2003

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Determiner Typology and Universals Evidenced from Three Indo-European Languages

by

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presented in partial fulfillment of the requirements

for the degree of

Master of Arts

University of Montana

May 2003

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6-3-03

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The Nature of the syntactic category determiner has long been an issue for debate in the linguistic community. One aspect that has been awarded little scholastic attention is that of determiner typology and the related determiner universals. This thesis focuses on one aspect of determiners, which is how the typology is manifested and what related universals exist.

This thesis applies Joseph Greenberg’s theory of implicational universals to determiners and reports the result. In order to demonstrate the validity of the hypothesis, three Indo-European languages will be examined. These three languages are English, Russian, and German.

This thesis posits that these results apply to languages universally. It also proposes four universals of determiner occurrence. These universals are initially derived from a set of proposed possible determiner language types, and the subset of these types that actually occur.

Through observing the properties of three Indo-European languages in concert with a set of possible determiner types, this thesis proposes to explain this one aspect of determiner occurrence across languages, that is typology and universals.
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1 Introduction

1.1 Overview of Determiners

The determiner is a part of speech which includes the articles, the demonstratives, the ordinals, the quantifiers, the predeterminers, and the possessives. These classes are combined and organized in various ways in different languages.

I began to notice similarities between the determiner properties in Koine Greek and Dyirbal, a language of North Queensland, two unrelated languages. These similarities did not reveal any language types; however, they did lead me to examine determiner typology. Determiner occurrence across languages appears to be somewhat haphazard and random. Once the data from multiple languages is examined and compared, however, certain patterns emerge which may yield certain typological classes and universals.

In order to reveal these patterns, I adapted Greenberg's method of determining word order typology to determiners. This adaptation revealed twenty-seven possible language types (listed in detail on page seven) based on determiners. Only six of these twenty-seven possible types actually occur in language. A question arose as to why the other twenty-one possible types do not occur. Upon comparing the possible types with the actual types, four attributes, which appear to be universals of human language, emerged. These universals are as follows: that all languages possess qualifiers, or determiners that are not articles; that all determiners in a language will be inflected in the same manner; that a language with indefinite articles must also have definite articles; and, that determiners in all languages obey occurrence restrictions. This thesis proposes the existence of twenty-seven types, and that only six of these occur. This thesis further
proposes that the occurrence of these types is restricted by four universals. Data from three Indo-European languages is used to demonstrate the claim.

The process of writing this paper was somewhat different from the typical writing process, and this accounts for several unusual aspects of it. The research was conducted without a preexisting hypothesis. After examining the results, I induced my hypothesis. Chapter three on Russian was written first, followed by chapter two on English, and then chapter four on German. A chapter on Greek was also written, but has not been included in this thesis. It was the observations from these three languages that led to the theory proposed above. The long lists of examples and counter examples are necessary in order to present a complete sketch of determiner occurrence in the languages examined.

In this paper I propose two different attributes to determiners: first, that determiners break languages into different types (outlined on pages seven through nine); and second, that these types reveal certain universals of determiner occurrence, as outlined above.

In the following three chapters, three different languages will be examined in terms of their determiner properties. These three languages are all Indo-European languages in two different subfamilies. The languages are English, in the Germanic family; Russian, in the Slavic family; and German, in the Germanic family. There are several aspects of determiners that must be addressed before the typology and universals of determiners can be dealt with adequately.

1.1.1 The History of Determiner Study

Before one can adequately examine determiner typology and universals, one should first examine the history of determiner studies. The hypothesis proposed in this paper is largely a continuation of the developments that will be described in this section. This
description will explain what other scholars have said about determiners, since this is the research upon which I have based my analysis.

The study of determiners has its roots in the study of parts of speech. The study of parts of speech in turn, has its roots with the philosopher Plato.¹ Plato was the first Westerner known to have attempted a classification of parts of speech. He broke the Greek words into two categories. The first class was the ὄνομα, or names. This class corresponds roughly to the class of *nouns*. The second class was the ῥῆμα or words.² This class corresponds to the *verbs*, and everything else. With this classification system, Plato had captured a basic split among parts of speech. It was Plato's pupil Aristotle who first attempted to refine the concept of parts of speech. To the two classes that Plato had set up, Aristotle added the συνδεσμός or *bonds*. These were the grammatical words that did not fit into either of Plato's categories. They were the words that bound the sentence together, the prepositions, articles, conjunctions, etc. This class would include all the forms that make up the class, determiner.

The next group to attempt to refine Plato's classification system was the Stoics. Unfortunately, their work has been lost and is only known through the later Alexandrian, Thrax. Thrax took what the Stoics had done and refined their classification into an eight part classification system. This began a long tradition in Europe of breaking language into eight parts of speech, though what these parts were, changes greatly. Thrax set up the following categories based upon their inflectional properties in Greek: nouns, verbs, participles, articles, pronouns, prepositions, adverbs, and conjunctions. To the modern

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²It should be noted that the concept of τος ῥῆμα could probably better correspond to the English word *event*, whereas, the Greek word δ λόγος would be approximately equivalent to the English *word*.
mind, there are several interesting aspects to Thrax's classification. First, it is of interest that adjectives are grouped with nouns. There are several good reasons for this. In Greek, the adjectives share inflection with nouns. Also, in many cases an adjective can be used substantively. In some cases, the adjective has become a noun, as in ὁγίς, -α, ὅν ὁγίος/ ὁγιαῖος holy, which came to mean, holy ones, and then saints. The second item of interest in Thrax's list is his classification of participles as a separate class. In Greek, the participle is inflected, first as a verb, and then as a noun. One other item of interest is the inclusion of articles as a separate class. This is the first record where articles are classed separately. Articles, a subset of determiners, receive more of Thrax's attention than other subsets since they do not follow the same pattern of inflection and occurrence as the adjectives. The other subsets of determiners which also occur in Greek do follow the same inflectional and occurrence pattern as the Greek adjectives, and Thrax therefore groups them with the adjectives.

For about another two hundred years, Thrax's classification system was changed very little. In about the second century AD, the Roman philosopher Varro proposed a four class system, which included nouns, verbs, participles, and adverbs. The class nouns, includes the adjectives. The verbs and participles are little changed from Thrax's system, but Varro has combined the other five classes into one, adverbs.

Varro's theory was not widely accepted by other Roman philosophers, who continued to use a seven class adaptation of Thrax's system. These scholars later added an eighth class, interjections, thus maintaining the tradition of eight parts of speech. This tradition of an eight class system remained strong. When in 1795 the English

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3Latin has no articles
grammatist Lindley Murray described the parts of speech in English, he also had an eight

class system, which was a modification of the Latin system, such that his system had
	nouns, adjectives, verbs, adverbs, pronouns, prepositions, conjunctions and interjections.

Of note in Murray's list, is the exclusion of participles as a separate class, and the

inclusion of articles under the class of adjective. Also, this is the first major work to
classify adjectives as a separate class.

In his 1952 book, the American Charles Fries set up a system with four major classes

and fifteen minor ones. The four main classes are nouns, lexical verbs, adjectives, and

adverbs. Fries' classification breaks with the previous systems in several ways. First, he
includes the pronouns under the heading of noun and separates the auxiliary verbs from
the lexical verbs. Fries' fifteen minor classes are as follows: determiners, auxiliary
verbs, not, degree quantifiers, coordinating conjunctions, prepositions, pro form do,
existential there, Wh-words, subordinating conjunctions, utterance-introducers, yes and
no, attention-getters, please, and let's. Fries' system separates the auxiliary verbs from
lexical verbs. He also separates the conjunctions into two classes. Fries' expansion of
the class article into the class determiner, which includes possessives and quantifiers, is
relevant to my thesis since this is the part of speech that I concentrate on.

The next major step in the classification of parts of speech was taken by the
Generativists in the 1950's and 1960's. The Generativists took the work of Fries and his
contemporaries and expanded and modified it. They proposed the following classes:

nouns (including pronouns), verbs, adjectives, adverbs, auxiliary verbs, determiners,
complementizers, coordinating conjunctions, and subordinating conjunctions. The main
item of interest is the addition of the class complementizer, which contained the words
*that, whether, and a few others, as in the sentence, Richard said that it was cold outside.*

1.1.2 The Purpose of Determiners

The existence of the class determiner has been established by the scholarship of Charles Fries, Noam Chomsky, and other Generativists, which was outlined in the previous section. In addition, Steven Abney's work on Determiner Phrase has served to further reinforce *determiner* as a legitimate part of speech. The semantic function of determiners is not as well established. This issue, however, should be resolved to a certain degree before the typology can be thoroughly explained since establishing a purpose for the class *determiner* is fundamental to explaining that determiners occur in all languages. This, in turn, is crucial to establishing a typology because a typology is based upon commonalities among languages. Without such commonalities a typology cannot be proposed. It is established that determiners determine, or constrain, the meaning of nouns, but this fact is not sufficient to explain the existence of determiners because to a large extent adjectives can achieve the same goal. In order to achieve a more satisfactory purpose for determiners, this purpose must also account for their occurrence in the context of discourse. So in terms of syntax, what does a determiner do? No single, agreed upon answer has yet been proposed, but there are many possibilities. It is possible that they exist simply to constrain the scope of nouns; however, an examination of English and Greek texts will yield some intriguing observations. Consider for a moment the title of the popular soap opera,

1.1) "The Bold and the Beautiful"

No native speaker has difficulty processing the meaning of this string. It means

1.2) the bold people and the beautiful people
Both of these strings denote the existence of two sets of people, bold people and beautiful people. In order to express this same concept while referring to only one person, the string should be manifested in this way,

1.3) The bold and beautiful

Since this string contains only one determiner, it must therefore be a single Noun Phrase, whereas, 1.1 and 1.2 are two separate Noun Phrases.

Now, consider the following string,

1.4) *Bold and beautiful

This string does not constitute a complete noun phrase, and if it is not incomprehensible, then it will at least leave the listener wondering, bold and beautiful what? This is not to say that a context could not be imagined in which this string would be acceptable, but by itself it is ungrammatical. What is the difference between 1.1 and 1.4? It is the presence of determiners in 1.1. Since all languages have determiners, one might venture to guess, from this data, that the determiner marks the noun phrase, that its presence or absence aids in the interpretability of a string on the very basic level of determining what is and is not a noun phrase.

In further support of the hypothesis concerning the interpretability of a Noun Phrase, examine the common Koine Greek phrase,

1.5) ὁ ἅγιος /ho agios/ the saints (holy ones)

This form is derived from the Greek adjective, ἅγιος /agios/ holy. Here again the presence of the determiner indicates the extent and existence of a complete noun phrase, whereas without the determiner the string is incomplete and ungrammatical.

A counter example to this claim can be found in the occurrence of the English plural,
1.6) Apples are red.

However, it can be argued, and has been by Quirk,⁴ that in this instance there is indeed a determiner in this noun phrase, the zero article, which denotes the indefinite plural. Thus, the actual form of this sentence would be

1.7) $\emptyset$ Apples are red.

Further evidence of this can be found in the French sentence of the same meaning,

1.8) des pommes sont rouge /de pom sō ruʒ/ apples are red

The article *des* indicates the indefinite plural in French, and corresponds to the zero article in English.

The determiner also exists for the purpose of clarification and determination of the noun, primarily in terms of definiteness versus indefiniteness. Consider the following two examples,

1.9) He wants to buy a house.

1.10) He wants to buy that house.

In example 1.9, he wants to buy a house, any one house out of the complete set of houses. In example 1.10, he wants to buy a specific house within the set of houses, and more specifically a house that is either distant or absent from the speaker. Thus the determiner also serves to constrain the possible meanings of a given noun or noun phrase, and therefore to aid the interpretability of the sentence or string. This being said the main point to be outlined in the remainder of this thesis can be considered valid since the above claim allows a comparison among languages by establishing a commonality among them, and this is necessary in order to establish a typology of determiners.

