conclusion it will be useful to review and amplify the discussion of the transformational rules. A quotation from Andrews (1971: 127) will serve as an appropriate starting point. This is what he says: "Transformational grammarians have in the past assumed that free word order is to be accounted for by a "scrambling rule" which follows the transformations and permutes and breaks up the constituents of the sentence randomly."

12.2 This would appear to suggest that the word order of a language such as Greek is purely random - a view that cannot be sustained in the face of the arguments and evidence presented in previous chapters. Admittedly there is a degree of randomness in Greek word order, and this has been recognised. But that is only part of the picture, for the placement of most modifiers conforms to statistical norms. The situation is complex and cannot be dealt with by a mere "scrambling rule" which operates at random. On the contrary it has been shown that an adequate description of Greek word order must incorporate a range of transformational rules designed to produce marked and unmarked sequences of various kinds.
12.3 But the suggestion that the rules which manipulate word order apply after the other "syntactic" transformations requires serious consideration. In this connection it will be helpful to reconsider some relevant evidence from chapter V.

12.4 First of all evidence will be presented from the word order behaviour of various clause types. Thus it is not difficult to show that main clauses, subordinate clauses, infinitival constructions and participial constructions do not always agree in their word order preferences. Some examples follow:

(1) In subordinate clauses the subject precedes or follows the direct object with equal frequency. But this is not true of the other clause types where the subject normally precedes the object.

(2) In subordinate clauses and infinitival constructions the passive "subject" precedes and follows the verb with equal frequency. But this is not true of main clauses and participial constructions where the passive "subject" normally precedes the verb.

(3) In subordinate clauses the adverbial of manner precedes and follows the verb with equal frequency. But this is not true of other clause types where the adverbial of manner normally precedes the verb.

(4) In participial and infinitival constructions the subjectival object normally follows the verb. But in other clause types the subjectival object precedes and follows the verb with equal frequency.
(5) In participial and infinitival constructions the personal dative precedes and follows the verb with equal frequency. But this is not true of main and subordinate clauses where the personal dative normally precedes the verb.

(6) In infinitival constructions the equational complement normally precedes the verb. But in main clauses, subordinate clauses and participial constructions the equational complement normally follows the verb.

(7) In infinitival constructions the genitive absolute precedes and follows the verb with equal frequency. But this is not true of other clause types where the genitive absolute normally precedes the verb.

(8) In infinitival constructions the conditional clause precedes and follows the verb with equal frequency. But this is not true of main clauses where the conditional clause normally precedes the verb.

(9) In participial and infinitival constructions the direct object normally follows the verb. But this is not true of other clause types where the direct object precedes and follows the verb with equal frequency.

(10) In the genitive absolute the subject normally follows the verb. But this is not true of other clause types where the subject normally precedes the verb.

12.5 It will be evident from the preceding statements that the different clause types differ at times in their word order behaviour. It follows that the transformations which produce the different clause types must be applied before the rules which determine word order.
12.6 Apart from this there is the fact that subordinate clauses and other embedded verbal constructions owe their placement within the matrix sentence to syntactic characteristics which are conferred upon them by the syntactic transformational rules.

12.7 Thus it has again been shown in chapter V that certain types of subordinate construction are normally attracted towards the front of the sentence. These include the following:
the circumstantial clause
the genitive absolute
the conditional clause
the aorist participle

Certain others are normally attracted towards the back of the sentence. These include:
the final clause
the future participle
the object clause
the causal clause
the completive participles

All these constructions cannot have their placement finalised until their syntactic identity has been established.

12.8 Another transformational rule which deserves consideration is that which produces the passive. Since the passive "subject" differs in its placement from the direct object from which it is derived in the deep structure, the transformation must operate before the passive "subject" receives its position in its clause.
12.9 Evidence from the noun phrase is less abundant, but points in the same direction. Thus the transformation which changes the noun + adjectival group into a construction consisting of a substantivised adjectival with a noun in the genitive must be applied before the word order is established because the word group concerned tends to show the genitive in second place regardless of how the adjectival is classified. The word order behaviour of noun + adjectival groups which have not undergone this transformation is different and much less straightforward.

12.10 Another transformation which must also operate before the word order rules is the lexicalisation transformation which produces compound words. As has been shown in chapter V the order of elements within compound words is fixed and must be taken from the lexicon. Where the compounds are placed in their sentence will depend, of course, upon their syntactic function.

