The Syntax of Determiners in Attic Greek

A Theoretical Approach

by

Noah D. Frederick

A thesis presented for the B.A. degree

with Honors in

The Department of Classical Studies

University of Michigan

Winter 2009
For the other two members of the *Triumpueri*, Bacchus and Scipio, and Antonia
Acknowledgments

I wish to thank for their support and expertise the following faculty at the University of Michigan: Ben Fortson for his guidance in the process of my research and writing, Derek Collins for teaching me the basics of Attic Greek, H.D. Cameron for two years of inspirational teaching, Kweku Garbrah for illuminating for me the subtleties of language, Sara Ahbel-Rappe to whom I owe my familiarity with Plato, Gina Soter for her continued mentoring and support, and Acrisio Pires for educating me in generative linguistics and answering my questions on the subject.
Abstract

This linguistic investigation is concerned with the syntax of complex nominal phrases in Attic Greek and particularly determiners. I attempt to establish subcategories for the Greek determiner based on the distribution of the so-called adjective πᾶς, the cardinal numeral δύο, the demonstratives ὁδε, οὖτος, ἐκείνος, and the definite article, ὁ, ἧ, τό. I then offer a syntactic analysis of the determiner phrase from the perspective of generative linguistics (X-bar theory, in particular), in which I propose an article phrase (ArtP), demonstrative phrase (DemP), and quantifier phrase (QP), noting other relevant features of complex nominal phrases as they come up. I also address the various positions of the definite article in detail and propose a mechanism by which the postposed article is generated, namely the raising of the noun (N).
CONTENTS

1 Introduction 1
  1.1 The Topic 1
  1.2 Some Preliminaries 1
  1.3 The Problems 4

2 Distribution of Determiners 5
  2.1 Overview 5
  2.2 Quantifiers 5
  2.3 Demonstratives 8
  2.4 The Article 11

3 Internal Structure of DPs 12
  3.1 D-Structure 12
  3.2 The Definite Article 17
  3.3 Position of Genitives 23

4 Conclusion 25
  4.1 Summary 25
  4.2 Further Points 25

Bibliography 27
1. Introduction

1.1 The Topic

Human language features universal syntactic categories (i.e., parts of speech) such as nouns and verbs that are used as the building blocks of clauses and sentences. This study is concerned with providing a synchronic analysis of one such category, the Attic Greek determiner as used in the work of Plato, from the point of view of generative linguistics. Ancient Greek is a topic that has historically been the subject of extensive study, but such studies—including those conducted in recent times—have for the most part\(^1\) taken a standard philological approach, that is an empirical one with a limited theoretical framework. My aim is to add to the abundant empirical documentation an extensible model of a particular feature of the language, namely determiners.

Most work in syntax is done on living languages, not dead ones, as languages such as Attic Greek lack (living) native speakers, which makes it difficult to collect data and test the resulting conclusions. It seems worthwhile nonetheless to attempt to shed some light on the nature of Greek phrase structure through the application of modern syntactic theory and at the same time to assess how the theory holds up to ancient languages such as Greek.

1.2 Some Preliminaries

Each syntactic category (X) has an associated phrase (XP) of which the word belonging to category X is said to be the head. In this case, we are concerned in part with the determiner phrase (DP), the head of which is the determiner (D). Determiners can be subcategorized (that is, split up into separate syntactic categories) based on their distribution in relation to the noun they

---

\(^{1}\) Notable exceptions that I have encountered include works by Devine & Stephens.
are associated with. It is often the case that the determiners of one language do not have a one-to-one correspondence to those of another language. Carnie (2007) lists the subcategories of the determiner of English as follows:

a) Articles: the, a, an
b) Deictic articles: this, that, these, those, yon
c) Quantifiers: every, some, many, most, few, all, each, any, less, fewer, no
d) (Cardinal) numerals: one, two, three, four, etc.
e) Possessive pronouns: my, your, his, her, its, our, their
f) Some wh-question words: which, whose

Greek should have similar distinctions among its determiners. Chapter 2 is concerned with what those distinctions are, based on the distribution of determiners in Plato—that is, what combinations they occur in and how they are ordered with respect to one another. Determiners are subject to co-occurrence constraints; for example, certain classes of the English determiners listed above cannot co-occur. Thus my two brothers is grammatical while *the my brothers is not. Chapter 3 is concerned with the internal structure of DPs with respect to the associated noun phrase (NP).

This investigation will assume a schema in which the syntax takes on a tree structure with nodes and branches (fig. 1.2.1). Each node may only branch to two other nodes, creating a binary structure. A node branching to a lower node is said to be the lower node’s parent, and the lower node the parent’s daughter. Two nodes that share the same parent are said to be sister nodes, and parents’ parents (and so on) are called ancestors, while daughters’ daughters (and so on) are descendents. There exists a restriction such that branches of the syntax tree may not cross, so that
the linear order of words must be reflected in the tree structure. (The triangle in fig. 1.2.1 represents structure that has been collapsed for simplicity.)

