THE MINISTRY OF HIGHER AND SPECIAL SECONDARY EDUCATION OF THE REPUBLIC OF UZBEKISTAN

GULISTAN STATE UNIVERSITY

FACULTY OF PHILOLOGY

DEPARTMENT OF ENGLISH LANGUAGE AND LITERATUR

QUALIFICATION WORK

on theme "Analysis of Syntax of Prenominal Attributive adjectives in Modern English language."

Prepared by: Student of group 1-11

Murodov Olim

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SUPERVISOR:

Fozilov M.

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GULISTAN – 2015

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INTRODUCTION

This is a paper about premodification in the English noun phrase,focusing on functions of attributive adjectives.The contributions in the present volume deal with a variety of issues in the analysis of the syntax and semantics of adjectives.Compared to the lexical categories of nouns and verbs, adjectives have received little attention in the linguistic literature. In the present introduction I will give an overview of some of the central issues in the study of adjectives and put the issues addressed by the papers in this volume into this wider context.

Adjectives in English are believed to have a specific word order when conjoined attributively. Despite transformational grammar theories, there are reasons why syntactic analyses don't always work. Here is cause for psycholinguistic analysis. Researchers have determined that prenominal adjective phrases have word orders that are based more on semantics, rather than syntax. The areas of discussion include the general adjective word orders as fixed, restricted,and free.Topics include experiments that have been used to help determine how we perceive and order multiple adjectives when speaking. Other discussions include adjective ranking, intuition, perception, order of events, primacy and recency,and proximity.

The aims and purposes of the work. The present paper is devoted to a study of Analysis of Syntax of Prenominal Attributive adjectives in Modern English language,aiming to prove that a class of prenominal adjectives, but not all of them, encode specificity, i.e. determine a [+specific] interpretation of the DP through their syntax or through their combined lexical meaning and syntax. As known, with [+specific] DPs, the speaker "has a particular referent in mind" and this piece of information is not (or need not be) shared by the hearer, hence specific DPs are typically indefinite.Develop semantic properties, with adjectives that depict "intrinsic" properties closer to the noun, and adjectives that are "speaker relative" in a more distant position. In the theory, the use of multiple adjectives is described as being equivalent to a sequential series of restrictions placed on the set of properties for a given noun.

Scientific scrutiny of the research problem. Analysis of Syntax of Prenominal Attributive adjectives in Modern English language has not been revisited since the 1970s and has not been applied cross-linguistically. My goal is not to simply describe the syntactic variation of prenominal adjective English language,but to establish a unifying semantic account for how adjectives restrict a noun's set of properties, and analysis of syntax of attributive adjectives order in which they do so. My theory intends to focus on the mechanics of Analysis of Syntax of Prenominal Attributive adjectives' rules, and explores how these mechanics operate cross-linguistically.

The scientific novelty of the work. The novelty of the qualification work is showed by the concrete results of investigation for distinguish various types of category of Analysis of Syntax of Prenominal Attributive adjectives in Modern English language,according to their semantic and structure.

The object of the research. The contributions in the present volume deal with a variety of issues in the analysis of the syntax and semantics of adjectives.

The subject of the research is devoted to a study of Analysis of Syntax of Prenominal Attributive adjectives in Modern English language.

Methods used in the qualification work. Methods in general is an issue that has received comparatively little attention in linguistic research, at least outside the field of syntax[1].Although there are some systematic descriptions of premodifier functions to be found in the literature, much remains to be done.With this study I hope to take a step towards a better understanding of what pre-nominal adjectives actually 'do'.

The practical value. The materials of the qualification paper is of practical importance in the courses such as Theoretical Grammar of the English Language,Stylistics and Text Interpretation,Comparative Typology of English and other languages. Students may use the materials of the work in doing their project works, writing their course works and synopses.

Structure of the qualification work. The work consists of introduction, the main body, conclusion and the bibliography.

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[1] Frawley, W. Linguistic Semantics. Hillsdale: Lawrence Erlbaum Associates. 1992.112p

The first section reviews the criteria that have been proposed to distinguish adjectives as a word class and discusses some cross-linguistic variation observed with respect these criteria.