12.11 In addition to the transformations considered so far it is necessary to deal with a subgroup of transformational rules which are particularly relevant to matters of word order. These are the logistic transformations which prepare the ground for the rules which establish word order.

12.12 First of all there are the rules which produce gapping. These are deletion rules which must operate before the subscripts are sequenced and before any other adjustments are made to the order of words. If this were not so an element might be sequenced only to be deleted
later - an uneconomical use of the sequencing rules.

12.13 Next comes relatorisation which usually affects main clauses and produces an element with a negative charge of 99.99. Obviously this element cannot be sequenced correctly until it has been labelled and charged.

12.14 Relatorisation is usually applied to major components of main clauses. In subordinate clauses relativisation is possible. This process produces an element with a negative charge of 100. Relatives in particular preempt the front of their clauses and cannot be demoted to any lower position. The same is true of other elements with a charge of -100.

12.15 Interrogativisation can be applied both to main and subordinate clauses. But its scope in subordinate clauses is limited if one of the verbal modifiers in the subordinate clause has been relativised. Interrogativisation is also uncommon if one of the verbal modifiers has been relatorised.

12.16 Another relevant transformation is that of topicalisation. Like relativisation topicalisation also produces an element with a negative charge of 100. In theory, topicalisation can co-exist with both relatorisation and interrogativisation. But in practice such combinations are rare. There is no clash with the relative because topicalisation occurs only in main clauses.
12.17 When a modifier appears with an ambivalent \pm charge on its subscript, it is necessary for a random selection rule to delete one or other of the signs. If this operation has not been performed then the rule which sequences subscripts in ascending order will not be able to process the modifier concerned.

12.18 Finally, if the author wishes to reverse the polarity of a given modifier he must invoke the appropriate rule to do this before, not after, the subscripts have been sequenced.

12.19 So the conclusion is reasonably clear. The syntactic transformations, including the logistic transformations, must operate before the application of the rules which establish surface word order. It is now time to consider the word order rules themselves.

12.20 To produce grammatical Greek text only one type of order transformation is absolutely necessary, i.e. the inversion rule. This must be used to invert the suffix + stem sequences and also to invert the sequences of noun + article. It is also normal, if an interrogative is found following a nominal head, for the inversion rule to apply here also and to move the interrogative into the position preceding its head. Once these modifications have been made the result will be an acceptable Greek sentence in which the surface order varies relatively little from the order in the deep structure.
12.21 The only complication here is the possible presence of a relator or relative or interrogative or topic. If any of these occurs in the sentence the application of the rule to sequence subscripts becomes obligatory. In any case the subscript sequencing rule will usually be brought into operation to establish normal surface order.

12.22 However, if two modifiers of the same head have identical subscripts then a random sequencing rule is brought into operation to arrange them in random order. The random sequencing rule may also be applied to items which do not have identical subscripts. In this case it simply produces random departures from exact normal order.

12.23 Another event which may become evident after the application of the rule which sequences subscripts, is the presence of a modifier which has had its polarity reversed. This only happens if the author has reversed the polarity of a modifier before it has been processed by the rule to sequence subscripts. The result is the appearance of a modifier in a reversed or marked position.

12.24 Fronting and backing rules may now be applied to change the position of demonstrative pronouns which are anaphoric or prophoric. Anaphorics may be fronted, whereas prophorics may be backed.

12.25 Next the author has the option of producing
further markedness by splitting one or more head + modifier groups. Split can only occur after the sequencing of subscripts. The reason for this is that syntactic split is produced either by moving a preposed modifier towards the front of the sentence or by moving a postposed modifier towards the back. Until the position of the modifier is established it will not be clear whether it should be fronted or backed. Needless to say all split sequences are stylistically marked.

12.26 The ultimate weapons in the armoury of word order are the rhetorical figures such as anaphora, anadiplosis and juxtaposition of cognates. Since anaphora does not necessarily require that the affected words should be moved all the way to the fronts of their clauses it need not be precluded if relatorisation or topicalisation has occurred. On the other hand anadiplosis involves the placement of a key element at the very front of the second sentence. So it cannot be brought into play if the second sentence has a topic.

12.27 Juxtaposition of cognates, on the other hand may co-exist with both relatorisation and topicalisation. The rhetorical figures mentioned may be regarded as shallow embellishments which contribute strongly to the stylistic markedness of the text.