Figure 1.2.1: An example of a syntax tree (adapted from Pl. Rep. 353e12)

The sentence from fig. 1.2.1 can also be represented in a collapsed form, which conveys all the same information:

$[VP[v \phi\alpha\iota\nu\tau\alpha\iota] [PP[p \kappa\alpha\tau\alpha] [DP[t\delta\nu \sigma\omicron\nu \lambda\omicron\gamma\omicron\nu]]]$

The allowed tree structures in a language can be represented by phrase structure rules. For example, the above prepositional phrase is generated by the following rule:

$$PP \rightarrow P \quad DP$$

X-bar theory, however, to which this investigation adheres, requires an intermediate (“bar”) level, the notation for which is $X'$, where $X$ is standing in for a lexical category. Thus for a prepositional phrase, we would write:

$$PP \rightarrow P'$$
$$P' \rightarrow P \quad DP$$

The recursion of phrase structure rules accounts for the recursive nature of human language, e.g., *the big bear, the big big bear, the big big big bear,* etc.

X-bar theory also posits a specifier (Spec) position for each phrase:
The specifier rule is not recursive like bar rules, so there can exist only one Spec per XP, just as there can exist only one head, X, per XP. The function of the specifier position depends somewhat on the lexical category of its phrase. Generally speaking, the relationship between specifier and its associated head is one that allows for grammatical interaction such as agreement and feature-checking. For example, it has been proposed that clausal subjects are generated in the Spec of the verb phrase (SpecVP), where they receive their thematic role. The Spec of functional projections (those that serve some pragmatic function but do not necessarily have an articulated head, i.e., a head that holds a lexical item) serves as a landing place for other elements in the tree, for example, the VP-internal subject, which raises to SpecIP to be checked for wh-features (Bernstein 2001, p. 540).

1.3 The Problems

As English exhibits subcategories of determiners that which can only occur in specific combinations and orders—

the cat
a cat
*the a cat

—so does Greek:

ό λόγος
όδε ο λόγος
*ό οδε λόγος

Based on data from Plato, we can construct a model describing which determiners are allowed to co-occur, and based on that information we can establish subcategories of the determiner. We
can also establish the default order of determiners relative to the NP, which will provide some insight into the internal structure of the DP, from which we can build a syntax tree.

Finally, a mechanism by which the various positions of the definite article (ό, ί, τό) relative to the noun head arise is needed to explain structures such as ο ὕπνο ο Ὀγοθός, where the article follows the noun head and is duplicated.

2 Distribution of Determiners

2.1 Overview

By analyzing the positions of determiners relative to the noun head, adjectives, and other determiners, we can assess which determiners belong to which classes and how these different classes interact with one another, that is, we can establish various positions into which particular classes of determiner fit. As Longobardi (p. 578) has stated, “the existence of different positions is manifested, rather universally, in the relative linear order of adjectives with respect to each other, and, with some parametric variation, with respect to the head noun.” So too, as we can see in English,² does this phenomenon apply to DPs.

2.2 Quantifiers

Quantifiers include the cardinal numerals and words such as πάζ ³ ‘all, whole.’

² Cf. neither of my somewhat unusual long thin chipped ancient blue Chinese porcelain flower vases, where the order of adjectives may not vary (http://www.angelfire.com/wi3/englishcorner/grammar/rules/adjord.html).
³ Certain textbooks and grammars like to refer to πάζ as an adjective, though this is clearly a misnomer given its position with respect to the article and noun in the provided data.
2.2.1 πᾶς, πᾶσα, πᾶν and its compounds

The position of this determiner is quite variable. Here are some examples of its usage in

*The Apology*, where it precedes the article (and therefore the noun):

(1) \(\text{n\(\circ\)}\)  
\(\pi\alpha\sigma\alpha\nu\) \(\tau\hbox{\check{e}}\nu\) \(\alpha\lambda\hbox{\-\-}\theta\varepsilon\iota\alpha\nu\) (17b8)  
the whole truth

(2) \(\pi\alpha\sigma\alpha\nu\) \(\upsilon\mu\iota\nu\) \(\tau\hbox{\check{e}}\nu\) \(\alpha\lambda\hbox{\-\-}\theta\varepsilon\iota\alpha\nu\) (20d5)  
the whole truth (to you)

(3) \(\sigma\upsilon\mu\pi\alpha\nu\tau\epsilon\zeta\)  
oi \(\alpha\lambda\lambda\iota\iota\) (20a5)  
all the others

(4) \(\alpha\pi\alpha\nu\tau\alpha\zeta\) \(\tau\iota\upsilon\zeta\) \(\tau\iota\ \delta\alpha\kappa\omicron\upsilon\tau\alpha\varsigma\) \(\epsilon\iota\delta\delta\nu\alpha\iota\) (21e6)  
all who seem to know something