The second section sketches some issues in the semantics of adjectives.

The third section gives a summary of the main issues in the syntax of adjectives and of the syntactic analyses proposed for the attributive and predicative uses of adjectives.

Chapter I.In Adjectives-Formal analyses in syntax and semantics.

1.1.Adjectives as a word class.

In a typological perspective it is crucial to have criteria that allow us to distinguish nouns and adjectives as well as different types of adjectives. Identifying nouns, verbs and adjectives cross-linguistically is, however, a difficult enterprise, with adjectives being particularly elusive. In earlier research on adjectives as a word class it was claimed that some languages do not have an adjective class at all and that predicates typically corresponding to adjectives in other languages are either nouns or verbs in these languages.

More recent research on adjectives as a word class, however, has defended the idea that an adjective class can be identified in all languages. The detailed studies of adjectives in Baker and Dixon have both given detailed evidence for a lexical category distinct from nouns and verbs in languages that had been analysed as lacking an adjective class. The criteria invoked by Baker and Dixon to set apart a class of adjectives include the following:

1) a. Adjectives allow direct modification of nouns.

b.Adjectives differ from other predicates in the comparative construction.

c.Adjectives do not have their own gender, they agree in gender with the modified noun.

d.Adjectives can appear without a preposition in resultative predications.

As Baker and Dixon point out, the criteria proposed need not distinguish adjectives from verbs or nouns in all languages, as independent cross-linguistic differences can interfere with the criteria.

Criterion (1a), for example, is not applicable in languages like Slave (Athapaskan) that do not allow direct modification of the noun by the adjective.

In order to apply criterion (1b), comparatives in a given language also have to be analysed in detail. As Dixon points out, comparative constructions may but need not distinguish adjectives from nouns. This seems to be a special case of the more general

observation that not all degree words select adjectives exclusively[2]. While *how, too, so* and *as* in English are limited to adjectives (like the synthetic comparative), semantically similar expressions such as *more, less* and *enough* can also combine with other expressions such as mass nouns *(more/less/enough water)* and verbs *(I trust her more/less/enough).*The distinction between the two types of degree expressions has other grammatical reflexes in English: *more/less/enough* can combine directly with the predicate pronoun *so* while degree heads like *how/too/so/as* require a dummy *much*.

(2) a. Mary is intelligent and Sue is more so.

b. Mary is intelligent, in fact she is too much so.

b.' *Mary is intelligent, in fact she is too so.

The application of the criterion in (1b) therefore has to be underpinned by a detailed examination of the degree words in a given language.Finally, there are languages such as French, Hindi, Russian and Chichewa that do allow only PP-resultative predicates - since adjectival resultative predicates are excluded independently in these languages, criterion (1d) is rendered inapplicable.

Summarising, it seems fair to say that the criteria in (1) are flawed since they are too coarse to properly isolate the characteristic features of adjectives, and therefore other properties of the language can interfere with the behaviour of adjectives on a given criterion.Nevertheless, the criteria provide a useful battery of tests that may help to identify adjectives in a given language.

A heuristic that may be used to approach the task of identifying the potential adjectives in a language is provided by Dixon's study of the semantics covered by adjectives in languages with small adjective inventories.According to Dixon, small adjective inventories typically include adjectives of dimension *(big, small, long, short, wide),* age *(new, young, old),* value *(good, bad)* colour *(black, white, red);* while only bigger adjective inventories typically also contain adjectives describing physical property *(hard, soft, heavy, wet),* human propensity *(jealous, happy, kind, clever)* and speed *(fast, slow)*.

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[2] Baker, M.. Lexical Categories. Verbs, nouns and adjectives. Cambridge: Cambridge University Press. 2003.169p.

In what follows I will review three central issues in the semantics of adjectives: gradability, intersectivity and lexical aspect. Gradability and the intersective/non-intersective contrast have been the object of a fair amount of research. The study of aspectual properties of adjectives, on the other hand, is only recently emerging as a focus of interest.