1.2 Determiner Typology

Determiners, like all other aspects of language, divide languages into different types based upon the attributes of the particular feature examined, in this case determiners.

1.2.1 Possible Determiner Language Types

To my knowledge, no work to date has addressed the possible language types that an examination of determiner properties in languages may yield. Nor has any work attempted to establish a system for determining these types. Therefore, after considerable observation of English determiners, in conjunction with limited observation of determiners in other languages (notably, Russian and German, but also Kyrgyz, French, Koine Greek, and Biblical Hebrew), I propose that determiner typology can be represented by the following system of determiner language types, as was described on page one.

If one classes the determiners into three main classes, qualifiers\(^5\) (including demonstratives, predeterminers, possessives, and interrogatives.), definite articles, and indefinite articles, then there are twenty-seven possible types that may occur in terms of the attributes of the determiners. These three classes are selected based upon my observations of the occurrence of determiners in, Kyrgyz, a language without articles. Languages such as Kyrgyz possess all types of determiners except definite and indefinite articles; therefore, all non-articles can be grouped together. These possibilities are derived by examining these three classes of determiners, qualifiers, definite articles, and indefinite articles, in three possible occurrences, nonexistent\(^6\), uninflected, and inflected.

\(^{5}\)I have chosen the term qualifier to differentiate this catch-all class from the more restricted determiner class of quantifier, which includes all, each, and so on.

\(^{6}\)No language exists without qualifiers, but this possibility is entertained in order to exemplify this fact about languages.
Many of these possible types do not or cannot occur. Because of my grouping system, the most widespread class is the qualifiers, followed by the definite articles, and then the indefinite articles. Based on this observation, the types indicated in the following list are ordered with the qualifiers first, definite articles second, and indefinite articles last. The possible types are as follows,

1. No qualifiers, No definite, No indefinite (NNN)
2. Uninflected qualifiers, No definite, No indefinite (UNN)
3. Inflected qualifiers, No definite, No indefinite (INN)
4. No qualifiers, No definite, Uninflected indefinite (NNU)
5. Uninflected qualifiers, No definite, Uninflected indefinite (UNU)
6. Inflected qualifiers, No definite, Uninflected indefinite (INU)
7. No qualifiers, No definite, Inflected indefinite (NNI)
8. Uninflected qualifiers, No definite, Inflected indefinite (UNI)
9. Inflected qualifiers, No definite, Inflected indefinite (INI)
10. No qualifiers, Uninflected definite, No indefinite (NUN)
11. Uninflected qualifiers, Uninflected definite, No indefinite (UUN)
12. Inflected qualifiers, Uninflected definite, No definite (IUN)
13. No qualifiers, Uninflected definite, Uninflected indefinite (NUU)
14. Uninflected qualifiers, Uninflected definite, Uninflected indefinite (UUU)
15. Inflected definite, Uninflected definite, Uninflected indefinite (IUU)
16. No qualifiers, Uninflected definite, Inflected indefinite (NUI)
17. Uninflected qualifiers, Uninflected definite, Inflected indefinite (UUI)
18. Inflected qualifiers, Uninflected definite, Inflected indefinite (IUI)
19. No qualifiers, Inflected definite, No indefinite (NIN)
20. Uninflected qualifiers, Inflected definite, No indefinite (UIN)
21. Inflected qualifiers, Inflected definite, No indefinite (IIN)
22. No qualifiers, Inflected definite, Uninflected indefinite (NIU)
23. Uninflected qualifiers, Inflected definite, Uninflected indefinite (UIU)
24. Inflected qualifiers, Inflected definite, Uninflected indefinite (IIU)
25. No qualifiers, Inflected definite, Inflected indefinite (NII)
26. Uninflected qualifiers, Inflected definite, Inflected indefinite (UII)
27. Inflected qualifiers, Inflected definite, Inflected indefinite (III)

Of these twenty-seven possibilities, twenty-one do not or cannot occur, leaving only six classes. The reasons why these twenty-one possible classes do not occur constitute the determiner universals, and will be explored in section 1.3. The six occurring forms are,

1. UNN
2. INN
3. UUN
4. UUU
5. IIN
6. III

Presumably, all human languages belong to one of these six types.
1.2.2 Occurring Determiner Types

The six types listed above actually occur in human languages, but which type is more common and which is less common cannot be determined without significant additional research. The UNN type is relatively common in Turkic languages, such as Kyrgyz.

1.10) bul kiji this man

1.11) bul kijini these men

The form of the qualifier, bul does not change with regard to the number, gender, or case of the head noun.

The INN type is also common, especially in Slavic languages. An excellent example of this is the Russian language. Consider the following examples,

1.12) tot chelovek novyi /tot tselovek novuij/ that man is new

1.13) ia vidyat togo chelovek /ja vidjat togo tselovek/ I see that man

In these examples the determiner tot is marked for case. In example 1.12, it is marked for nominative case, whereas in 1.13 it is marked for accusative case.

The UUN type does not appear to be as common as the previous two types. It does occur in Biblical Hebrew.

1.14) /ha?arets/ the earth

In Hebrew the prefix /ha/ the remains constant regardless of number, gender, or case. The qualifiers function in the same manner, but are not necessarily prefixes.

The UUU type is relatively uncommon across languages; however, English is a member of this type. In English, the determiners are not modified for case, number, or gender, nor are the nouns.
The IIN type is moderately common. Koine Greek is a member of this type. In Koine Greek, the definite article, and the qualifiers are marked for gender, number, and case. They must agree with the head noun in all three of these respects.

The final type, III, is common among Germanic languages. Consider the following examples from German,

1.15) der Mann *the man*
1.16) dem Mann *to the man*
1.17) das Wasser *the water*

The determiners in German are marked for case, as in examples 1.15 and 1.16, and for gender, as in 1.17. They are also marked for number.

1.3 Determiner Universals

As noted in the previous section, there are many determiner types that do not occur. There are universals of languages that may help explain this. These universals are based largely upon Joseph Greenberg's implicational universals. Based upon my examination of the possible types, and subsequent comparison to the occurring types, three patterns emerge that suggest certain facts about language. The first fact is that all languages have qualifiers. To my knowledge, no language has yet been described that does not have at least qualifiers and demonstratives. The second fact is that languages that have indefinite articles also have definite articles. Indefinite articles cannot occur without definite articles. The third fact is that if one class of determiner is inflected, all other occurring classes must also be inflected. Therefore, in no language can one class be

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inflected and another uninflected. These three facts appear to be universal throughout all human languages.

The fourth universal does not relate to the determiner types but rather to the ways in which determiners occur within a language. This universal is that in all languages determiners obey three types of restrictions: co-occurrence restrictions, which restrict which determiners can co-occur together; ordering restrictions, which determine the order in which co-occurring determiners fall within the noun phrase; and subcategorization restrictions, which determine what nouns a determiner can modify.

1.4 Syntax of Determiners

The view of the syntax of determiners has fluctuated greatly over the past fifty years. Originally, they were viewed as nominal modifiers as part of the linear string of the sentence. Then, in the late 1950's and early 1960's, Transformational Grammar began to alter the perception of syntax, and thus of determiner syntax. The determiner was now viewed as the sister to the noun on a hierarchical structure as in Figure 1.1

```
           NP
            ▼
             D   AP   N
              ▼
               A
                ▼
                the  red  dog
```

Figure 1.1

In the late 1970's the view of the syntax of determiners was changed again, this time by X-bar theory, which proposed the following structure, seen in Figure 1.2.

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8 The following historical narrative is adapted from Jamal Ouhalla. *Introducing Transformational Grammar*. Arnold, 1999.
In Figure 1.2, the D is in the specifier position of the Noun Phrase, denoting both its relationship to the head N, and its linear position.

The most recent revision to determiner syntax was proposed by Steven Abney in 1987. He proposed a new phrasal constituent, the Determiner Phrase (DP). The DP occurs in the specifier position of the Inflected Phrase (IP), where the Noun Phrase had originally resided. The Noun Phrase then becomes the complement of the head D. This structure helps explain many attributes of English and German determiner structure. For example, this structure creates a position for all of the possible determiners that can co-occur in these languages. The DP hypothesis may face a problem with Russian syntax, for reasons that will be outlined in chapter three.
2. English Determiners

2.1 Overview of English Determiners

English is a language that exhibits a UUU structure, in which the definite and indefinite articles, and the qualifiers are all uninflected, type four in my scheme. The agreed upon forms that comprise the set of determiners in English are as follows:

- *a(n) any*
- *each either*
- *enough every*
- *much neither*
- *no some*
- *that the*
- *these this*
- *those what*
- *which whose*
- *possessives θ*

Some analysts include the predeterminers *all, both,* and *half,* and the ordinals.

These determiners can be broken into seven subclasses. The broadest of these is the subclass quantifiers. These include, *any, each, either, enough, every, much, neither, no,* and *some.* A more restricted subclass is that of the demonstratives, *this, that, these,* and *those.* The third class is that of the interrogatives, *what, which,* and *whose.* The predeterminers, *all, both,* and *half* as well as *double, triple, twice, three times,* etc. comprise the fourth subclass. The fifth is comprised of the articles, *the, a(n),* and *θ.* The sixth subclass is that of the ordinal modifiers, which include the ordinal numbers as well...
as next, last, other, and another. All possessive Noun Phrases pattern similarly, and thus can be grouped as the seventh subclass.

2.2 Co-Occurrence Restriction of English Determiner Subclasses

Determiners in all languages obey co-occurrence restrictions, but the extent of these restrictions varies widely across languages. Following is an account of the co-occurrence restriction that English determiners obey.²

2.2.1 Qualifiers

The members of this subclass cannot co-occur with each other, as in,

2.1) *Any neither bird

nor with the other determiners as in,

2.2) *The any honey

2.3) *Which enough candy

They also cannot co-occur with the predeterminers, thus,

2.4) *All much water

2.5) *Double every water³

The qualifiers any, each, enough, much, neither, and some also have alternative constructions with of. These constructions obey a different set of co-occurrence restrictions. They can still not co-occur with other qualifiers, but they can co-occur with the demonstratives, as in,

2.6) Much of this meat

2.7) Neither of these shoes

¹The separation of the ø article from the a(n) article is from Quirk.

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They can also co-occur with the determiners, thus,

2.8) Enough of the cats

2.9) Much of a car

They cannot co-occur with the \(\emptyset\) article,

2.10) *Some of trees

2.11) *Any of turtles

They cannot co-occur with the predeterminers, but they can co-occur with the ordinals, as in,

2.12) Each of the first boats

2.13) *All some of the rocks

They cannot co-occur with the ordinals without also co-occurring with the definite article, as in,

2.14) *Any of next tests

2.2.2 Demonstratives

The demonstratives pattern together and can co-occur with the predeterminers and the ordinals, as well as certain other of constructions. They can co-occur with the predeterminers, thus,

2.15) All this light

2.16) Both these desks

2.17) Half those apples

2.18) Double that number

*This and that may also co-occur with the ordinals, as in,
2.19) That next chair

2.20) This third book

2.2.3 Interrogatives

The interrogative determiners *what*, *which*, and *whose* can co-occur with the predeterminers and with the qualifiers with *of*,

2.21) All whose book

2.22) Each of what apples

2.2.4 Predeterminers

The predeterminers in English can co-occur with the demonstratives, the articles, the interrogatives, and the possessives. They can co-occur with the demonstratives, as in,

2.23) All this light

2.24) Double these portions

They can co-occur with the articles similarly,

2.25) Half the bed

2.26) Twice a man

Also, they can co-occur with the interrogatives in the following ways,

2.27) Both whose cars

2.28) Thrice what bear

They cannot co-occur with the ordinals,

2.29) *All next cats

They can, however, co-occur with the possessives, thus,

2.30) Both John's books

2.31) All my cows
2.2.5 Articles

English articles may not co-occur with possessives, demonstratives, interrogatives, or qualifiers. The definite article can co-occur with the predeterminers, as in,

2.32) Half the bread
2.33) Double the milk

The indefinite article can only co-occur with the predeterminers, *half, twice, and three times, etc.*

2.34) Half a car
2.35) *All a milk*
2.36) *Both a houses
2.37) Twice a bird
2.38) *Triple a light

Both the definite and indefinite articles can co-occur with the ordinals,

2.39) The next window
2.40) A first cake

The * article also appears to co-occur with the ordinals, thus,

2.41) Next winner

2.2.6 Ordinals

Ordinals in English can co-occur with all other determiners except the qualifiers and the predeterminers,

2.42) This second cup

---

\[Note: The ungrammaticality of this Noun Phrase is related to the subcategorization restrictions of the English indefinite article, a(n).]
2.43) A third coat
2.44) Whose fourth duck
2.45) Bob's fifth coke

The ordinals can occur with the qualifiers with *of*, if they also co-occur with a definite article or a demonstrative, as in,

2.46) Any of the first customers

2.2.7 *Possessives*

The possessives in English can co-occur only with the predeterminers, the ordinals, and the qualifiers and *of*, as in the following,

2.47) All Wanda's charcoal
2.48) Bill's first assignment
2.49) Each of Ray's dogs

All aspects of English Determiners obey co-occurrence restrictions, as posited by universal number four.