12.28 It will now be useful to look at a low level formalisation of the logistic and word order rules. The rules are presented as far as possible in their
order of application. In establishing this order the
assumption has been made that syntactic split produces
greater markedness than inversion, and that rhetorical
word order produces greater markedness than syntactic
split. Rules which produce greater markedness are
considered to come into operation after rules which
produce lesser markedness, and to produce effects which
are more superficial. In general more strongly marked
sequences are less frequent than sequences with lesser
markedness. The lists follow:

12.29 The Logistic Rules

(1) Gapping

See paragraph 2.27.

(2) Relatorisation

IF (VMOD\textsuperscript{1} = RADVERBIAL) THEN

RELATORISE(VMOD\textsuperscript{1}) AND

SET(SUBS\textsuperscript{1} = -99.99): optional; applies once.

(3) Relativisation

IF (SCLAUSE) THEN

RELATIVISE(VMOD\textsuperscript{1}) AND

SET(SUBS\textsuperscript{1} = -100): optional; applies once

(4) Interrogativisation

IF (VMOD\textsuperscript{1} NOT = RELT) AND

IF (WORD\textsuperscript{J} OF VMOD\textsuperscript{1} NOT = RELATIVE) THEN

INTERROGATIVISE(WORD\textsuperscript{J} OF VMOD\textsuperscript{1}) AND

IF (MCLAUSE) THEN

SET(SUBS = φ)

IF (SCLAUSE) THEN

SET(SUBS\textsuperscript{1} = -100) AND
DELETE (SCONJ): optional; applies once

(5) **Topicalisation**

IF (MCLAUSE) AND

IF (ELEM¹ OF MCLAUSE = TOPIC) THEN

TOPICALISE (ELEM¹ OF MCLAUSE) AND

SET (SUBS¹ = -100): optional; applies once

(6) **Sign Deletion**

IF (MODSIGN = ±) THEN

RANDELETE (+ OR -): obligatory if the condition is fulfilled; applies once.

(7) **Reversal of Polarity**

IF (MODSIGN = + OR -) THEN

REVERSE (MODSIGN): optional within statistical limits; applies once

12.30 **The Word Order Rules**

(1) **Inversion**

a) IF (SUF + STEM) THEN

FRONT (STEM): obligatory; applies once

b) IF (NOMINAL + X + DET) THEN

FRONT (DET)

UNTIL (DET + NOMINAL + X): obligatory; applies once; X may be null

c) IF (INT = MOD OF NOMINAL¹) AND

IF (NOMINAL¹ + INT) THEN

FRONT (INT): a frequent option; applies once

(2) **Sequencing of Subscripts**

a) IF (INT/REL/RELATIVE/TOPIC) THEN

DO N = 1, I + 1

BEGIN
DO M = N + 1, I
BEGIN
IF(SUBSN > SUBSM) THEN
FRONT(ELEMN)
UNTIL(ELEMN + ELEMN)
END
END: obligatory if the condition is fulfilled;
applies once; I is the total number of subscripted
elements in the construction.

b) IF(NOT INT/REL/T/RELATIVE/TOPIC) THEN
DO N = 1, I - 1
BEGIN
DO M = N + 1, I
BEGIN
IF(SUBSN > SUBSM) THEN
FRONT(ELEMN)
UNTIL(ELEMN + ELEMN)
END
END: a frequent option within statistical limits;
applies once; I is the total number of subscripted
elements in the construction

(3) Random Sequencing of Modifiers

a) IF(SUBSI = SUBSJ) THEN
RANSEQ(MODJ, MODJ): obligatory if the condition
is fulfilled; applies once

b) IF(SUBSI NOT = -100) AND
IF(SUBSI NOT = SUBSI + J) THEN
RANSEQ(MODI, MODI + J): optional within statistical
limits; applies once
(4) Movement of Anaphorics and Prophorics

a) IF(\text{NOT} \# + \text{ANAPHORIC}) THEN
   \text{FRONT(ANAPHORIC)}; \text{optional; applies J times}; J
   \text{is an integer which varies according to the distance of the anaphoric from the front of the sentence}

b) IF(\text{NOT} \text{PROPHORIC} + \#) THEN
   \text{BACK(PROPHORIC)}; \text{optional; applies J times}; J
   \text{is an integer which varies according to the distance of the anaphoric from the back of the sentence}