(5) \(\alpha\pi\alpha\nu\tau\alpha\zeta\)  
oi \(\pi\alpha\rho\omicron\nu\tau\epsilon\zeta\) (22b7)  
all those present

(6) \(\pi\alpha\nu\tau\omicron\zeta\) \(\tau\iota\ \beta\iota\iota\u) (33a1)  
the whole of life

Example (2) is interesting in that there is an intervening word (an indirect object of the verb) that does not belong to the NP (or associated DP) sandwiched between quantifier and article. This phrase in fact occurs twice. According to Devine and Stephens (1999), this example represents simple hyperbaton, where \(\pi\alpha\sigma\alpha\nu\) has raised to a higher position in its clause (p. 15).

Πᾶς seems to take the same position when no article is present:

(7) \(\pi\alpha\nu\tau\epsilon\zeta\) \(\acute{\alpha}n\theta\rho\omicron\omega\pi\omicron\) (25b1)  
all men

(8) \(\pi\alpha\nu\tau\iota\) \(\tau\omicron\\omicron\omicron\omicron\) (33c6)  
in every way

And such is the case with pronouns, which are never found with the article:

(9) \(\pi\alpha\sigma\iota\nu\) \(\upsilon\mu\iota\nu\) (32b5)  
to all of you

(10) \(\pi\alpha\nu\tau\alpha\zeta\) \(\upsilon\mu\acute{\alpha}\zeta\) (38d1)  
all of you

The following data represent πᾶς in attributive position:
(11) ὁ πᾶς χρόνος (40e3) 
the whole time

(12) τῶν ἄλλων ἀπάντων ζῶων (25b6) 
all the other animals

Examples such as (11) and (12) are few in comparison with the other arrangements. Πᾶς may also follow the noun head (only one example of this arrangement occurs in The Apology):

(13) τῷ πρόσθεν χρόνῳ παντὶ (40a5) 
the whole time prior

When a noun is omitted and the article present, the quantifier may also follow the NP:

(14) τὰ ύπό γῆς πάντα (18b8) 
all the things under the earth

(15) τὰ ἄλλα ἁγαθά τοῖς ἄνθρωποις ἀπάντα (30b4) 
all the other goods for men

(16) τὰ ἄλλα πάντα (31b8) 
everything else

(17) οἱ ἄλλοι πάντες (33b7) 
all the others

According to Smyth (§1172), the words ἄνθρωπος, μέσος, ἐσχάτος, and ὅλος all occur in the same positions as πᾶς, with similar distinctions in meaning.

2.2.2 δύο

I have chosen δύο ‘two’ as a representative cardinal numeral (under the assumption that all cardinal numerals behave the same in Greek), as it is likely to provide the greatest abundance of data. An analysis of The Republic reveals that the cardinals follow the article (and sometimes the noun) but never stand before the article as πᾶς does in examples (1–6) above. We see three possible arrangements for δύο, the first being in attributive position:
(18) τούς (μὲν γὰρ) δόο μισθοὺς (347a8)^4
the two rewards

(19) τὰ δόο εἰδῆ (397b4)
the two kinds

The second arrangement is equivalent to that above but with the article omitted:

(20) δόο τοιούτω δακτυλίῳ (360b3)
two such rings

(21) δόο τέχνα (411e4)
two skills

(22) δόο ταῦτα ὄνόματα (470b4)
these two names

(23) δοιν (δὲ) νόθαιν (587b14)
two spurious ones

Interestingly, the numeral in (22) precedes a demonstrative that typically precedes the article, yet when the article is present, the numeral follows the article. The third arrangement consists of the numeral following the noun:

(24) ταῦτα τὰ σκεῦη δόο (596b3)
these two implements

2.3 Demonstratives

Demonstratives include the words ὁδὲ ‘this,’ ὁ ὅτος ‘this/that,’ and ὅ τε ἡνὸς ‘that.’

2.3.1 ὁδὲ, ἴδε, τόδε

Ὅδε often follows proper names (without the article):

(25) Παράλιος ὁδὲ (Ἀπ. 33e7)
this Paralius

^4 I have set off words that do not belong to the NP (or DP) with parentheses in this and subsequent examples. Here, μὲν and γὰρ have taken up second position in their clause, rendering the DP discontinuous by Wackernagel’s Law, which states that enclitics normally follow the first accented word of their clause (Anderson 1993).
(26) Πλάτων (δὲ) ὁδε (Ap. 38b6) (and) this Plato

(27) Θεόδωρος ὁδε (Theaet. 147d3) this Theodorus

(28) Σωκράτης (γᾶρ) ὁδε (Laches 180c5) (for) this Socrates

Ὁ ὁδε, however, can also precede proper names:

(29) ὁδε (δὲ) Ἀδείμαντος (Ap. 33e8) (and) this Adeimantos

Attributive adjectives follow ὁδε:

(30) ὁδε τρίτος συμπότης (Symp. 213b6) this third fellow drinker

Ὅ ὁδε precedes the article:

(31) ὁδε ὁ κόσμος (Tim. 29a2) this cosmos

(32) (ἐν) τῶ ὁδε τῷ βίῳ (Rep. 619a6) (in) this life

(33) (περὶ) τοῦ ὁδε τοῦ πόματος (Phaedo 117b6) (about) this drink

Or follows the noun, as in (25–28) above, when the article is present:

(34) ὁ ἐραστής ὁδε (Phaedrus 257b5) this erastes

(35) (περὶ) τὸν κόσμον τὸν ὁδε (Phileb. 59a3) (about) this cosmos

2.3.2 οὗτος, αὕτη, τούτο

Ὅ τοῦτο precedes the noun (without article):

(36) Οὗτος ἄνηγ (Gorgias 467b1, 505c3) this man

(37) τούτῳ Σωκράτει (Theaet. 147d1) this Socrates
Oútoς may also follow the noun (without article):

(38) Σωκράτης οὗτος (Symp. 175a7, 213b9)  
this Socrates

(39) Ἰπποχράτης οὗτος (Protagoras 316b2)  
this Hippocrates

Oútoς directly precedes the article when present:

(40) οὗτος ὁ ἄνηγ (Ap. 21c6)  
this man

(41) οὗτος ὁ θεός (Cratylus 405d3)  
this god

(42) οὗτος ὁ μῦθος (Theaet. 156c3)  
this story

Oútoς may also follow the noun when the article is present:

(43) ὁ Μέλητος οὗτος (Euthyphro 5c6)  
this Meletus

(44) ὁ λόγος οὗτος (Phaedo 88d4)  
this argument

(45) ὁ αὕτος οὗτος (Cratylus 420a8)  
this same man

Likewise with substantive adjectives:

(46) οἱ ἄλλοι οὗτοι (Euthyd. 274b4)  
these other men

2.3.3 ἐκεῖνος, ἐκεῖνη, ἐκεῖνο

Like ὁδὲ and οὗτος, ἐκεῖνος precedes the noun (without article):

(47) ἐκεῖνος πολίτης (Gorgias 515d10)  
that citizen

Or with the article:

(48) ἐκεῖνος ὁ ποιητής (Alc. 142e2)  
that poet
(49) ἔξεινος (μὲν) ὁ τῶν κακῶν καθαρὸς τόπος (Theaet. 177a5) that place free of evils

(50) ἔξεινος ὁ ἐραστής ὁ πάνδημος (Syrp. 183d8) that common erastes

Like ὁδε and οὗτος, ἔξεινος may also follow the noun:

(51) ὁ Ῥαδάμανθος ἔξεινος (Gorgias 526b4) that Rhadamanthus

(52) (ἐξ) τῆς λίθου ἔξεινης (Ion 536a4) (from) that stone

2.4 The Article

The definite article can take either of two positions relative to the noun. The first of these positions precedes the noun:

(53) ὁ μιμητής (Ion 602a8) the imitator

Likewise the article precedes substantive adjectives and adverbs:

(54) περί τῶν ἐν Ἅδου (Ion 531c8) about matters in Hades

(55) τῶν ἐν λέγοντα (Ion 531d14) he who speaks well

The second of these positions follows the noun:

(56) πόλιν τὴν αὐτῶν (Rep. 600d1) their own city

The preposed and postposed article may co-occur:

(57) τῆς τέχνης τῆς ὀρασφαντικῆς (Ion 539e3) of the rhapsodic art

(58) τῶν βίων τῶν ἀνθρώπων (Ion 607d9) the human life

(59) τοὺς δαπτυλάους (ἀγχαῖ) τοὺς σιδηροῦς (Ion 533d5) (attracts) the iron rings
This is much more common than the previous arrangement, where an article follows the noun but no article precedes it. The discontinuous noun phrase in example (59) represents what Devine and Stephens (1999) call simple verb phrase hyperbaton (see pp. 12–13).

3 Internal Structure of DPs

3.1 D-Structure

In order to determine the internal structure of DPs, we should consider the possible surface structures as outlined above. A major difficulty in analyzing the data is that examples of the co-occurrence of multiple determiners are sparse. Thus it may be the case that two determiners are in complementary distribution, or that the data simply do not provide examples of the determiners in contrast because the corpus is too small.