2.3 Ordering Restrictions of English Determiners

The third set of restrictions that determiners obey is ordering restrictions. These restrictions determine the order in which co-occurring determiners will appear inside a Noun Phrase.

Either a predeterminer or a qualifier with *of* will occur first, followed by either a demonstrative, an article, an interrogative, or a possessive. Then will follow an ordinal, followed by a numeral, and then an adjective. In English, the last position in such a noun phrase will be the noun, thus,

2.50) All the first seven green apples
2.51) Any of the next nine pink peaches

Another possibility is that a qualifier will occur first, followed by a numeral, an adjective and the head noun, thus,

2.52) Every six old shoes

The ordering restrictions can be represented as a chart in the following way,

<table>
<thead>
<tr>
<th>Predeterminer</th>
<th>Demonstrative</th>
<th>Ordinal</th>
<th>Numeral</th>
<th>Adjective</th>
<th>Noun</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantifier + of</td>
<td>Article</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Interrogative</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Possessive</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 2.1

<table>
<thead>
<tr>
<th>Qualifier</th>
<th>Numeral</th>
<th>Adjective</th>
<th>Noun</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 2.2

All English determiners obey ordering restrictions, as proposed by the fourth universal.

2.4 Subcategorization Restrictions of English Determiners

All determiners obey subcategorization restrictions. These restrictions determine what type of noun a particular determiner can modify. The determiners break into six groups based on subcategorization. These groups bear little or no relation to the seven natural classes of English determiners. In order to fully explain subcategorization restrictions, one must first explain the breakdown of English nouns since the subcategorization properties are based on this breakdown.
2.4.1 Subcategorization of English Nouns

According to Quirk, all English nouns fall into one of three categories. These categories are singular, plural, and mass. Singular and plural nouns are fairly well known; mass nouns, however, may require some explanation. They are simply nouns that refer to an object that cannot be counted, such as water, light, or ink. Quirk, et al. also sets up a frame for categorizing nouns; thus in figure 2.3 below, dog is singular, dogs is plural, and water is mass. This same frame will be used to represent subcategorization restrictions among the determiners.

![Figure 2.3](image)

2.4.2 Group One Determiners

The group one determiners, in terms of their subcategorization properties, are the, no, whose, which, what, some (when stressed), any (when stressed), and the possessives. These forms subcategorize for all three classes of nouns.

2.53) the man
2.54) the men
2.55) the light
2.56) whose cat
2.57) whose cats
2.58) whose water
2.4.3 Group Two Determiners

Group two determiners consist of \( \emptyset \), some (when unstressed), any (when unstressed), and enough. These forms subcategorize for a plural noun, as in

2.59) Enough pillows

2.60) Pillows (with the \( \emptyset \) article)

They also subcategorize for a mass noun,

2.61) Enough paint

2.62) Paint (Again, with the \( \emptyset \) article)

They cannot, however, subcategorize for a singular count noun, thus,

2.63) *Enough cat

2.64) *Cat\(^5\)

2.4.4 Group Three Determiners

The group three determiners are simply the singular demonstratives this and that.

They subcategorize for a singular noun or a mass noun,

2.65) This beaver

2.66) That ink

They do not subcategorize for a plural noun,

2.67) *This beavers

2.68) *That houses

2.4.5 Group Four Determiners

This group of determiners is comprised of the plural demonstratives these and those.\(^7\)

These two forms subcategorize only for a plural noun, as in,

\(^5\) Quirk, p. 138.
2.69) These houses
2.70) Those bears

They cannot subcategorize for a singular or mass noun, thus,

2.71) *These bird
2.72) *Those milk

2.4.6 Group Five Determiners

This group of determiners consists of a(n), every, each, either, and neither. These forms subcategorize only for a singular noun, thus,

2.73) A chicken
2.74) Every horse

The do not subcategorize for a plural or mass noun, as in,

2.75) *Each cows
2.76) *Neither air

2.4.7 Group Six Determiners

This group consists singly of much. Much can only subcategorize for a mass noun, therefore, the following,

2.77) Much water
2.78) *Much cat
2.79) *Much cats

2.4.8 Summary of English Subcategorization Restrictions

The six groups of English determiners in relation to subcategorization restrictions can be summarized in terms of subcategorization frames, thus

---

6 This form would be acceptable as a vocative case construction.
7 Quirk, p. 138.
Group 1: *the, no, whose, which, what, some* (when stressed), *any* (when stressed), and the possessives

Group 2: *a, some* (when unstressed), *any* (when unstressed), and *enough*

Group 3: *this and that*

Group 4: *these and those*\(^8\)

Group 5: *a(n), every, each, either, and neither*

\(^8\) *Many* is not included in Quirk’s list, and is therefore not included here.
Group 6: *much*

English determiners obey sub-categorization restrictions, just as was expected, based on the fourth universal.

2.5 Phonology of English Determiners

Six of the seven natural classes of English determiners are not constrained by any phonological alternations. The seventh class, the articles, is constrained only slightly. The two physically realized articles in English, *the* and *a(n)*, are phonologically conditioned by the initial segment of the following word. If the initial segment is a consonant then they are manifested thus,

2.80) The bird /ðə bɔːrd/

2.81) A cat /ə kæt/

If the initial segment of the following word is a vowel, then the article manifests itself in the following way,

2.82) The ant /ði ænt/

2.83) An eagle /æn ɪɡəl/

The phonological form of the determiner is conditioned by the initial segment of the following word, not of the head noun, thus,

2.84) The old man /ði old mæn/

2.85) A little ant /ə lɪtəl ænt/
2.6 Morphology of English Determiners

English determiners bear no morphological marking.

2.7 Syntax of English Determiners

How the syntax of determiners in English functions has been a fluid topic. The ideas of how the determiner is related to its head noun have changed considerably and frequently over the years. Some of the most significant advances in the structure of the determiner-noun relationship have been made by the Generativists. According to the earliest generative grammar theories in the 1950's and sixties, the noun phrase "all the next seven happy bears" would have been represented in the following way,

Figure 2.4

In 1987, Steven Abney proposed a Determiner Phrase Structure, which was dealt with briefly in chapter one. This DP analysis would produce the following tree of English determiner occurrence.
2.8 Summary of English Determiner Usage

English exhibits all of the characteristics expected of a UUU language. It possesses qualifiers, definite articles, and indefinite articles. None of these classes are inflected for number, gender, or case.

The evidence presented in English is also consistent with the proposed universals. English has qualifiers, which is consistent with the first universal. English has indefinite articles and also has definite articles. This is consistent with the second universal. All three of the determiner classes in English are uninflected, which correlates with the third universal. In regard to the fourth universal, English determiners are restricted by co-occurrence restrictions, ordering restrictions, and sub-categorization restrictions.
3 Russian Determiners

3.1 Overview of Russian Determiners

Russian has an INN structure, wherein, the qualifiers are inflected and there are no definite or indefinite articles (This would be a type two language in my scheme.). According to Russian grammarians and language texts, Russian has no articles, but it does have five special modifiers, four of which are closely related to independent nominal modifiers. These special modifiers correspond to what American linguists classify as determiners.

3.1.1 The Special Modifiers

The five special modifiers pattern together and are один /odin/ one, всє /ves/ all, этцот /etot/ this, тот /tot/ that, and чей /tsiej/ whose.

3.1.1.1 Один /odin/ one

Один operates primarily as a numeral modifier, as in

3.1) один портфель /odin portfel/ one bookbag.

The complete paradigm of the indefinite nominal modifier in the nominative case is as follows:

один /odin/ - one, masculine  один дом /odin dom/ one house
одна /odna/ - one, feminine  одна книга /odna kniga/ one book
одно /odno/ - one, neuter   одно ведро /odno vedro/ one bucket
одни /odni/ - only; alone, plural  одни люди /odni lyudi/ only people

Один, the special modifier is closely related to the numeral один, which has the same

1The following is adapted from V. Kostomarov. Russian for Everybody. Moscow: Russky Yazik, 1992.
phonological form, the same meaning, but follows different co-occurrence restrictions and is uninflected.

3.1.1.2 Весь /ves/ all

Весь can be used in two different ways. First it can be used with a temporal noun, as in

3.2) весь вечер /ves V etjer/ all evening. It can also be used with a mass noun, such as вода, as in

3.3) вся вода /ves voda/ all the water.

The complete paradigm of the indefinite temporal/mass nominal modifier in the nominative is as follows:

весь /ves/ - all, masculine, весь вечер /ves V etjer/ all evening
вся /vca/ - all, feminine, вся вода /vca voda/ all water
всё /vcjo/ - all, neuter, всё мясо /vcj o myaso/ all meat
все /vce/ - all, plural, все книги /vce knigi/ all books

This determiner is related to the independent pronouns, всё /vsjo/ everything and все /vse/ everybody. Neither of these pronouns obey co-occurrence restrictions, nor are they inflected, thus they occur in the following way,

3.4) всё красное /vsjo krascnoje/ everything is red.
3.5) все старые /vse staruije/ everyone is old
3.1.1.3 ἓτο/etot/ this

The third special modifier, ἓτο/etot/ (this) is derived from the independent pronoun, ἓτο. ἓτο follows the same pattern as the previous two special modifiers, as in

3.6) ἓτα κνίγα /eta kniga/ this book.

The definite special modifier has the following forms in the nominative case:

ἓτο/etot/ - this, masculine ἓτο μαζίν /etot magazin/ this store

ἣ /eta/ - this, feminine ἓτη πεςνί /eta pesnyya/ this song

ἕτο /eto/ - this, neuter ἕτο οκινό /eto okno/ this window

ἕτι /eti/ - these, plural ἕτι ποζέδα /eti poezda/ these trains

This special modifier is closely related to the demonstrative pronoun ἓτο /eto/ this.

This independent pronoun follows no co-occurrence restrictions, and is uninflected, thus

3.7) ἓτο δόμ /eto dom/ this is a house (m.)

3.8) ἓτο μαζίνα /eto masjina/ this is a car (f.)

3.9) ἓτο οκινό /eto okno/ this is a window (n.)

3.10) ἓτο πτίς /eto ptitsui/ these are birds, (pl.)