Gradability is often taken to be a prototypical property of adjectives: degree expressions of the type of *too* or *very* combine with adjectives but not with other categories. It has been pointed out, however, that the syntactic behaviour of degree expressions varies cross-linguistically as illustrated here by the degree expressions *too* and *trop* "too" in English and French respectively[3]:

	French	English	
A	**trop** grand	**too** big	(adjective)
B	**trop** apprecier	appreciate **too** much	(gradable verb)
C	**trop** danser	dance **too** much	(eventive verb)
D	**trop** de soupe	**too** much soup	(mass nouns)
E	**trop** de livres	**too** many books	(count nouns)

As Doetjes points out, the distribution of *too* distinguishes adjectives from other categories in English as only adjectives can combine directly with *too.*In contrast, the French degree expression *trop* - although semantically similar to *too* - does not discriminate between adjectives, verbs and nouns.Gradability therefore seems to be a more general property of a subclass of predicates that are associated with a scale, be they nouns, verbs or adjectives.

Apart from degree expressions, gradable adjectives also admit comparative and superlative formation (e.g. *smaller/smallest).* In some languages adjectives have dedicated comparative and superlative morphological forms that do not apply to other categories:

4) a. schon schoner schonster (Ge)
beautiful beautiful-comparative beautiful-superlative
b. green greener greenest

[3] Doetjes, J. "Adjectives and degree modification". Oxford: Oxford University Press. 2008.155p.

However, in the same way as degree expressions do not single out adjectives cross-linguistically (see discussion in section 1 above), comparative and superlative morphology is not limited to adjectives either.

'In this place in the south I meet with the one of our filmmakers who is the most like a writer or the one of our writers who is the most like a filmmaker, G.S.' (attested).

The preceding examples show that gradability and its reflexes in degree expressions and superlative and comparative morphology cannot be taken to characterize adjectives as a class cross-linguistically.This not with standing, it is true that gradability is an important semantic property of a large subset of adjectives in many languages.Kennedy and McNally (2005) propose a semantic typology of gradable predicates based on the properties of the scales along which these predicates order their arguments (their *scale structure).*These authors propose to classify gradable predicates along two parameters: (i) whether the scale involved is open or closed and (ii) whether the standard of comparison for the predicate is relative (i.e. fixed con- textually) or absolute (a maximal or minimal value on the scale, irrespective of context).

(6) a. open scale relative : *big*

i.no upper limit on the scale: *big* is incompatible with *completely*

ii.relative standard of comparison: *big* can be modified by *very*

b. closed-scale absolute adjective: *undocumented*

i.upper limit on the scale: *completely undocumented*

i.absolute standard of comparison: # *very undocumented*

Kennedy & McNally point out that the two properties of gradable predicates interact; in particular, gradable adjectives associated with totally open scales have relative standards.The inverse correlation is not as strong: gradable adjectives that use totally or partially closed scales need not have absolute standards but in the default case the standards for close-scale adjectives correspond to an endpoint of the scale (either the minimum or the maximum).

As the preceding discussion shows, the claim that gradability is proto-typical of adjectives cannot be maintained.However, even if gradability does not characterise

adjectives as a class, it is an important semantic property of a large subset of adjectives in many languages that is a crucial component of the meaning of many adjectives.

Adjectives can further be classified based on the inferences that an adjective+noun combination can license. The simplest case is that of *intersective* adjectives: these adjectives license inferences between the attributive and the predicative use based both on the noun and on the adjective:

(7) Intersective adjectives: Licensed inferences

a.X is Adj N --> X is a N X is a red house --> X is a house

b.X is Adj N --> X is Adj X is a red house --> X is red

Among the adjectives that are not intersective, we can distinguish *subsective* adjectives, and *non-subsective* adjectives. For subsective adjectives only one of the patterns of inference is fulfilled, namely the inferences based on the noun:

(8) Subsective adjectives: Licensed inferences

a X is Adj N --> X is a N X is a perfect typist --> X is a typist

b. X is Adj N -/-> X is Adj X is a perfect typist -/-> X is perfect

Non-subsective adjectives can be further divided into *simple subsective* adjectives where the adjective+noun combination implies neither the adjective nor the noun, and *privative* adjectives that license a negative inference for the noun:

(9) Non-subsective adjectives

i.Simple subsective

a) X is Adj N -/-> X is a N

b) X is Adj N -/-> X is Adj

ii.Privative

a) X is Adj N -- > X is not a N

b) X is Adj N -/-> X is Adj

X is an alleged murderer -/-> X is a murderer X is an alleged murderer -/-> *X is alleged

X is a fake diamond -- > X is not a diamond X is a fake diamond -/-> X is fake

The intersective/non-intersective distinction is partially correlated with the syntax of the adjectives: only attributive adjectives allow intersective and non-intersective readings, while predicative adjectives are always intersective.

It has been observed that some attributive adjectives give rise to intersective/non-intersective ambiguities[4], as in the following example.

(10) Olga is a beautiful dancer.

i. 'Olga is a dancer who is beautiful' (Intersective reading)

ii. 'Olga dances beautifully'(Non-intersective reading)

Larson (1998, 2000) argues that adjectives with a non-intersective reading are closer to the noun. When combined with an adjective like *blonde* that only has an intersective reading, the adjective *beautiful* can only have the non-intersective reading if it is closer to the noun as in (11a); when *beautiful* is separated from the noun by the intersective adjective *blonde,* only the intersective reading is possible (11b):

(11) a. Olga is a **blonde beautiful** dancer INT - INT ok INT - NON-INT ok

b. Olga is a **beautiful blonde** dancer INT - INT ok NON-INT - INT *

As pointed out by Larson, the analysis of the intersective/ non-intersective ambiguity proposed by Siege attributes the ambiguity to a hidden semantic ambiguity of adjectives and implicitly assumes that nouns do not contribute to the ambiguity.The analysis proposed by Sproat & Shih attributes the difference between intersective and non-intersective modification to a difference in syntactic structure between the modifiers: intersective modification results from reduced relatives while non-intersective modifiers are APs. Larson proposes that the semantic difference is due to the syntactic position of the modifier in the noun phrase: modifiers that attach outside the NP are uniformly intersec- tive, modifiers that attach inside the NP are non-intersective. Larson analyses intersective pre- nominal adjectives as originating post-nominally in the position of relative clauses; their surface position is analysed as the result of movement .

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[4] Larson, R.K. and Cho, C.. "Temporal adjectives and the structure of possessive DPs". Natural Language Semantics 11:. 2003. 247p.

Aspectual classes of adjectives the bulk of the work on aspect has studied the aspectual contrasts that can be observed for verbs. In more recent research on aspect, aspectual contrasts have been studied for other word classes including adjectives, nouns, and prepositions.

Aspect in non-verbal categories has not received the same attention as verbal aspect, even though as early as 1979, Dowty pointed out that the stative- non-stative distinction can also be applied to adjectives and nouns. Dowty used the progressive to distinguish stative and non-stative adjectives and nouns: while stative adjectives and nouns are incompatible with the progressive (12b/b'), non-stative ones allow it (12a/a'):

12. a. John is being careful. a'. John is being a hero.
b. *John is being tall. b'. *John is being a grandfather.

(Dowty)

Ultimately, however, Dowty classified adjectives as stative predicates on a par with stative verbs and common nouns, thus taking the states in the Vendler-classification to extend to adjectival states. In subsequent research it is evident, however, that adjectival states do not easily fit the Vendler classification; Rothstein's detailed study of Vendler classes, for example, characterises *verbal* states as cumulative, non-dynamic and totally homogeneous, explicitly excluding *adjectival* states from her discussion.This choice is empirically justified since adjectival states such as *careful* combined with the copula *be* fail the tests for verbal states.