Of the classes of determiners outlined in chapter 2, the position of the definite article relative to the noun head shows the least variation except in the case of the postposed article, which will be addressed in section 3.3. For now, let us consider the more usual order:

\[(1) \quad (\text{τις \ ψυχή} \ (\text{Pl. Ion 536b8}) \quad \text{(your) soul})\]

It is clear that the noun phrase is embedded in the article phrase (ArtP), as in English, as described by the following phrase structure rules:

\[
\begin{align*}
\text{ArtP} & \rightarrow \text{Spec Art'} \\
\text{Art'} & \rightarrow \text{Art NP}
\end{align*}
\]

This gives us the following tree for (1), where the NP is the complement of the head, Art:

\[\text{ArtP} \rightarrow \text{Spec Art'} \rightarrow \text{Art NP}\]

---

Notice that the NP will always be present whether or not there is an articulated noun, so that in cases such as

\[(2) \quad \text{oī ἄκοιντότες (Pl. Ion 534d2)}\]

those listening (i.e., the audience)

where a participle, or some other adjectival modifier, is used substantively, an NP is still generated that has a null head and contains the substantive modifier. The tree corresponding to (2) looks like:

\[\text{Figure 3.1.2: NP with null head}\]

The quantifier πᾶς, according to the data presented in section 2.2, can take any of the following three positions relative to the article and noun, as is the case with the words ἄκοιντος,
μέσος, ἐσχάτος, and οἷος, all of which occur in the same positions as πᾶς with similar distinctions in meaning (Smyth §1172):

(a)  Q-Art-N  
(b)  (Art)-Q-N  
(c)  (Art)-N-Q

In order to account for the variation in position, I propose that Q is base-generated post-nominally and may raise to positions (a) and (b) through a mechanism called movement. Movement refers to transformational rules whereby one tree is transformed into another tree through the movement of elements in the tree structure (Carnie 2007, p. 244). The deep structure (D-structure) of a sentence represents the tree as it is generated before any transformations are applied, while the surface structure (S-structure) represents the output of the transformational rules. Accordingly, (c) most closely corresponds to the D-structure. An example of word order (c) from above is as follows:

(3)  τῷ πρόσθεν χρόνῳ παντι (Pl. Ap. 40a5)  
the whole time prior

The tree will look like the following:

![Diagram of tree structure](image)

*Figure 3.1.3: QP in its post-nominal position*
The cardinal numerals take the same positions as πᾶς and its compounds, but never precede the article in the data. Nevertheless the same treatment is applicable to numerals with the restriction that the numeral may not raise to a position above Art.

The demonstratives ὁδε, ὁτος, and ἔχεινος appear in the same environments and cannot co-occur, so it is correct to treat them as a single lexical class. According to the data in section 2.3, the demonstrative can take either of two positions⁶ relative to the article and noun:

(a) Dem-(Art)-N
(b) (Art)-N-Dem

The article need not be present, but often does occur in the presence of a demonstrative, since the article expresses definiteness and the referent of a demonstrative is nearly always definite. Since the demonstrative does not appear between article and noun, it seems best not to treat it like the quantifiers above, but instead to treat it like the article by positing a DemP in which the NP is nested and to account for order (b) through movement of NP. So

(4) ταύτα ὁν ἑν πάντα ἅξια (Pl. Ion 530c6)

all these worthy things

would be represented by:

---

⁶ Smyth (§1176) confirms that the demonstratives never stand in attributive position in Greek.
The movement of Q mentioned above accounts for the position of πάντα in the surface structure.

In cases where article and demonstrative co-occur, the ArtP is embedded in DemP as evident in the word order Dem-Art-N. We can represent this hierarchy in the phrase structure rules:

\[
\begin{align*}
\text{DemP} & \rightarrow \text{Spec} \quad \text{Dem'} \\
\text{Dem'} & \rightarrow \text{Dem} \quad \text{ArtP} \\
\text{Dem'} & \rightarrow \text{Dem} \quad \text{NP} \\
\text{ArtP} & \rightarrow \text{Spec} \quad \text{Art'} \\
\text{Art'} & \rightarrow \text{Art} \quad \text{NP}
\end{align*}
\]

There is no reason to assume that the ArtP or DemP is generated when no article or demonstrative is present (hence the third phrase structure rule above).

To account for Θεόδωρος ὁδε (Pl. Theaet. 147d3), we can posit a D-structure where the demonstrative is generated according to the above rules, and an S-structure where NP has raised to the Spec of DemP (fig. 3.1.5).
Figure 3.1.5: A transformation whereby the order of N and Dem is reversed

Note that since every element in the nominal phrase receives case as realized in case endings (that is, every element that can receive case, barring prepositional phrases, for instance), there is no need to posit any sort of CaseP. We can assume that the entire nominal phrase receives case at the highest level in the tree, and the case feature is distributed to each lexical head.