3.1.1.4 ἑτο/etot/ that

The far definite special modifier is ἑτο /tot/ that. It functions in the same way as the previous three special modifiers, as in

3.11) ἓτο οκινό /tot okno/ that window

The complete nominative paradigm of ἑτο is as follows:
TOT /tot/- that, masculine TOT САД /tot sad/ that garden

ТА /ta/- that, feminine ТА ШКОЛА /ta skola/ that school

ТО /to/- that, neuter ТО ПИСЬМО /to pis^mo/ that letter

ТЕ /te/- that, plural ТЕ БИБЛИОТЕКИ /te biblioteki/ those libraries

TOT is related to the far definite independent pronoun TO /to/ that, which does not obey co-occurrence restrictions, and is uninflected.

3.1.1.5 Чей

Russian also has an interrogative special modifier, ЧЕЙ /tjej/ whose. This modifier works in the same manner as the other four special modifiers, thus

3.12) Чьи книги /tji^i knigi/ whose books

The nominative paradigm of ЧЕЙ is as follows:

ЧЕЙ /tjej/- whose, masculine ЧЕЙ МАГАЗИН /tjej magazin/ whose store

Чья /tji^a/- whose, feminine Чья газета /tji^a gazeta/ whose newspaper

Чье /tji^o/ whose, neuter Чье пальто /tji^o palto/ whose coat

Чьи /tji^i/ whose, plural Чьи дома /tji^i doma/ whose houses

The special modifiers are inflected for gender and number. Thus if the special modifier is modifying a feminine singular noun, then the feminine form must be used,

3.13) одна машина, one car, for example.

The same applies to ВСЕ. It must be specified for the same gender and number as the noun it modifies, i.e.
3.14) *все дни* /vse dni/ *all days.*

Этот functions the same way. Thus, in the following Noun Phrase

3.15) *это яблоко* /eto yabloko/ *this apple.*

The indefinite and mass special modifiers pattern together as follows: *один вечер* /odin vetjer/ *one evening* и *вечер* /veci vetjer/ *all evening,* etc. The special modifiers are also inflected for case, but this will be discussed later.

The special modifier *это* patterns with *один* and *вечер* as follows: *эта машина новая* /eta majina novaja/, *this car is new.* It does not have to occur in an equational sentence as with *это,* for example,

3.16) *Эта женщина работает на заводе* /eta zen4ina rabotajet na zavode/ *this woman works in the factory.*

3.2 Phonology of Russian Determiners

Russian determiners do not change their form based upon their phonological environment. Thus, the form of the special modifier remains constant whatever the initial segment of the following word. They do not assimilate in voicing, as in,

3.17) *это ведро* /eto vedro/ *this bucket*

3.18) *это письмо* /eto pis4mo/ *this letter*

3.19) *это окно* /eto okno/ *this window*

Or in place of articulation

3.20) *один магазин* /odin magazin/ *one store*

---

2It should be noted that gender is neutralized in the plural in Russian.
3.21) один спорт /odin sport/ one sport

3.22) один год /odin god/ one year

3.3 Co-occurrence restrictions

The five special modifiers break into three distinct groups with regard to their co-occurrence restrictions. The members of each group are mutually exclusive with each other and cannot co-occur. The first group consists of один /odin/ and всё /ves/, the second of этот /etot/ and тот /tot/, and the third of only чей /tej/, which patterns with the possessives.

3.3.1 Один and Весь

Один and Весь pattern together and can both co-occur with этот. For example,

3.23) Весь этот вечер all this evening.

3.3.1.1 Co-occurrence restrictions with весь

Весь always occurs before the definite modifier, as in the previous example. It can also co-occur with the independent definite pronoun, это, as in

3.24) Весь это мой /ves eto moj/ all this is mine.

When co-occurring with the definite special modifier этот, весь must be inflected for gender and number. Thus,

3.25) вся эта вода /vca eta voda/ all this water

is well formed, but

3.26) *всё это вода /vce eto voda/ all this is water
is not. Весь can also co-occur with тот in much the same way. Again both premodifiers must agree with the noun in gender and number,

3.27) веe тe людi /ves¹ te lyudi/ all those people
3.28) вся тa вода /ves¹ a voda/ all that water

Весь can co-occur with numerals, as well, in the following manner,

3.29) всe тpи яблока /ves¹ tri yabloka/ all three apples

It cannot co-occur following a numeral,

3.30) *четыре всe дома /tetshire vs¹ e doma/ four all houses

The final class of nominal modifier that весь can co-occur with is the adjective. It can co-occur with an adjective, as follows,

3.31) всe кpасныe яблоки /ves¹ e krasnujije yabloki/ all red apples
3.32) вся кpасивая вода /ves¹ a krasivaya voda/ all beautiful water

It can also co-occur with этот and an adjective,

3.33) всe эти хорошие книги /ves¹ e ti xorolije knigi/ all these good books

or with тот,

3.34) всeть тот старый снег /ves¹ tot staruij sneg/ all that old snow

3.3.1.2 Co-occurrence restrictions with один

Один follows the same basic co-occurrence pattern as весь, with a few exceptions. First, it can co-occur with этот, but it must occur between этот and the noun or adjective, thus

3.35) этот один портфель /etot odin portfel¹/ this one bookbag

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is grammatical, but

\[3.36) \text{*одна это машина /odna eta maja/ this car alone}\]

is not. Contrary to logical thought, Один can co-occur with the numerals in the plural as in,

\[3.37) \text{один пять школ /odni pyati skol/ only five schools}\]

Один can do this because it can also convey the meaning *only*. It cannot occur in the singular with another numeral since in the singular, it takes on the properties of a numeral, also, no other numeral can occur with the singular.

3.3.2 том and Tom

3.3.2.1 Co-occurrence restrictions with том

Этот can co-occur with весь and один as described above. It can co-occur with all adjectives, but not with тот or чей. Thus,

\[3.38) \text{вся эта вода /vsja eta voda/ all this water}\]

and

\[3.39) \text{это одно окно /eto odno okno/ this one window}\]

are grammatically correct, but

\[3.40) \text{*этот тот дом /etot tot dom/ this that house}\]

\[3.41) \text{*чья эта школа /tja eta skola/ whose this school}\]

are unacceptable.

Этот can also co-occur with all numerals, as in

\[3.42) \text{эти три книги /eti tri knigi/ these three books}\]

\[3.43) \text{эти шесть дней /eti jeti dniu/ these six days}\]
It can also co-occur with any numeral and один in the plural in the following manner:

3.44) один эти пять птиц /odnî eti pjat' ptitsu/ only these five birds

As noted above, этот can also co-occur with any adjective, in any gender or number,

3.45) эта белая книга /eta belaja kniga/ this white book
3.46) это одно ведро /eto odno vedro/ this one bucket
3.47) один этот зеленый гараж /odin etot zelenui/ only this green garage
3.48) все эти письма /vs'ë eti pic'ma/ all these letters

3.3.2.2 Co-occurrence restrictions with Tom.

Тот follows the same co-occurrence restrictions as этот. It can occur with both один and все, but not with этот or чей, thus,

3.49) тот сад /tot sad/ that garden
3.50) та одна машина /ta odna masina/ that one car
3.51) одно то мясо /odno to mjaco/ only that meat
3.52) все то мясо /vs'ë to mjaco/ all that meat
3.53) все те комнаты /vs'ë te komatwi/ all those rooms

but not,

3.54) *та эта газета /ta eta gaz'eta/ that this newspaper
3.55) *чей тот номер /tjej tot nomer/ whose that number

It can co-occur with all adjectives and numerals, thus

3.56) тот русский лес /tot russkij l'ec/ that Russian forest
3.57) те три ведра /te tri vedro/ those three buckets

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or, it can co-occur with один or весь and an adjective and a numeral, as in

3.58) один те старые врачи /odin te staruyi te vratyi/ only those old doctors

3.59) весь тот зеленый лед /ves tot zelenuij led/ all that green ice

3.60) все те шесть бабушек /vs te babusjki/ all those six grandmothers

3.61) один те пять цветов /odni te pjeti tsbetkoui/ only those five flowers

3.3.3 Co-occurrence Restrictions with Чей

Чей forms its own group of special modifier. It does not pattern with any of the other four special modifiers, but it does pattern with the possessive pronouns. Чей cannot co-occur with any of the other special modifiers, nor can it co-occur with a possessive modifier. Thus, the following are ungrammatical,

3.62) *чё моё яблоко /t'eo mojo aboloko/ whose my apple

3.63) *чё одна машина /t'ea odna mazina/ whose one car

3.64) *чёй этот дом /t'jej etot dom/ whose this house

It can co-occur only with an adjective, thus

3.65) чё плохие дети /t'ej ploxije deti/ whose bad children

or a numeral thus,

3.66) чё пять книги /t'ej pjeti knigu/ whose five books

or both thus,

3.67) чё три синие яблоки /t'ej tri siniju jabolki/ whose three blue apples
3.3.4 Possessives

Possessives are nominal elements that modify a noun. They are genitive case forms, and indicate possession. They are formed in the same manner as adjectives; however, they do not follow the same co-occurrence restrictions. They pattern closely with the special modifier, чей. Possessives cannot co-occur with этот, тот, or чей, but they can co-occur with весь and один, as in

3.68) вся её вода /v sla ye yo voda/ all her water

3.69) одно их пальто /odno ix pal'to/ only their coat

Possessives can also co-occur with adjectives and numerals, thus

3.70) наша красная кухня /na'ja krasnaja kux'n'a/ our red kitchen

3.71) твои четыре большие комнаты /tvoji tet'vre bol'si'je komnatui/ your four big rooms

3.3.5 Order of Occurrence of Nominal Premodifiers

As in many languages, the nominal premodifers in Russian obey certain ordering rules in addition to their co-occurrence restrictions. These restrictions apply as follows,

<table>
<thead>
<tr>
<th>один/весь</th>
<th>этот/тот</th>
<th>numerals</th>
<th>adjectives</th>
<th>head noun</th>
</tr>
</thead>
</table>

Thus a Noun Phrase could be produced in either of the following ways,

3.72) одни эти три маленькие комнаты /odin eti tri malen'kije komnatui/ only these three small rooms

3.73) чьи шесть новые птицы /ti'ji se'st' novui'je ptitsui/ whose six new birds
3.4 Subcategorization Restrictions

The Russian special modifiers break into different groupings with regard to subcategorization restrictions.\(^3\) ЭТот и тОТ pattern with один и чёй. Весь patterns by itself.

3.4.1 ЭТот, тОТ, один, and чёй Subcategorization restrictions

These two special modifiers pattern together exactly. These two modifiers have the least limited subcategorization restrictions. They subcategorize for a noun that is either singular, plural, or mass. Therefore, all three of the following are correct,

3.74) ЭТот дом /ётот дом/ this house
3.75) эти дома /эти дома/ these houses
3.76) ЭТОТ снег /ётот снег/ this snow

These same restrictions apply to тОТ, as in,

3.77) та машина /та машина/ that car
3.78) те машины /те машины/ those cars
3.79) та вода /та вода/ that water

Один patterns just as ЭТот and тОТ do. It subcategorizes for either a singular, plural, or mass noun, as in

3.80) один вечер /один вечер/ one evening
3.81) один вечера /один вечера/ only evenings
3.82) один дождь /один дождь/ only rain

\(^3\) Quirk's subcategorization frame is not necessary to represent Russian determiner subcategorization restrictions, due to the small number of forms in Russian, and that they do not form natural subcategorization classes.
Чей patterns in much the same way, as in

3.83) чье ведро /чъё ведро/ whose bucket

3.84) чье ведра /чъё ведра/ whose buckets

3.85) чье мясо /чъё мясо/ whose meat

3.4.2 Чей Subcategorization restrictions

Чей follows a more restricted set of subcategorization restrictions than the previous three special modifiers. It can subcategorize for a plural noun or a mass noun, but not for a singular noun, thus

3.86) *всю книгу /всъё книгу/ all book

3.87) все книги /всё книги/ all books

3.88) всю воду /всъё воду/ all water

3.5 Morphology of Special Modifiers

The special modifiers must be specified for gender, number and case with inflectional suffixes. These suffixes are based on the adjectival suffixes that specify the same information. That is, the special modifiers are marked with modified adjective suffixes.