(5) Syntactic Split

a) IF(MODSIGN = -) AND
   IF(EXEL + MOD^N) AND
   IF(ICATS^N - 1 \text{ NOT} = ICATS^N/ICATS \text{ OF HEAD}) AND
   IF(\text{NOT} \text{RELT/RELATIVE/TOPIC} + MOD^N) THEN
   \text{FRONT(MOD^N)}; \text{optional within statistical limits};
   \text{applies J times}; J \text{ is an integer which varies according to the original distance of MOD^N from the front of the sentence}

b) IF(MODSIGN^N = +) AND
   IF(MOD^N + EXEL) AND
   IF(ICATS^N + 1 \text{ NOT} = ICATS^N/ICATS \text{ OF HEAD}) THEN
   \text{BACK(MOD^N)}; \text{optional within statistical limits};
   \text{applies J times}; J \text{ is an integer which varies according to the original distance of MOD^N from the back of the sentence}

(6) Rhetorical Figures

a) Anaphora
   IF(\text{ELEM}^I \text{ OF MCLAUSE}^K = \text{ELEM}^J \text{ OF MCLAUSE}^K + 1) THEN
IF (NOT # + ELEM^I OF MCLAUSE^K) THEN
  DO L = 1, M
  BEGIN
    FRONT(ELEM^I OF MCLAUSE^K)
  END
  AND
  IF (NOT # + ELEM^J OF MCLAUSE^K + 1) THEN
  DO L = 1, N
  BEGIN
    FRONT(ELEM^J OF MCLAUSE^K + 1)
  END: optional within statistical limits; applies once; M is an integer which varies according to the original distance of ELEM^I from the front of M MCLAUSE^K and N is an integer which varies according to the original distance of ELEM^J from the front of MCLAUSE^K + 1.

b) Anadiplosis

IF (ELEM^I OF MCLAUSE^K = ELEM^J OF MCLAUSE^K + 1) AND
  IF (MCLAUSE^K + 1 NOT TOPICALISED) THEN
  IF (NOT ELEM^I OF MCLAUSE^K + #) THEN
  BACK(ELEM^I OF MCLAUSE^K)
  UNTIL(ELEM^I OF MCLAUSE^K + #)
  AND
  IF (NOT # + ELEM^J OF MCLAUSE^K + 1) THEN
  FRONT(ELEM^J OF MCLAUSE^K + 1)
  UNTIL(# + ELEM^J OF MCLAUSE^K + 1): optional within statistical limits; applies once

c) Juxtaposition of Cognates

IF (ELEM^I COGN ELEM^I + J) AND
  IF (NOT ELEM^I + ELEM^I + J) THEN
\text{FRONT}(ELEM^I + J) \\
\text{UNTIL}(ELEM^I + ELEM^I + J): \text{optional within statistical limits; applies once}

12.31 It will have been noticed that some of the rules have been labelled "optional within statistical limits." This means that before the rule comes into operation a counter is checked to ensure that the maximum frequency of the phenomenon produced by the rule is not exceeded in the text. Actual frequencies have not been incorporated into the statement of the rules because the frequencies vary with varying input. The relevant statistical information, in so far as it is available here, may be found in chapters V and VIII, X, XI.

12.32 Given the appropriate conditions the logistic rules require the following formal operations:

1. deletion 
2. relatorisation 
3. relativisation 
4. interrogativisation 
5. topicalisation 
6. subscript setting 
7. reversal of polarity

12.33 Given the appropriate conditions the word order rules proper require the following formal operations:

1. fronting 
2. backing 
3. random sequencing
12.34 It is not without interest that the operations listed for both the logistic and the word order rules are computable; that is to say they are sufficiently formal to be coded into algorithms and processed by a computer. Appropriate data and programmes would of course be required.
CHAPTER XIII

CONCLUSION

13.1 We must now offer an answer to the question posed in chapter III. Is Greek word order free? The answer is both "yes" and "no".

13.2 Firstly, it is true to say that the order of inflected words, apart from a few exceptions mentioned in chapter III, is remarkably free. The two constraints which usually apply to natural languages, i.e. the typological constraint and the syntactic integrity constraint, can be violated virtually at will by the author. Thus head/modifier sequences can be reversed and modifiers can be sundered from their heads. What is more both these operations can be performed without any essential change in the syntax or meaning of the sentence. The absence of any other general restriction on the placement of inflected words means that Greek closely approaches the behaviour of a hypothetical language with absolute freedom of word order such as the example discussed in chapter III. For the most part the Greek author can, if he wishes, deal his words in random sequence. Cf. Watkins (1964: 1039): "Greek would appear to have gone farther than any other I.E. language in the elaboration of a 'free' word order".

13.3 But there is another sense in which Greek word order is not free at all. The examination of a substantial sample of text (in this case Herodotus I) shows that in
practice the author is a creature of habit. In other words he tends in his writing to adhere to certain conventions of a primarily syntactic nature.