3.2 The Definite Article

The definite article presents additional challenges in describing the internal structure of complex nominal phrases because it may appear in several positions and may occur twice for a single NP, as outlined in section 2.4. It attaches to its NP as a proclitic, but adjuncts to N may intervene between article (Art) and N. The following represents a typical NP with a modifier (X):

1) (διὰ) τοῦ ἁπλοῦτατου ποιητοῦ (Pl. Ion 534e6) (Art-X-N)
   (through) the most insignificant poet

Adjuncts to N usually follow the article directly. This position is traditionally referred to as “attributive position” by textbooks and grammars. An oddity of Greek is the ability to repeat the article, thereby allowing modifiers to follow N:

2) ὁ ἀνθρώπως ὁ μαχητής (Art-N-Art-X)
   the tall man
Both articles must match the gender number and case of the noun head. Also possible are the following arrangements:

3) \( \ddot{a}n\theta\omicron\omega\pi\omicron\varsigma \; \omicron \; \mu\alpha\chi\rho\omicron\varsigma \) (N-Art-X)  
the tall man

4) \( \mu\alpha\chi\rho\omicron\varsigma \; \omicron \; \ddot{a}n\theta\omicron\omega\pi\omicron\varsigma \) (X-Art-N)  
the man, tall

5) \( \omicron \; \ddot{a}n\theta\omicron\omega\pi\omicron\varsigma \; \mu\alpha\chi\rho\omicron\varsigma \) (Art-N-X)  
the man, tall

Strings like (4) and (5) either represent two separate phrases linked by an (often omitted) copulative verb (e.g., “the man is tall”), or the modifier (X) is an “adjunct of state that expresses a temporary state of the referent (e.g. ‘I like the door black’ = ‘I like the door when black’)” (Bakker 2008). This becomes evident when we look at an example in context: \( \dot{o}\rho\theta\omicron\alpha\iota \; \dddot{a}i \chi \tau\omicron\chi\xi\varsigma \iota\sigma\tau\alpha\tau\mu\iota \; \iota\pi\omicron \dot{o} \phi\omicron\beta\omicron\omicron \omega \) ‘(my) hair stands up straight from fear’ (Pl. Ion 535c7). So, for the purposes of explaining the syntax of the article, (4) and (5) need not be further explored, as the associated adjectives actually belong to the predicate and not to the NP,\(^7\) which leaves (2), Art-N-Art-X, and (3), N-Art-X, to be explained. In terms of the semantic distinctions among (1), (2), and (3), the adjective of \( \omicron \; \mu\alpha\chi\rho\omicron\varsigma \; \ddot{a}n\theta\omicron\omega\pi\omicron\varsigma \) serves to further limit the noun, and that of (\( \omicron \) \( \ddot{a}n\theta\omicron\omega\pi\omicron\varsigma \; \omicron \; \mu\alpha\chi\rho\omicron\varsigma \) is emphatic.\(^8\) The arrangement Art-X-Art-N is not attested in any dialect of classical Greek (Welo, p. 188).

---

\(^7\) Although A. Pires (personal communication, January 14, 2009) indicates that the analysis of cases of secondary predication such as \( \dot{o}\rho\theta\omicron\alpha\iota \; \dddot{a}i \chi \tau\omicron\chi\xi\varsigma \iota\sigma\tau\alpha\tau\mu\iota \; \iota\pi\omicron \dot{o} \phi\omicron\beta\omicron\omicron \omega \) is still somewhat controversial, one solution he offers is that \( \dot{o}\rho\theta\omicron\alpha\iota \) leads an adjunct clause to \( \chi \tau\omicron\chi\xi\varsigma \iota\sigma\tau\alpha\tau\mu\iota \) with a PRO subject, that is, a covert subject that is controlled by \( \dddot{a}i \chi \tau\omicron\chi\xi\varsigma \), from which it receives case. In this example, \( \dot{o}\rho\theta\omicron\alpha\iota \) would have been base-generated within VP and then raised to a focus or topic position:

\[ [\text{DP } \dddot{a}i \chi \tau\omicron\chi\xi\varsigma] \; [\text{VP } [\text{V } [\text{V' } [\text{V' } [\text{V } \dot{o}\rho\theta\omicron\alpha\iota ] ] ] ] ] \; [\text{PRO, } \dot{o}\rho\theta\omicron\alpha\iota ] ] ] \; [\text{PP } \iota\pi\omicron \dot{o} \phi\omicron\beta\omicron\omicron \omega ] ] ] \]

Therefore the adjective does not belong to the NP but the predicate.

\(^8\) Menge (1961) states that “when an adjective simply expresses the more exact characterization of a noun, then it takes the attributive position between article and noun, e.g., \( \dot{o} \; \dot{a}g\alpha\omicron\theta\omicron\varsigma \; \omicron\nu\iota\varsigma \; \text{‘the good man.’} \) If it should be emphasized more strongly, then it is placed after noun with replicated article, e.g., \( \dot{o} \; \omicron\nu\iota\varsigma \; \dot{o} \; \dot{a}g\alpha\omicron\theta\omicron\varsigma \; \text{‘the man, namely the good one’} \) (as distinguished from \( \omicron\nu\iota\varsigma \; \dot{o} \; \dot{a}g\alpha\omicron\theta\omicron\varsigma \; \text{‘a man, namely the good one’})” [trans. from the German].
Creating a recursive rule (as below) for the ArtP will not solve this problem, as it would allow the generation of a variety of ungrammatical strings:

\[
\text{Art'} \rightarrow \text{Art'} \text{ ArtP}
\]

* Art-N-Art-N
* Art-N-Art-N-Art-N
   etc.