3.5.1 Чей Nominal Suffixes

Before one can adequately describe the morphology of Russian special modifiers, a description of the basic nominal endings may be necessary. All of the prenominal modifiers take their inflectional properties from the head noun, and all of these inflectional endings are derived from the noun suffixes.
3.5.1.1 Masculine Gender

The Masculine Gender is marked with -\(\sigma\). Since all Russian suffixes are vowel initial, this means that a masculine noun will end in a consonant as in магазин /magazin/ store or портфель /portfel/ bookbag. No nominative case, masculine noun ends in a vowel.

3.5.1.2 Feminine Gender

The feminine gender is usually marked with the suffix vowel -a, as in машина /masha/ car or книга /kniga/ book. In some cases it can be marked with the suffix -ja, as in Азия /azija/ Asia. In other cases the marker can become -'a, as in нянья /nyanja/ nurse or кухня /kuxnja/ kitchen.

3.5.1.3 Neuter Gender

The default ending for a neuter noun is -o, as in ведро /vedro/ bucket or мясо /maso/ meat. In some cases it undergoes the same phonological transformations as the feminine. The ending can become -jo, -lo, or -je in various circumstances.

3.5.1.4 Plurals

Masculine and feminine gender distinctions are neutralized in Russian plurals. Thus, there is not a masculine or feminine plural. There is simply plural. The basic morpheme denoting plural in Russian is -i. This morpheme can also surface as -je or -tu. Neither of these forms appear to occur predictably, thus it is probable that there are three distinct plural morphemes in Russian; however, this question is beyond the scope of this paper. The basic neuter plural suffix is -a. In a few circumstances the neuter suffix shows up in
3.5.2 Adjective Endings

The adjective endings for specification of gender and number are as follows:

-ый 
  masculine adjective marker - новый дом /novuij dom/ new house

-ий
  masculine adjective marker - хороший сад /xoroji sad/ good garden

-ая
  feminine adjective marker - красивая школа /krasivaja skola/ beautiful school

-ое
  neuter adjective marker - старое пальто /staroje pal'to/ old coat

-ее
  neuter adjective marker - последнее ведро /posledneje vedro/ last bucket

-ие
  plural adjective marker - иностранные профессора

/in ostrannuije professora/ foreign professors

-ие
  plural adjective marker - русские языки /russkie jaziki/ Russian languages

3.5.3 Determiner Gender and Plural markers

The determiners are specified with similar suffixes to those used by the adjectives. The five special modifiers are marked for gender and number in several ways.

3.5.3.1 Gender and Plural Markers with Один

Один has the root form of /odn/. In the masculine form an /i/ is inserted to form a second syllable. Then the endings are added in the other two gender forms and in the plural, thus

3.89) /odn+a one+fem

4This insertion occurs in order to satisfy Russian syllable structure, but the details of this are not pertinent to this paper.
3.90) /odn+o/ one+neut

3.91) /odn+i/ one+plur

3.5.3.2 Gender and Plural Markers with Бець

Бець has the root form /vs/. In the masculine /e/ is inserted to satisfy the syllable structure of Russian. The other forms are marked as follows

3.92) /vs+a/ all+fem.
3.93) /vs+o/ all+neut.
3.94) /vs+e/ all+plur.

3.5.3.3 Gender and Plural Markers with Эрот

Эрот has the root form /et/. The suffix markers are applied as follows

3.95) /et+ot/ this+masc.
3.96) /et+a/ this+fem.
3.97) /et+o/ this+neut.
3.98) /et+i/ this+plur.

3.5.3.4 Gender and Plural Markers with Тот

Тот has the root form /t/. The gender and plural markings are applied as follows,

3.99) /t+ot/ that+masc.
3.100) /t+a/ that+fem.
3.101) /t+o/ that+neut.
3.102) /t+e/ that+plur.
3.5.3.5 Gender and Plural Markers with Человек

Человек has the root form /tʃj/. In the masculine form the /e/ is inserted in order to fulfill the requirements of Russian syllable structure. The other three forms are formed as follows:

3.103) /tʃj+a/ whose+fem.
3.104) /tʃj+o/ whose+neut.
3.105) /tʃj+e/ whose+plur.

3.6 Special Modifiers and Case

Russian special modifiers must agree with the head noun in number, gender, and case. The suffixes used to mark case in special modifiers are based on the adjectival case markers, which are, in turn based on the basic nominal paradigm

3.6.1 Noun Case Marking

Russian nominals are marked for six cases, nominative, accusative, genitive, prepositional, dative, and instrumental. The basic nominal forms of these suffixes are as follows.

3.6.1.1 Masculine Case Markers

The masculine case markers are as follows. The masculine noun Человек /tʃelovek/ person will be used to demonstrate the various case endings in the following examples:

/-о/ denotes the nominative case singular, as in,

3.106) Человек работает в школе /tʃelovek rabotajet v škole/ the person works in the school

/-о/ also represents the accusative case singular, as in,
3.107) Иван видит человека /ivan vidit tšeloveka/ Ivan sees the person

/-a/ denotes the genitive case singular, as in

3.108) вот книга человека /vot kniga tšeloveka/ here is the person’s book

(book of the person)

/-e/ denotes prepositional case singular, thus

3.109) я знаю о человеке /ja znaju tšeloveke/ I know about the person

/-u/ marks the dative case singular, as in,

3.110) я дам книгу человеку /ja dam knigu tšeloveku/ I give a book to

the person

/-om/ represents the instrumental case singular

3.111) женщина идёт с человеком /ženšina idjet s tšelovekom/ the

woman goes (walks) with the person

/-ui/ denotes the nominative case plural, as in,

3.112) люди идут в школу /ljudi idut v školu/ the people go

to school.

/-ui/ marks the accusative case plural, thus,

3.113) бабушка смотрит на человеков /babuška smotret na tšelovekov/

the grandmother watches the person

/-ø/ represents the genitive case plural,

3.114) я вижу туфли человека /ja vizu tuflit tšeloveka/ I see the

persons’ shoes (shoes of the person)
/-ax/ marks the prepositional case plural, as in,

3.115) он понимает о людях /on ponimajet o ljudax/ *he understands about the people*

/-am/ denotes the dative case plural, thus,

3.116) она едет к людям /ona jedet k ljudiam/ *she rides to the persons*

/-ami/ marks the instrumental case plural,

3.117) мы работаем с человеками /mśmy rabotajet s tšelovekami/ *we work with the persons*

3.6.1.2 Neuter Case Markers

The neuter case markers are almost identical to the masculine ones. There are, however, a few notable exceptions, which will be outlined in the following section. In this section, the noun ведро /vedro/ *bucket* will be used to demonstrate the neuter case endings.

/-o/ denotes the nominative case singular, as in,

3.118) ведро новое /vedro novoje/ *the bucket is new*

/-o/ also denotes the accusative case singular, as in,

3.119) шофёр ударит ведро /šofor udarit vedro/ *the driver hits the bucket*

/-a/ marks the genitive case singular, thus,

3.120) я вижу билет ведра /ja vidzju bilet vedra/ *I see the bucket’s ticket*

/-e/ represents the prepositional case singular, as in,
3.121) ты знаешь о ведре /tɯjɨ znajejɟ o veder/ you know about the bucket

/-u/ denotes the dative case singular, as in,

3.122) я кладу книгу в ведро /ja kladu knigu v veder/ I put the book in the bucket

/-om/ marks the instrumental case singular,

3.123) он читал с ведром /on tsital s vedom/ he read with the bucket

/-a/ marks the nominative case plural, as in,

3.124) ведра были белые /vedra buili beluije/ the buckets were white

/-a/ also denotes the accusative case plural, thus,

3.125) он видит ведра /on vidjet vedra/ he sees the buckets

/-o/ denotes the genitive plural, as in,

3.126) человека ведро старое /tʃeloveka vedor staroje/ the bucket's man is old

/-ax/ marks the prepositional case plural,

3.127) я кладу яблоки в ведра /ja kladu jabloki v veda/ I put the apples in the buckets

/-am/ represents the dative case plural, as in,

3.128) я иду к ведру /ja idu k veder/ I walk to the bucket

*Many example sentences are grammatically correct, even if they are anomalous. These examples are used in order to express the morphological properties of the neuter gender in Russian, which has no animate members.

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/-ami/ marks the instrumental case plural, thus,

3.129) он идет с ведрами /on id'ot s vedrami/ he walks with the buckets

3.6.1.3 Feminine Case Markers

The feminine case markers are very similar to the neuter and masculine ones. However, they differ slightly in almost every instance. The feminine noun машина /ma'sina/ car will be used in the following section to demonstrate the feminine case markers.

/-a/ marks the nominative singular, as in,

3.130) машина была красивая /ma'sina buila krasivaja/ the car was beautiful

/-u/ denotes the accusative singular, thus,

3.131) человек ударит машину /tjelovek udarit ma'sinu/ the man hits the car

/-ui/ marks the genitive case singular,

3.132) я видел колесо машины /ja vidju koleco ma'siniui/ I saw the car's wheel

/-e/ indicates the prepositional case singular, as in,

3.133) она работает в машине /ona rabotajet v ma'sine/ she works in the car

/-e/ also marks the dative case singular, as in,

3.134) учитель едет к машине /ut'sitel' jedet ma'sine/ the teacher rides to
the car

/-øj/ denotes the instrumental case singular, thus,

3.135) женщина едет с машиной /женщина едет с машиной/ the woman

rides with the car

/-ui/ represents the nominative case plural,

3.136) машины были белые /машины были белые/ the cars were white

/-i/ marks the accusative case plural, as in,

3.137) он видел машины /он видел машины/ he saw the cars

/-о/ indicates the genitive case plural, thus,

3.138) птица ударила шофёра машин /птица ударила шофёра машин/ the bird

hits the cars' drivers

/-ax/ marks the prepositional case plural, just as in the masculine and neuter forms, thus,

3.139) вы знаете о машинах /вы знаете о машинах/ you (pl.) know

about the cars

/-am/ denotes the dative case plural, as in,

3.140) я дал шофёру машин /я дал шофёру машин/ I will give

drivers to the cars

/-ami/ represents the instrumental case plural,

3.141) Иван ехал с машинами /Иван ехал с машинами/ Ivan rode with the

cars
3.6.2 Adjective Case Marking

Adjectives must agree in gender, number, and case with the nouns they modify. The adjectival case markers are similar to their nominal counterparts, but with a few distinct differences that will be discussed later. The complete paradigm of adjectival endings using **новый** /novuij/ new is as follows:

<table>
<thead>
<tr>
<th>Case</th>
<th>Masculine</th>
<th>Feminine</th>
<th>Neuter</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nom.</td>
<td><strong>новый</strong> /novuij/</td>
<td><strong>новая</strong> /novaja/</td>
<td><strong>новое</strong> /novoje/</td>
<td><strong>новые</strong> /novuije/</td>
</tr>
<tr>
<td>Acc, inan.</td>
<td><strong>новый</strong> /novuij/</td>
<td><strong>новую</strong> /novuju/</td>
<td><strong>новое</strong> /novoje/</td>
<td><strong>новые</strong> /novuije/</td>
</tr>
<tr>
<td>Acc, anim.</td>
<td><strong>нового</strong> /novogo/</td>
<td><strong>новую</strong> /novuju/</td>
<td><strong>новое</strong> /novoje/</td>
<td><strong>новых</strong> /novuiх/</td>
</tr>
<tr>
<td>Gen.</td>
<td><strong>нового</strong> /novogo/</td>
<td><strong>новой</strong> /novoj/</td>
<td><strong>нового</strong> /novogo/</td>
<td><strong>новых</strong> /novuiх/</td>
</tr>
<tr>
<td>Prep.</td>
<td><strong>новом</strong> /novom/</td>
<td><strong>новой</strong> /novoj/</td>
<td><strong>новом</strong> /novom/</td>
<td><strong>новых</strong> /novuiх/</td>
</tr>
<tr>
<td>Dat.</td>
<td><strong>новому</strong> /novomu/</td>
<td><strong>новой</strong> /novoj/</td>
<td><strong>новому</strong> /novomu/</td>
<td><strong>новым</strong> /novuiм/</td>
</tr>
<tr>
<td>Instr.</td>
<td><strong>новым</strong> /novuiм/</td>
<td><strong>новой</strong> /novoj/</td>
<td><strong>новым</strong> /novuiм/</td>
<td><strong>новым</strong> /novuiм/</td>
</tr>
</tbody>
</table>

The first difference of note is that the adjectives do not distinguish gender in the plural, thus, the masculine, feminine, and neuter plurals take the same form. The second difference is that in some forms there is a distinction between the animate and inanimate nouns in the accusative case. These two differences will carry over to the case marking of the special modifiers.