13.4 So it might be said that word order in Herodotean Greek is free in the abstract, but relatively restricted in the concrete. The distinction thus drawn is similar to but not identical with the famous distinction made by De Saussure (1960: 30f) between langue and parole. But it is necessary to recall that for De Saussure not only parole but langue also was a concrete entity. "La langue n'est pas moins que la parole un objet de nature concrete...". The position taken here is that grammar is an abstract system. With a few well-known exceptions Greek word order is not ultimately determined by grammar, but by style, which can be seen in actual utterances, which are concrete.

13.5 The degree to which Herodotus' writing is conventional can be expressed by the statistical norms established in chapters V and VII. The frequency with which he departs from the various norms is a measure of the author's individuality. That is to say the level of marked sequences is a characteristic or distinguishing feature of his idiolect, and one which can be quantified. His performance in actual passages of text can be assessed by calculating the I-Index, S-Index, R-Index and G-Index.

13.6 The norms themselves come from elsewhere, from outside the individual. Their place of origin is the
speech community to which the author belongs. It follows that the same norms will be observed by others and will be found in a range of Greek authors.

13.7 In some cases the general picture has already been established. Thus Demetrius in De elocutione 199 appears to regard the placement of the subject before the predicate as "natural". This view is supported by the statistics compiled by Frisk (1933:16) which demonstrate that the subject normally precedes the predicate. It is of interest to compare the more general assertion of Dionysius in De compositione verborum 5 that nouns precede verbs, which he justifies on the principle that in nature thing precedes process. Since then Monteil (1963: 250) has indicated that the noun clause object shows a statistical tendency to follow the verb. The normal placement of the infinitive, which usually follows its head, was already known to Ebeling (1902: 230).

13.8 Another feature which has already been researched is the position of the relative clause, which normally follows its head, not only in Herodotus, as has been seen in chapter VI, but also in Homer (Monteil 1963: 33; Friedrich 1975:19). As for Spaltung, it is doubtful whether anyone would wish to assert that it is stylistically normal for any construction in any author. Results of this kind inspire confidence that future work on Greek word order will show that many of the syntactic norms established for Herodotus apply to other Greek authors also.
13.9 Is this the limit of convention? Not at all; for the Greek language is a member of the Indo-European family and shares certain word-order characteristics with other members of the group. Thus head/modifier reversal and syntactic split are found not only in Greek, but also, for example, in Latin and Sanskrit. The same is true of Wackernagel's Law, which describes an Indo-European rather than a specifically Greek phenomenon. So Greek must be viewed in its Indo-European context.

13.10 Recent work on Indo-European word order includes a book by Friedrich (1975) which, inter alia, surveys the surface order of subject, verb and object in the various languages and argues that SVO is the most widespread and also the earliest order. This conclusion runs against the findings of Lehmann (1973a; 1973b; 1974) who believes that Proto-Indo-European was a SOV-language. Also requiring consideration is the theory proposed by Miller (1975) who argues for a development of Indo-European from VSO to SOV to SVO.

13.11 A full investigation of the problem cannot be attempted here. Nevertheless it may be possible to shed some light on the matter by applying a principle from the theory of dialect geography. The principle in question is Bartoli's norm of the lateral areas which has been reviewed and reformulated by Pisani.

Bartoli's Norm
Bertoni & Bartoli (1925: 68). "La fase anteriore si conserva in aree LATERALI e la fase seriore si trova invece nelle aree di mezzo."
Pisani's Modification

Pisani (1940: 299). "La fase che appare in due o più aree isolate fra loro e che non è verisimile sia sorta indipendentemente in ciascuna di esse, ha appartenuto un tempo all' area che fungeva da intermediaria fra le due."

13.12 If the norm is applied to the Indo-European languages there are the following areas to be considered:

(1) The central or intermediate area, which includes the majority of Indo-European languages where SVO patterns predominate in the surface structure.
(2) Six lateral or isolated areas, namely Italic, Baltic, Indic, Iranian, Tocharian and Hittite, where SOV patterns predominate in the surface structure.
(3) Another three lateral or isolated areas, namely Celtic, Slavonic and Old Armenian, where VSO patterns predominate in the surface structure.