In a manner similar to verbal predicates the meaning of adjectives can also impose conditions on the internal structure of the interval of which the state holds.Take an adjective like *dead* or *changed:* both adjectives imply that the state holds of an interval that has a left boundary; while the interval of which *dead* by virtue of its lexical meaning does not have a right boundary, *changed* is neutral with respect to the length of the interval.

a. He was dead.(transition, no right boundary)

b. He was changed. (transition, right boundary not restricted)

Gradability further affects the temporal trace of which the state holds in two respects: (i) the distribution of the property denoted by the state across the interval and (ii) the possible transitions from state to non-state.Compare the following examples illustrating the distribution of a state across an interval: while *drunk* is compatible with varying degrees of drunkenness over an interval, *open/closed* for a shop is a yes-no state that either holds or does not hold. These two examples also contrast with respect to the possible transitions from state to non-state: while the transition from *sober* to *drunk* is a matter of degree, the transition from *open* to *closed* (for a shop) is not: the interval of which *open* holds has a right boundary, while this need not be true for the interval of which *drunk* holds as the transition is gradual.

(14) a. The shop is open. yes/no states

b. He was drunk/sick. gradable states

The study of deadjectival verbs in Kennedy and Levin[5] supports the hypothesis that there is dualism between gradability in adjectives and lexical aspect (telicity) in verbal predicates.More specifically, they provide evidence that deadjectival verbs such as *to cool* and *widen* inherit the scalar properties of the adjectives from which they are derived and that these scalar properties largely determine the aspectual properties of the derived verb.

Notice that the aspectual distinctions evoked above cannot be reduced to the contrast between individual-level and stage-level adjectives: adjectives like *open* and *drunk* are both s-level but differ in their gradability properties and in the internal structure that they impose on the temporal trace of their state.

The syntax of adjectives

As is well-known, adjectives can appear in two main types of syntactic contexts: as *attributive* adjectives directly modifying a noun (15) and as *predicative* adjectives in the complement of a copula (16a) and as secondary predicates (16b):

(15) Attributive adjectives

a.The **blue** car came down the avenue.

[5] Hay, J., Kennedy, C. and Levin, B. 1999. "Scalar structure underlies telicity in 'degree achievements'". Proceedings of SALT 9:1994. 124-144.

b.Das **blaue** Auto kam die Strasse entlang. (German) DET blue.NOM.MSG.WK car came DET road along.

'The blue car came along the road.'

(16) a. Predicative adjectives (copula)

i. The car is **blue.**

ii. Das Auto ist **blau.** (German) DET car is blue

'The car is blue.'

b. Predicative adjectives (secondary predication)

i. John painted the house **blue.**

ii. Sie streicht das Haus **blau.** (German) she paint.PRES3SG DET house blue

'She is painting the house blue.'

As the contrast between (15b) and (16aii/bii) illustrates, the two contexts can differ in terms of their morphological properties: in English attributive adjectives show agreement in gender, number and case with their head noun (the form of the agreement depending also on the type of determiner) while predicative adjectives in (16) are invariant.

An analysis of the syntax of adjectives therefore should aim to address the following three questions:

(i) What is the syntax of *attributive* adjectives: how are nouns and adjectives combined in the syntax?

(ii) What is the syntax of *predicative* adjectives?

(iii) What is the relationship between attributive and predicative adjectives?

In what follows, I will review the analyses proposed for attributive and predicative adjectives separately. I review well-studied semantic differences between attributive and predicative adjectives and then discuss some syntactic differences with respect to multiple modification.

The syntax of attributive adjectives

In what follows I will give a brief overview over the different analyses that have been proposed. As the discussion will show, there is no consensus in the literature as to the analysis of the syntax of attributive adjectives cross-linguistically.

Analyses of attributive adjectives: an overview

Two main approaches to the syntax of attributive adjectives can be found in the literature: adjectives are analysed as either heads or specifiers.

According to the first type of approach, adjectives are heads that take the NP as a complement or as a specifier.The first analysis of adjectives as heads was proposed in Abney .This analysis treats adjectives as heads that are selected by D and take an NP complement: (17) [DP D [AP A [NP N]]]

The main argument for this analysis was the observation that in English pre-nominal adjectives cannot have complements. If the analysis is taken to be an analysis of adjectives cross- linguistically, however, this argument loses its forces since many languages do allow pre-nominal attributive adjectives to take complements.