The repetition of the article may not be sufficiently described by the phrase structure rules themselves, but this phenomenon may instead be the result of movement of some kind within the nominal phrase, accounting for the postposed article in a string such as (ό) ἄνθωπος ó ἀγαθός.

Some languages, including Haitian Creole, show signs of movement in an articulated trace—that is, an element that stands in where the word that underwent movement originally was—as in this example adapted from Déprez (1992):

\[
\begin{align*}
\text{Jan} & \quad \text{sanble li pati} \\
\text{John seems} & \quad \text{he leave.INF} \\
\text{“John seems to leave”}
\end{align*}
\]

Here, *Jan* has raised from the subject position of *pati* to the subject position of *sanble*, leaving a trace in the form of a personal pronoun, *li*.\(^9\) So too may the postposed article be an articulated trace of some element in the nominal phrase.

We can represent (1) by the tree in figure 3.3.1, where the NP is the complement of Art:

\(^9\) Indeed the article has its origin as a demonstrative pronoun (PIE *so-/to-), which around Homer’s time started coming into use as an article and by the time of Plato had mostly lost its pronominal usage except in some fixed constructions such as ó μὲν…ό δὲ ‘one…the other’ (Welo, p. 187).
I propose that the adjunct (here, the AP) is generated to the right of the noun head, to account for adjectives that follow the noun when no article is present, and for reasons that will become evident when we analyze the postposed article as a trace of N. In order to achieve the surface structure seen in (1), we must posit that the adjunct raises to a higher position, thus bringing it to the left of N. The only available position is the Spec of NP:

---

10 Dik (1997) makes the same claim, that adjectives are base-generated in a postnominal position.
We can represent a construction such as (2) by raising $N^{11}$ to the Spec position of NP leaving an articulated trace in the form of the article matching its antecedent in gender, number, and case, as in figure 3.2.3:

![Diagram](image.png)

**Figure 3.2.3: N raises to Spec NP, leaving an articulated trace**

Note that the movement of $N$ blocks the movement shown in figure 3.2.2, correctly blocking strings such as *τοῦ φαυλοτάτου ποιητοῦ τοῦ.

This model accounts for multiple adjectives requiring a coordinator in attributive position, since only one element may fill the Spec position (e.g., ὁ ἀγαθὸς καὶ οὐσφὸς ἀνήρ “the good, wise man,” but *ὁ ἀγαθὸς οὐσφὸς ἀνήρ). However, Smyth provides data from Xenophon where an adjective or genitive and a PP co-occur in attributive position without a conjunction.\(^{12}\) Therefore it may be necessary to adjust the model to account for a higher level of complexity in the nominal phrase with respect to adjectival modifiers. Julien (2005) solves a similar problem in Norwegian by positing that each AP sits in the Spec of nested functional

---

11 I have not come across any examples of Art-X-N-Art-Y (where X and Y are adjuncts to N) in the data, but if this construction is possible, it may be necessary to posit the raising of not only the head, N, but of a branching N’ node.

12 According to Smyth (§1033), “if one substantive has several attributive adjectives, these are sometimes added without a conjunction (by Asyndeton).” Smyth’s examples of this do not include the article.
projections, which she refers to as \(\alpha P\). If we adopt this solution for Greek, we can assign each lexical or semantic category of adjectival modifier to an \(\alpha P\):\(^{13}\)

![Diagram of \(\alpha P\) structure]

*Figure 3.2.4: The \(\alpha P\) with the raised \(AP\) in its Spec*

It follows that prepositional phrases will have their own \(\alpha P\) to raise to, and so on, but these projections will only be generated as needed (i.e., if there are lexical items for them to hold).

Given the phrase structure rules presented in section 3.1 and the model of movement accounting for the postposed definite article, we can take a more complex example,

(5) \(τῶν\; (μὲν) \; τῶν\; τόπων\; τῶν\; ἐν\; τῇ\; γῇ\) (Pl. *Phaedo* 114b7)

of these locations on the earth

where both demonstrative and definite article occur:

---

\(^{13}\) It is beyond the scope of this investigation to describe how many such phrases exist and what distinctions are made among the modifiers they can hold.
3.3 Position of Genitives

Devine and Stephens (1999) classify the four possible positions of a genitive modifier as follows (adapted from data on p. 103):

1. \( \tau \acute{a} \varsigma \ \nu \alpha \upsilon \varsigma \ \tau \omicron \nu \ \Delta \theta \nu \acute{a} \iota \iota \omicron \ \nu \) (Thuc. 7.74.2)
   the ships of the Athenians