3.6.3 Special Modifier Case Markers

The special modifiers, possessives and ordinal numbers pattern together with the adjectives, using almost identical suffix forms. All of these determiners must agree with their head noun in number, gender, and case just as the adjectives do. All can occur in all six cases, and with all three genders and the plural. A detailed description of the case modification of the Russian determiners follows.
3.6.3.1 *Case Marking with Этом and Тот*

Этом and Тот pattern together exactly, with the exception of the instrumental case and the nominative case plural; therefore, they will be dealt with together. In the nominative case they occur in the following ways,

**Masculine**

3.142) этот человек был русским /это́т цэловек бу́ил руским/ *this person was Russian*

3.143) тот человек был русским /тот цэловек бу́ил руским/ *that person was Russian*

**Feminine**

3.144) эта птица была русским /эта́ пти́ца бу́ила руским/ *this bird was Russian*

3.145) та птица была русским /та́ пти́ца бу́ила руским/ *that bird was Russian*

**Neuter**

3.146) это письмо было русским /э́то пи́смо бу́ило руским/ *this letter was Russian*

3.147) то письмо было русским /то́ пи́смо бу́ило руским/ *that letter was Russian*

**Plural**

3.148) эти машины были русским /эти́ маши́ны бу́или руским/ *these cars were Russian*
3.149) те машины были русскими /te maʃini buʃili ruski/ \textit{those cars} \textit{were Russian}

It is of limited interest that in the nominative plural these two demonstrative special modifiers do not share the same form, \textit{этот} takes the suffix /-i/, and \textit{тот} takes the suffix /-е/ to denote the plural, but this is not pertinent to this paper.

In the accusative case these special modifiers can occur as follows,

\textbf{Masculine Inanimate}

3.150) человек ударит \textit{этот} самолёт /tʃelovek ydarit etot samolʲot/ \textit{the man hits this airplane}

3.151) человек ударит \textit{тот} самолёт /tʃelovek ydarit tot samolʲot/ \textit{the man hits that airplane}

\textbf{Masculine Animate}

3.152) человек ударит этого отца /tʃelovek ydarit etogo otsʲets/ \textit{the man hits this father}

3.153) человек ударит того отца /tʃelovek ydarit togo otsʲets/ \textit{the man hits that father}

\textbf{Feminine}

3.154) человек ударит эту школу /tʃelovek ydarit etu školu/ \textit{the man hits this school}

3.155) человек ударит ту школу /tʃelovek ydarit tu školu/ \textit{the man hits that school}

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Neuter

3.156) человек ударит это пальто /тсёлувек yдарит ето пал'to/ the man

hits this coat

3.157) человек ударит то пальто /тсёлувек yдарит то пал'to/ the man hits

that coat

Plural Inanimate

3.158) человек ударит эти книги /тсёлувек yдарит ети knigi/ the man hits

these books

3.159) человек ударит те книги /тсёлувек yдарит ети knigi/ the man hits

those books

Plural Animate

3.160) человек ударит этих брати /тсёлувек yдарит etix brati/ the man

hits these brothers

3.161) человек ударит тех брати /тсёлувек yдарит tex brati/ the man hits

those brothers

In the genitive case these two determiners can occur in the following ways,

Masculine

3.162) я видел книги этого человека /ja videl knigi etogo tseloveka/ I

saw this man's books

3.163) я видел книги того человека /ja videl knigi togo tseloveka/ I

saw that man's books
Feminine

3.164) я видал книги этой птицы /ja videl knigi estoj ptitsui/ *I saw this*
bird’s books

3.165) я видал книги той птицы /ja videl knigi toj ptitsui/ *I saw that*
bird’s books

Neuter

3.166) я видал книги этого ведра /ja videl knigi etogo vedra/ *I saw this*
bucket’s books

3.167) я видал книги того ведра /ja videl knigi togo vedra/ *I saw that*
bucket’s books

Plural

3.168) я видал книги этих женщин /ja videl knigi etix zensinи/ *I saw*
these women’s books

3.169) я видал книги тех женщин /ja videl knigi tex zensinи/ *I saw*
those women’s books

The prepositional forms are manifested in the following ways,

Masculine

3.170) учитель знает об этом доме /utjitel’ zajet ob etom dome/ *the teacher knows about this house*

3.171) учитель знает о том доме /utjitel’ zajet o tom dome/ *the teacher knows about that house*
Feminine

3.172) учителев знает об этой машине /учите́ль знает об е́той маши́не/  
the teacher knows about this car

3.173) учителев знает об той машине /учите́ль знает об той маши́не/  
the teacher knows about that car

Neuter

3.174) учителев знает об этом письме /учите́ль знает об этом письме/  
the teacher knows about this letter

3.175) учителев знает об том письме /учите́ль знает об том письме/  
the teacher knows about that letter

Plural

3.176) учителев знает об этих туфлях /учите́ль знает об этих туфлях/  
the teacher knows about these shoes

3.177) учителев знает об тех туфлях /учите́ль знает об тех туфлях/  
the teacher knows about those shoes

In the dative case these special modifiers occur thus,

Masculine

3.178) она́ даст я́блоко е́тому сосе́ду /она́ даст я́блоко е́тому сосе́ду/  
she will give the apple to this neighbor

3.179) она́ даст я́блоко тому сосе́ду /она́ даст я́блоко тому сосе́ду/  
she will give the apple to that neighbor
Feminine

3.180) она даст яблоко этой женщине /ona dast jabloko etoj zensine/  
she will give the apple to this woman

3.181) она даст яблоко той женщине /ona dast jabloko toj zensine/ she  
will give the apple to that woman

Neuter

3.182) она даст яблоко этому ведру /ona dast jabloko etomu vedru/ she  
will give the apple to this bucket

3.183) она даст яблоко тому ведру /ona dast jabloko tomu vedru/ she  
will give the apple to that bucket

Plural

3.184) она даст яблоко этим птицам /ona dast jabloko etim ptitsam/  
she will give the apple to these birds

3.185) она даст яблоко тем птицам /ona dast jabloko tem ptitsam/ she  
will give the apple to those birds

The instrumental case is marked in the following ways,

Masculine

3.186) я иду с этим человеком /ja idy s etim tjelevekom/ I go with  
this person

3.187) я иду с тем человеком /ja idy s tem tjelevekom/ I go with that  
person
Feminine

3.188) я иду с этой женщиной /ja idy s etoj dzenšinoj/ I walk with this woman

3.189) я иду с той женщиной /ja idy s toj dzenšinoj/ I walk with that woman

Neuter

3.190) я иду с этим пальтом /ja idy s etim pal'tom/ I walk with this coat

3.191) я иду с тем пальтом /ja idy s tem pal'tom/ I walk with that coat

Plural

3.192) я иду с этими людьми /ja idy s etimi ljud'ami/ I walk with these people

3.193) я иду с теми людьми /ja idy s temi ljud'ami/ I walk with those people

3.6.3.2 Case Marking with Один

Один patterns only with itself with regards to case marking. The pattern is as follows, using the same sentence frames as with этот and тот.

Masculine

3.194) один человек русским /odin tšelovek bui1 ruskim/ one person is Russian

Feminine

3.195) одна птица русская /odna ptitsa buiila ruskaja/ one bird is Russian

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Neuter

3.196) одно письмо русское /odno pismo builo ruskoe/ one letter is

Russian

Plural

3.197) одни машины русские /odni masiny buili ruskije/ only cars are

Russian

In the accusative case this special modifier can occur as follows,

Masculine Inanimate

3.198) человек ударит один самолёт /tselovek ydarit odin samolot/ the man will hit one airplane

Masculine Animate

3.199) человек ударит одного отца /tselovek ydarit odnogo omtsa/ the man will hit one father

Feminine

3.200) человек ударит одну школу /tselovek ydarit odnu shkolu/ the man will hit one school

Neuter

3.201) человек ударит одно пальто /tselovek ydarit odno pal'to/ the man will hit one coat

Plural Inanimate

3.202) человек ударит одни книги /tselovek ydarit odni knigi/ the man will hit only books
Plural Animate

3.203) человек ударит одних братья /tʃelovek ydarit odnix bratui/ *the man will hit only brothers*

In the genitive case this determiner can occur in the following ways,

Masculine

3.204) я видел книги одного человека /ja vidil knigi odnogo tʃeloveka/  
*I saw one man’s books*

Feminine

3.205) я видел книги одной птицы /ja vidil knigi odnoj ptitsui/ *I saw one bird’s books*

Neuter

3.206) я видел книги одного ведра /ja vidil knigi odnogo vedra/ *I saw one bucket’s books*

Plural

3.207) я видел книги одних женщин /ja vidil knigi odnix ženy/ *I saw only women’s books*

The prepositional forms are manifested in the following ways,

Masculine

3.208) учитель знает об одном доме /utʃitel’ znajet ob odnom dome/  
*the teacher knows about one house*

Feminine

3.209) учитель знает об одной машине /utʃitel’ znajet ob odnoj mnajine/
the teacher knows about one car

Neuter

3.210) учитель знает об одном письме /Учителъ знает об одном письме/
the teacher knows about one letter

Plural

3.211) учитель знает об одних туфлях /Учителъ знает об одних туфлях/
the teacher knows about only shoes

In the dative case this special modifier occurs thus,

Masculine

3.212) она даст яблоко одному соседу /она даст яблоко одному соседу/
sоседу/ she will give the apple to one neighbor

Feminine

3.213) она даст яблоко одной женщине /она даст яблоко одной женщине/
женщине/ she will give the apple to one woman

Neuter

3.214) она даст яблоко одному ведру /она даст яблоко одному ведру/
едру/ she will give the apple to one bucket

Plural

3.215) она даст яблоко одним птицам /она даст яблоко одним птицам/
птицам/ she will give the apple to only birds

The instrumental case is marked in the following ways,
Masculine

3.216) я иду с одним человеком /ja idy s odnim tselovekom/ I walk with one man

Feminine

3.217) я иду с одной женщиной /ja idy s odoj zensinoj/ I walk with one woman

Neuter

3.218) я иду с одним пальтом /ja idy s odnim pal'tom/ I walk with one coat

Plural

3.219) я иду с одними человеки /ja idy s odnimi tseloveki/ I walk with only people
3.6.3.3 Case Marking with Весь

Весь is marked for case identically to тот, but due to its different subcategorization restrictions it must be dealt with separately. A similar set of sentence frames will be used to exemplify the case endings for весь.