If the areal norm is correct then the lateral or isolated areas may be expected to preserve a more archaic linguistic character than the central areas. In other words SOV and VSO should be more ancient than SVO. The question remains as to whether VSO is older than SOV. But since VSO has fewer representatives than SOV it is probably nearer to extinction and accordingly may be more ancient. This reasoning is supported by Bartoli's norm of the fase sparita:

Bertoni & Bartoli (1925: 75): "Se di due fasi linguistiche una è sopraffatta, cioè morta or moribonda, e l'altra sopravvive, la fase sopraffatta è di norma la fase anteriore."
In most of the Indo-European languages VSO patterns are relatively rare and appear to be vestigial.

13.13 If the argument is correct then Greek has preserved three layers or strata of Indo-European word order. Of these the most frequent is the most recent and the least frequent is the oldest. If this conclusion is provisionally accepted it may be used to explain the fluctuation in Greek (not to mention various other Indo-European languages) between OV and VO typologies. The sequence VSO > SOV > SVO implies a typological movement from VO to OV and back to VO. Such a reversal in the current of change might well be expected to create ambivalence in head/modifier behaviour.

13.14 This interpretation is supported by the chronology of compound words which tend to be conservative in relation to the contemporary behaviour of the verb phrase. In the classical period the normal compound word presents OV, which is archaic as compared with the classical surface pattern of VO in the verb phrase. An earlier stage, however, is represented by certain proper noun compounds which show VO. The picture which emerges may be tabulated as follows:

<table>
<thead>
<tr>
<th>Verb Phrase</th>
<th>Compound Word</th>
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<tbody>
<tr>
<td>Archaic</td>
<td>VO</td>
</tr>
<tr>
<td>Early</td>
<td>OV</td>
</tr>
<tr>
<td>Recent</td>
<td>VO</td>
</tr>
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</table>

13.15 The view that recent SVO developed from a preceding SOV is also consistent with the inflectional
morphology which is so characteristic of the Indo-
European languages. Inflectional syntax is associated
above all with OV patterns, i.e. patterns in which the
functional element is placed to the right of its
modifier(s). In general the Indo-European languages
also show a developed prepositional syntax. The preposi-
tional phrase is more at home in SVO languages. But in
the Indo-European family, at least, the prepositional
phrase is known to be later than inflexional structures
and tends to replace them in the modern era. So it is
that the Latin case system has been eliminated in most
Romance languages. And a similar fate has befallen the
Latin inflectional passive.

13.16 As far as Greek itself is concerned there is
some support for an earlier OV phase in the syntax of
the clay tablets written in Linear B. These are the
earliest surviving evidence for Greek and show a clear
preference for OV patterns in the noun phrase. Thus the
genitive and the adjectives (with the exception of
patronymics) normally appear before the noun which they
modify (Vilborg 1960: 138 & 151). The direct object, on
the contrary, normally follows its verb (Vilborg 1960:
137); but cf. Homer, where the object normally precedes.

13.17 To sum up, the evidence seems to favour the
development suggested by Miller (1975), i.e. that the
Indo-European languages have evolved from VSO to SOV
to SVO. Needless to say this statement applies only to
the surface structure of the languages concerned. The
next step is to consider what is happening in the deep
structure. In this connection it is noteworthy that the
order which appears to be the oldest in the surface structure is the same as the order which has been posited for the deep structure of Greek. In other words the deep structure of Greek has remained unchanged in spite of two radical modifications of the surface structure. This may be regarded as a plausible result because it appears likely that deep structure is more resistant to change than is surface structure. We may compare the views of Pullum (1977: 274) and the findings of Lakoff (1968:234), who concluded, after a study of complementation in Latin and Spanish, that only the "superficial syntax" had changed.

13.18 Finally it is necessary to consider Greek as one of all the world's natural languages. Given that human nature is the same everywhere, it seems likely that at least some of the characteristics of Greek word order should be observed world wide. An example may be found in Greenberg (1966: 84) who observes that final expressions come at the end of the sentence in a wide range of languages. What is the explanation?

13.19 Perhaps the most general principle which applies is the so-called "iconic" principle (Friedrich 1975: 20). This has been formulated by Greenberg (1966:103) as follows: "The order of elements in language parallels that in physical experience or the order of knowledge."

13.20 The effect of this principle may be seen in the tendency for verbs representing successive actions
to occur in natural temporal order, and for places visited to be mentioned in the order of their geography. A less concrete example would be the practice of ordering conditional sentences so that the protasis precedes the apodosis.

13.21 In conclusion, however, it should be emphasised once again that word order is primarily a matter of syntax. For this reason future progress in the understanding of Greek word order may be expected to depend upon the development of new concepts in general syntactic theory.
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