2. \( \tau \omicron \nu \ \Delta \theta \nu \acute{a} \iota \iota \omicron \ \nu \ \pi \epsilon \eta \ \tau \acute{a} \varsigma \ \nu \alpha \upsilon \varsigma \ \epsilon \rho \omicron \mu \alpha \tau \iota \) (Thuc. 8.55.3)
   the fortification of the Athenians around the ships

3. \( \tau \acute{a} \varsigma \ \tau \omicron \nu \ \Delta \theta \nu \acute{a} \iota \iota \omicron \ \nu \) (Thuc. 7.23.3, 7.36.3)
   the ships of the Athenians

4. \( \delta \omicron \lambda \omicron \nu \ \tau \omicron \ \sigma \omicron \rho \acute{a} \tau \epsilon \upmu \mu \alpha \ \tau \omicron \ \tau \omicron \nu \ \Delta \theta \nu \acute{a} \iota \iota \omicron \ ) (Thuc. 8.50.5)
   the entire army of the Athenians

They refer to arrangements (1) and (2) as external (in predicative position) and to (3) and (4) as internal (in attributive position). The genitive of (1) tends to be in a “simple modifier position, apparently just a sister to the head determiner phrase”—a non-contrastive position—whereas the internal genitive of (3) belongs in a functional projection (similar to \( \alpha \)P above)—a position for
contrastive or exclusive focus (pp. 103–4). This pattern is akin to the usage of certain Italian adjectives such as *vecchio* ‘old’ that occur before their noun when used non-contrastively and after their noun when used contrastively:

- *la strada vecchia*
  the old street (i.e., not the new one)
- *quel vecchio libro*
  that old book

Given Devine and Stephens’s analysis, we can account for more complex examples, where a genitive resides inside the DP, such as:

(5) *oī (τὲ) τῶν ἐπῶν ποιηταὶ οἱ ἀγαθοὶ (Pl. Ion 533e5)*
  the good poets of epic poetry

I will refer to this functional projection in which the genitive resides as γP.

*Figure 3.3.1: A genitive in SpecγP*
The projection $\gamma P$ is acting as a focus position just like $\alpha P$ above, as a genitive residing in its Spec position is focused or contrasted in the same way as attributive adjectives. Thus $\gamma P$ and $\alpha P$ may be equivalent.

4 Conclusion

4.1 Summary

We have established several subcategories of determiner based on the serial order of words in nominal phrases and the constraints on the co-occurrence of these words. We can split quantifiers into at least two classes: the $\pi\alpha\varsigma$ class (which includes those associated words listed above) and the cardinal numerals. We have established (or verified, really) the class of demonstratives, and established that the definite article belongs to its own subcategory of determiner. We then offered a structural description of the DP and a mechanism by which the postposed article is generated.

4.2 Further Points

The snapshot of the subcategories of determiner presented here can be broadened through the consideration of a larger group of words. Additionally, a study of the semantic contexts of these words in relation to their positions relative to the noun will inform the analysis of their internal syntax.

---

14 As Menge (1961) states the difference in meaning among internal and external genitives, “the attributive genitive normally stands between article and noun, e.g., ἡ τοῦ γείτόνος οἶς ἄτια or, if it is more strongly emphasized, it is placed after the noun with repetition of the article, e.g., ἡ οἶς ἀ τοῦ γείτόνος…Thus, for example, ὁ τῶν Ἀθηναίων δήμος means ‘the Athenian people’ (as contrasted with other peoples), while ὁ δήμος τῶν Ἀθηναίων means ‘the Athenian people’ (as contrasted with the Athenian senate or the nobles or the slaves in Athens)” [trans. from the German].
The proposed mechanism for generating the postposed definite article should be extended and revised in order to account for the rare occurrence of examples such as τὸ τεῖχος τὸ μακρόν τὸ νότιον ‘the long southern wall’ (And. 3. 7.), which indicate that the postposed article is generated through a recursive process, either through multiple transformations, where N (or N’) raises in steps, or through a recursive generative rule working in some manner other than that mentioned and dismissed in section 3.2.

One of the attractions of the DP that led to its proposal by Abney (1987) and its wide acceptance is its cross-categorical nature. The DP at the nominal level corresponds to the complementizer phrase (CP)\(^{15}\) at the clausal level, neatly drawing parallels between the nominal and clausal domains.\(^{16}\) It would be advantageous if parallels could be drawn between some of the ideas presented here regarding the nominal domain and the Greek CP, as these two domains could inform one another in constructing a more complete model of Greek syntax within the framework of X-bar theory.

\(^{15}\) CP represents the highest structure of a clause and holds complementizers (subordinating conjunctions) and wh-question words.

\(^{16}\) See Bernstein (2001) for an overview of the morphological, syntactic, and semantic evidence for DPs, including discussion of these parallels to CP.
Bibliography