Masculine

3.220) весь лед русский /ves¹ led buiili ruski/ all ice is Russian

Feminine

3.221) вся вода была русская /vs¹a voda buiila ruskaja/ all water was

Russian

Neuter

3.222) всё мясо было русское /vs¹o m³aso buiilo ruskoje/ all meat was

Russian

Plural

3.223) все машины были русские /vs¹e mašinwi buiili ruskije/ all cars

were Russian

In the accusative case this special modifier can occur as follows,

Masculine Inanimate

3.224) человек ударит весь воздух /tʃelovek ydarit ves¹ vozduš/ the person will hit all the air

Masculine Animate

3.225) человек ударит всего соседа /tʃelovek ydarit vs¹ego
sos\^edevo/ the person will hit all the neighbors

Feminine

3.226) человек ударит всю чернилу /t\^elovek ydarit vs\^u t\^ernilu/ the person will hit all the ink

Neuter

3.227) человек ударит всё мясо /t\^elovek ydarit vs\^o m\^as\^o/ the person will hit all meat

Plural Inanimate

3.228) человек ударит все книги /t\^elovek ydarit vs\^e knigi/ the person will hit all the books

Plural Animate

3.229) человек ударит всех братьев /t\^elovek ydarit vs\^e bratwi/ the man hit all the brothers

In the genitive case this determiner can occur in the following ways,

Masculine

3.230) я видел книгу всего лда /ja videl kniguvs\^ego vida/ I saw all the ice's book

Feminine

3.231) я видел книгу всей воды /ja videl kniguvs\^ej vodu/ I saw all the water's books

Neuter

3.232) я видел книгу всего мяса /ja videl knigu vs\^e m\^asa/ I saw all the
the meat's books

Plural

3.233) я видел книгу всех женщин\ /ja videl knigu vs\ex zensjini/ I

saw all the women's books

The prepositional forms are manifested in the following ways,

Masculine

3.234) учитель знает о всем льду /ut\sitelj\ znajet o vs\j\em lde/ the teacher

teacher knows about all the ice

Feminine

3.235) учитель знает о всея воде /ut\sitelj\ znajet o vs\j\e\j vode/ the

teacher knows about all the water

Neuter

3.236) учитель знает о всем мясе /ut\sitelj\ znajet o vs\j\em m\j\ase/ the

teacher knows about all the meat

Plural

3.237) учитель знает о всех туфлях /ut\sitelj\ znajet o vs\j\ex tuflax/ the

teacher knows about all the shoes

In the dative case this special modifier occurs thus,

Masculine

3.238) она даст яблоко всему льду /ona dast jabloko vs\j\em ldu/ she

will give the apple to all the ice
Feminine

3.239) она даст яблоко всей траве /ona dast jabloko vs¹ej trave/ she will give the apple to all the grass

Neuter

3.240) она даст яблоко всем мясу /ona dast jabloko vs¹em m¹asu/ she will give the apple to all the meat

Plural

3.241) она даст яблоко всем птицам /ona dast jabloko vs¹em ptitsam/ she will give the apple to all the birds

The instrumental case is marked in the following ways,

Masculine

3.242) я иду со всем космосом /ja idy so vs¹em kosmosom/ I walk with all the cosmos

Feminine

3.243) я иду со всей травой /ja idy so vs¹ej travoj/ I walk with all the grass

Neuter

3.244) я иду со всем мясом /ja idy so vs¹em m¹asom/ I walk with all the meat

Plural

3.245) я иду со всеми людьми /ja idy so vs¹emi ljud¹ami/ I walk with all the people

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3.6.3.4 Case Marking with Чей

Чей follows its own pattern of case marking. Although the suffixes are based on the
same root as with the other special modifiers, they are rarely the same forms with Чей.
The case marking pattern is as follows,

**Masculine**

3.246) Чей человек был русским /tʃej tʃelovek buil ruskij/ whose

*person was Russian*

**Feminine**

3.247) Чья птица была русская /tʃa ptitsa buila ruskaja/ whose *bird*

*was Russian*

**Neuter**

3.248) Чье письмо было русское /tʃo picьmo builo ruskoe/ whose

*letter was Russian*

**Plural**

3.249) Чьи машины были русские /tʃi maʃi:n '#' buili ruskije/ whose

*cars were Russian*

In the accusative case this special modifier can occur as follows,

**Masculine Inanimate**

3.250) Человек ударит Чей самолёт /tʃelovek ydarit tʃej samol'ot/ *the

*man will hit whose airplane*

**Masculine Animate**

3.251) Человек ударит Чьего омца /tʃelovek ydarit tʃ'eɡo omtsa/ *the
man will hit whose father

Feminine

3.252) человек ударит чью школу /tʃelovek ydarit tfju škul/ the man
will hit whose school

Neuter

3.253) человек ударит чье пальто /tʃelovek ydarit tfjo palto/ the man
will hit whose coat

Plural Inanimate

3.254) человек ударит чьи книги /tʃelovek ydarit tfji knigi/ the man
will hit whose books

Plural Animate

3.255) человек ударит чьих братьев /tʃelovek ydarit tfjix brat'yui/ the
person will hit whose brothers

In the genitive case this determiner can occur in the following ways,

Masculine

3.256) я видел книги чьего человека /ja videl knigi tf'ego tʃeloveka/ I
saw whose man's books

Feminine

3.257) я видел книги чьей птицы /ja videl knigi ts'tj ptitsui/ I saw
whose bird's books

Neuter

3.258) я видел книги чьего ведра /ja videl knigi tf'ego vedra/ I saw
whose bucket's books

Plural

3.259) я видел книги их женщин /ja videl knigi tʃix ženʃini/ I saw

whose women's books

The prepositional forms are manifested in the following ways,

Masculine

3.260) учителъ знает о чьем доме /uʃjitelj znaʃet o tʃ'om dome/ the

teacher knows about whose house

Feminine

3.261) учителъ знает о чьей машине /uʃjitelj znaʃet o tʃ'ej maʃine/ the

teacher knows about whose car

Neuter

3.262) учителъ знает о чьем письме /uʃjitelj znaʃet o tʃ'om pitʃme/ the

teacher knows about whose letter

Plural

3.263) учителъ знает о чьих туфлях /uʃjitelj znaʃet o tʃ'ix tuʃlaʃ/ the

teacher knows about whose shoes

In the dative case this special modifier occurs thus,

Masculine

3.264) она даст яблоко чьему соседу /ona dast jabloko tʃ'emu sosedu/

she will give the apple to whose neighbor
Feminine

3.265) она даст яблоко чьей женщине /ona dast jabloko tjej ženshine/

she will give the apple to whose woman

Neuter

3.266) она даст яблоко чьему ведру /ona dast jabloko tjejemu vedru/

she will give the apple to whose bucket

Plural

3.267) она даст яблоко чьим птицам /ona dast jabloko tjejim ptitsam/

she will give the apple to whose birds

The instrumental case is marked in the following ways,

Masculine

3.268) я иду с чьим человеком /ja idy s tjejim tjejelovekom/ I walk with

whose person

Feminine

3.269) я иду с чьей женщиной /ja idy s tjej ženshinoj/ I walk with

whose woman

Neuter

3.270) я иду с чьим пальтом /ja idy s tjejim paljom/ I walk with whose

coat

Plural

3.271) я иду с чьими людьми /ja idy s tjejimi ljudami/ I walk with whose

people
3.7 Syntax of Russian Determiners

In 1987, Steven Abney proposed the Determiner Phrase (DP). This provides three possible syntactic structures for the Russian Noun Phrase.

3.7.1 Transformational Grammar Structure

Following is a representation of the Noun Phrase (NP) вся эта синяя вода

/all this blue water

This structure has the added benefit of accurately representing an NP without any determiner modification, as in

or

However, it does not accurately represent the relationships between the different constituents, in order to do that, a different theoretical structure is needed.
### 3.7.2 X-Bar Theory Structure

The following structure is based on the NP

\[3.272) \text{это зеленое ведро } /\text{это зеленое ведро/ this green bucket}\]

One problem with this structure is that it is difficult to represent a structure with multiple determiners such as, один этот русский сад /один этого русский сад/ only this Russian garden

### 3.7.3 Determiner Phrase Structure

This hypothesis is useful in representing multiple determiner structures, thus the co-occurrence and ordering restrictions can be mapped out accurately, as in the NP,

\[3.273) \text{все эти три хороших человека } /\text{все эти хороших человек/ all these three good people}\]
One problem presented by this structure is that it requires a determiner head of DP. In Russian this would require an ambiguous $\emptyset$ determiner, in all instances, where there is no phonetically produced determiner.

No syntactic representation is accurate to Russian Noun Phrase Structure, though each possible representation has benefits and disadvantages.

3.8 Summary of Russian Determiner Occurrence

The data presented in Russian is consistent with an INN language. Russian has qualifiers, which are inflected. It does not have definite or indefinite articles.

Russian is also consistent with the four proposed universals. It has qualifiers, consistent with universal one. It has no indefinite article, nor does it possess a definite article. This is consistent with universal two. The one occurring class is inflected, consistent with universal three. The Russian determiners are also constrained by co-occurrence restrictions, ordering restrictions, and subcategorization restrictions. This
corresponds with the expectation of universal four. Russian data is consistent with the proposed determiner types and with the proposed determiner universals.
4 German Determiners

4.1 Overview of German Determiners

German exhibits an III determiner structure, in which the qualifiers, definite and indefinite articles are all inflected. This is a type six language in my scheme. The agreed upon set that comprises German determiners is as follows\textsuperscript{1},

\textit{der} \hspace{1cm} \textit{dieser}
\textit{jener} \hspace{1cm} \textit{solcher}
\textit{welcher} \hspace{1cm} \textit{aller}
\textit{m	extsuperscript{a}n	extsuperscript{d}er} \hspace{1cm} \textit{ein}

possessives ordinals

These determiners can be divided into eight subclasses. The first subclass contains only the definite article, \textit{der} and all of its forms. The second consists of the demonstratives, \textit{dieser}, this, \textit{jener}, that, and \textit{solcher}, such. The third subclass is made up of the interrogative, \textit{welcher}, whose, which. The fourth subclass contains the quantifiers, \textit{aller}, all, and the fifth contains \textit{mancher}, some. The sixth subclass consists solely of the indefinite article, \textit{ein}. Subclass seven is made up of the possessives, and subclass eight of the ordinals. These subclasses are relevant to the co-occurrence and ordering restrictions. The determiners will be subdivided differently with regard to subcategorization restrictions.

4.2 Co-Occurrence Restrictions of German Determiners

Determiners in German obey co-occurrence restrictions. These co-occurrence restrictions are based upon the seven subclasses.

4.2.1 Definite Articles

The definite article cannot co-occur with the indefinite article, as in

4.1) *der ein Mann /der ein man/ the a man

4.2) *eine die Mutter /eine di muter/ a the mother

It also cannot co-occur with the demonstratives, thus,

4.3) *dieser der Fußball /diser der fusbal/ this the football

4.4) *jene die Bahn /jene di ban/ that the railroad

The definite article cannot co-occur with the interrogative determiner,

4.5) *welches das Radio /velxes das radio/ which radio

It can also co-occur with the quantifier aller, thus,

4.6) alle die Schuhe /ale di ju?e/ all the shoes

but not with mancher, thus,

4.7) *manche die Markte /mançe di markte/ some of the markets

The definite article cannot co-occur with the possessives, as in,

4.8) *der mein Wald /der mein vald/ the my forest

It can co-occur with the ordinals, thus,

4.9) der erste Fisch /der erst fiß/ the first fish
4.2.2 Demonstratives

The German demonstratives cannot co-occur with either the definite or indefinite articles, thus,

4.10) *dieser der Film /diser der film/ this the film

4.11) *solches ein Obst /solçes ein obst/ such a fruit

They can co-occur with the quantifiers as in,

4.12) alle jene Milch /ale jene milç/ all that milk

4.13) manches dieses Lied /mançes dises lid/ some of this song

The demonstratives cannot co-occur with the possessives, as in,

4.14) *dein dieser Zug /dein diser zug/ your this train

Or with the interrogatives,

4.15) *welcher dieser Baum /velçer diser baum/ which this tree

4.2.3 Interrogatives

The interrogatives cannot co-occur with either the definite or indefinite articles, thus,

4.16) *welcher der Onkel /velçer der onkel/ which the uncle

4.17) *welches ein Ding /velçes ein diŋ/ which a thing

They also cannot co-occur with the demonstratives,

4.18) *welcher jener Baum /velçer jener baum/ which that tree

4.19) *welche solche Sonne /velçe solçe son/ which such sun

Or with the possessives, as in,

4.20) *welcher sein Tisch /velçer zein tij/ which his table

The interrogatives can co-occur with the ordinals, thus,
4.21) welches erste Buch /velçes erste bux/ which first book

But not with the quantifiers,

4.22) *aller welcher Brief /aler velçer brif/ all which letter

4.23) *mancher welcher Bus /mançer velçer bus/ some of which bus

4.2.4 The Quantifier Aller

This quantifier can co-occur with the definite but not the indefinite articles, thus

4.24) alle die Bleistifte /ale di bleistifte/ all the pencils

4.25) *alle eine Tische /ale eine tīse/ all a tables

It can also co-occur with the demonstratives,

4.26) alle diese Bücher /ale dise byxer/ all these books

This quantifier cannot co-occur with the ordinals, thus,

4.27) *alles erst Ding /ales erst din/ all (the) first thing

They can also not co-occur with the interrogative, as in,

4.28) *aller welcher Baum /aler welçer baum/ all which tree

The quantifiers can also co-occur with the possessives, thus,

4.29) alle meine Stühle /ale meine style/ all of my chairs

4.2.5 The Quantifier Mancher

This quantifier cannot co-occur with the definite article or the indefinite article,

4.30) *manche eine Terrasse /mançe eine terase/ some of a patio

4.31) *manches das Geld /mançes das geld/ some of the money

It can also not co-occur with the demonstratives, as in,

4.32) *mancher jener Tag /mançer jener tag/ some of that day
This quantifier cannot co-occur with the ordinals, thus,

4.33) *mancher ein Wald /mançer ein wald/ some of a forest

It cannot co-occur with the interrogative, thus,

4.34) *manches welches Buch /mançes welçes bux/ some of which book

And also with the possessives,

4.35) manches deiner Butter /mançes deiner buter/ some of your butter

4.2.6 Indefinite Article

The indefinite article obeys the same co-occurrence restrictions as the definite article.

It is listed here as a separate class because many German grammarians class it separately.

4.2.7 Possessives

The possessives cannot co-occur with the definite or indefinite articles, as in,

4.36) *sein der Käse /sein der kase/ his the cheese

4.37) *meine eine Brücke /meine eine bryke/ my a bridge

They can also not co-occur with the demonstratives, thus,

4.38) *ihre jene Geschichte /ire jene geʃjte/ her that story

The possessives can co-occur with the quantifiers,

4.39) all dein Krieg /al dein krig/ all your war

They can also co-occur with the ordinals, as in,

4.40) sein erster Baum /sein erster baum/ his first tree

The possessives cannot co-occur with the interrogative,

4.41) *mein welches Kind /mein velçes kind/ my which child
4.2.8 Ordinals

The ordinals can co-occur with all other determiners.

4.3 Ordering Restrictions of German Determiners

German, as other languages, has ordering restrictions that determine the order in which the constituents of a noun phrase occur. In German, these restrictions can be manifested in the following chart.

<table>
<thead>
<tr>
<th>Quantifier</th>
<th>Demonstrative</th>
<th>Ordinal</th>
<th>Adjective</th>
<th>Noun</th>
</tr>
</thead>
<tbody>
<tr>
<td>Def/Indef Article</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interrogative</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Possessive</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The second slot is the only one that has multiple possible members. In the other four slots, an occupant must be selected from a particular class to fill the slot.

4.4 Subcategorization Restrictions of German Determiners

In order to better describe the subcategorization restrictions, it may be prudent to review the subcategorization frame proposed by Quirk and Greenbaum. They propose that all nouns will fit into one of the following slots, singular, plural, and mass. They further propose that any given determiner can only modify members of certain of these slots. The slots that a particular determiner can modify determine its classification in regard to subcategorization. German determiners separate into only two classes with regard to subcategorization.
4.4.1 Class One Determiners

The class one determiners include *der, dieser, jener, solcher, welcher, aller, mancher*, and the possessives. These determiners can modify a noun from any of the classes. They can modify a singular noun, thus,

4.42) *der Baum /der baum/ the tree*

and a plural noun, thus,

4.43) *diese Bäume /dise baume/ these trees*

They can also modify a mass noun, thus,

4.44) *alles Wasser /ales vasser/ all water*

The subcategorization frame for class one determiners would be as follows,

\[
x \quad x \\
x \quad x
\]

4.4.2 Class Two Determiners

The class two determiners consist only of *ein* and the ordinals. These determiners cannot modify a plural noun, though they can modify a singular or a mass noun. Thus, the following is true.

4.43) *eine Garten /eine garten/ a garden*

4.44) *eine Garten /eine garten/ gardens*

4.45) *eine Milch /eine milç/ a milk*
The subcategorization frame for class two determiners would be as follows,

4.5 Phonology of German Determiners

German determiners are not altered phonologically.

4.6 Morphology of German Determiners

German determiners are morphologically marked for gender, number, and case.

German has three genders, two numbers, and four cases. There is no gender distinction in the plural. A given determiner will, therefore, have eight forms in German. There are two basic sets of morphological markings. The first patterns with the definite article, der in all forms. The second patterns with the indefinite article, ein in all forms. For this reason it is only necessary to represent the forms of these two determiners in this paper.

The declension of der is as follows,

<table>
<thead>
<tr>
<th></th>
<th>Masculine</th>
<th>Feminine</th>
<th>Neuter</th>
<th>All Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominative</td>
<td>der</td>
<td>die</td>
<td>das</td>
<td>die</td>
</tr>
<tr>
<td>Accusative</td>
<td>den</td>
<td>die</td>
<td>das</td>
<td>die</td>
</tr>
<tr>
<td>Genitive</td>
<td>des</td>
<td>der</td>
<td>des</td>
<td>der</td>
</tr>
<tr>
<td>Dative</td>
<td>dem</td>
<td>der</td>
<td>dem</td>
<td>den</td>
</tr>
</tbody>
</table>

The words that pattern with der are dieser, jener, solcher, welcher, aller, mancher, and the ordinals. Following is the declension of dieser, which sets the pattern for the remainder of these determiners
The determiners that pattern with *ein* are the possessives. All of these forms pattern together exactly. The declension of *ein* is as follows,

<table>
<thead>
<tr>
<th></th>
<th>Masculine</th>
<th>Feminine</th>
<th>Neuter</th>
<th>All Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominative</td>
<td><em>ein</em></td>
<td><em>eine</em></td>
<td><em>ein</em></td>
<td><em>keine</em></td>
</tr>
<tr>
<td>Accusative</td>
<td><em>einen</em></td>
<td><em>eine</em></td>
<td><em>ein</em></td>
<td><em>keine</em></td>
</tr>
<tr>
<td>Genitive</td>
<td><em>eines</em></td>
<td><em>einer</em></td>
<td><em>eines</em></td>
<td><em>einer</em></td>
</tr>
<tr>
<td>Dative</td>
<td><em>einem</em></td>
<td><em>einer</em></td>
<td><em>eines</em></td>
<td><em>einen</em></td>
</tr>
</tbody>
</table>

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4.7 Syntax of German Determiners

The history of German syntax study has followed much the same pattern as the previous languages examined. In its earlier stages German syntax represented a noun phrase as a linear string. It then progressed to a Transformational Grammar Tree-structure, then to an X-bar tree structure. The most recent advancement has been to the Determiner Phrase hypothesis. This structure would be represented in German as follows.

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\(^2\)This form is in the negative, it cannot occur in the positive.
German is consistent with the DP analysis proposed by Abney, and supports the hypothesis that there is a Determiner Phrase that dominates the Noun Phrase.

4.8 Summary of German Determiners

German exhibits evidence consistent with an III language. It has qualifiers, definite and indefinite articles. All three of these are inflected for gender, number, and case.

German also presents data consistent with the proposed universals. It possesses qualifiers. All three of the occurring classes bear the same inflectional marking. It possesses both indefinite and definite articles. With regard to the fourth universal, German determiners are constrained by co-occurrence restrictions, ordering restrictions, and subcategorization restrictions. German is consistent with the language types and determiner universals proposed in this paper.
5 Conclusion

5.1 Determiner Typology and Universals

In this paper three languages were examined in terms of their determiner attributes. These three languages belong to three different types, English to UUU, Russian to INN, and German to III. In the introduction two different proposals were made regarding determiner typology, first that there are six occurring determiner language types, and second that there are four language universals with regard to determiner properties.

5.1.1 Determiner Types

The idea that there are different types into which a language may fit with regard to its determiner properties was proposed in the introduction. This is confirmed by the data presented in chapters two through four. Each of the three distantly related languages examined fits neatly into a different determiner type as outlined above. Many other languages pattern with these languages. Nearly all of the Slavic languages fall into the same type as Russian, as does Latin. Most Indo-European languages pattern with German. English is in a more restricted type, with fewer members. Recall that I said that that there appear to be six occurring determiner language types. This paper presented evidence for three of these types, whether the number of naturally occurring determiner language types is six, or three, or another number is beyond the scope of this paper.

5.1.2 Determiner Universals

The second issue raised in the introduction was that of determiner universals. It was proposed that there are four such universals. Each of these will now be examined in more detail.
5.1.2.1 Universal One: All Languages Possess Qualifiers

The first universal proposed was that all languages have qualifiers. There are qualifiers in all three of the languages examined. In Russian, these qualifiers are the extent of the determiner set. In English, they are uninflected and in German, the qualifiers are highly inflected, but they occur in all three languages. It may, therefore, be supposed that these will also occur in other languages, though further research is needed to demonstrate this definitively.

5.1.2.2 Universal Two: Indefinite Articles Do Not Occur Without Definite Articles

The second universal proposed is that indefinite articles cannot occur without definite articles. Only one of the languages examined, English, has indefinite articles. English also possesses definite articles. German also has definite articles, as well as indefinite articles. In none of the languages examined do indefinite articles occur without their definite counterparts.

5.1.2.3 Universal Three: All Determiners must Share Inflectional Properties

The third proposed universal was that if one of the three main classes of determiners is inflected, then all other classes that occur in that language must also be inflected. In Russian, only one class occurs, and it is inflected. In German, all three classes, definite articles, indefinite articles, and qualifiers occur, and are inflected. In English, all three classes occur and all three are uninflected. This data supports the existence of this universal, and once again the supposition can be made that this will prove true in other languages.
5.1.2.4 Universal Four: All Languages Possess Three Types of Determiner

Restrictions

The final universal proposed is that all languages restrict determiner occurrence in three ways. First, through co-occurrence restrictions, they restrict which determiners can occur simultaneously within the same Determiner Phrase. These restrictions are vibrant in all three languages examined, though they do not restrict the same forms or words from co-occurring. From this one can surmise that although these restrictions are universal, what they restrict is language specific. The second restriction is the ordering restriction. This determines the order in which co-occurring determiners will occur. This restriction is also active in all three languages, though also restricting and placing different forms in different orders.

The third restriction is the subcategorization restriction. This restriction determines what nouns a particular determiner can modify. This is also a vibrant and active property of all three of the languages examined. The subcategorization restriction is not based upon natural determiner classes, as are the other two restrictions, but is word specific, and forms different classes. They, too vary cross-linguistically, though their presence seems to be universal.

5.2 Final Thoughts

In conclusion, this paper demonstrates the existence of absolute determiner types into which a given language may fit. The evidence does not suggest that a particular language can waffle back and forth between types. This paper also demonstrates that there are at least four different properties of determiners that are universal throughout all human language.
Bibliography


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1 I have included all the sources that were useful in writing this thesis.