Delsing,citing Cinque, further distinguishes between adjectives in nominalisations which have equivalents in the clause (either the external theta-role or an adverb) and adjectival modification of un-derived nouns.

In analyses that associate each adjective with a specific head be it an adjective-head A or a functional project F that takes the adjective in its specifier, the relative order of adjectives can be attributed to the relative order of the respective heads:

(18) a. [DP [AP A [AP A [N]]]]

b. [DP [FP AP F [FP AP F [N]]]]

Under an analysis that takes adjectives to adjoin to the nouns they modify, adjective order is expected to be essentially free.

Languages with different types of adjectives

The syntax of predicative adjectives

The syntax of predicative adjectives seems much less controversial than the syntax of attributive adjectives. It is widely assumed that predicative adjectives (and nouns) combine with a functional category PRED, that introduces the subject of the predication above the AP/NP proper .

Baker argues in detail that English *be* should not be analysed as a lexical manifestation of PRED, since *be* need not appear in untensed small-clause contexts (s

where PRED is still needed, by hypothesis, to introduce the subject of nouns and adjectives:

(30) a. The poisoned food made Chris sick/ an invalid.

b.I consider Chris intelligent/ a genius.

c.With Chris sick/ an invalid, the rest of the family was forced to work harder.

This means that the functional category PRED need not be overt. However, as argued in Baker, assuming this null element implies that verbal and non-verbal lexical categories differ with respect to the nature of their specifier: while the specifier of adjectives and nouns is introduced by PRED and therefore external to the AP/NP, the specifier is part of the lexical projection of V. This difference can then be used to explain the contrast between adjectives and nouns on the one hand and verbs on the other hand regarding tense-aspect morphology and causative morphemes.

The relationship between attributive and predicative adjectives

Since many adjectives have predicative and attributive uses, it is tempting to reduce attributive and predicative adjectives to a single case. One possibility of doing this is to view attributive adjectives as derived from predicative adjectives via a relative clause. This type of analysis squares well with the observation that in many languages, predicative adjectives are morphologically simpler than attributive adjectives: in German, e.g. predicative adjectives are invariant while attributive adjectives have agreement morphology, in Russian, predicative adjectives but not attributive adjectives can appear in the short form that marks fewer features.

Unfortunately,an analysis that reduces attributive adjectives to predicative adjectives encounters several empirical problems.

First, many adjectives can be attributive but not predicative (31). Inversely, many

(31) the **main** idea vs. *The idea is **main.**

adjectives can be predicative but not attributive (30):

be predicative but not attributive (30)

(32) a. *the **asleep** man a'. The man is **asleep.**

b. *the ready woman b'.The woman is ready.

(33) Notice, that the possibility of appearing in attributive or predicative position can change when adjectives are modified:

a. a wide-awake patient

b. their still awake children

c. a ready-to-use website

A final problem for analyses deriving attributive adjectives from predicative ones it the fact that the attributive use and the predicative use of an adjective need not have the same meaning.More generally,only attributive adjectives can have non-intersective meanings.

(34) a. the old director (= former) a'. The director is old. (= elderly)

b. the responsible man b'. the man responsible (for the contract)

If attributive adjectives were uniformly derived from predicative adjectives, we would expect them to have the same meaning.

Based on this evidence against a unifying analysis of attributive and predicative adjectives, Siegel concluded that adjectives can be of two semantic types.Some adjectives were analysed as having the semantic type <e,t>, which is the type for intersective attributive and for predicative adjectives, while other adjectives are of type <<e,t>, <e,t>>, a modifier,which is the type for non-intersective attributive adjectives.This approach then has to account for the fact that a large proportion of adjectives allows intersective and non-intersective and attributive and predicative uses, it is therefore necessary to characterise the adjectives that only allow one semantic type.

It has further been observed that attributive adjectives show a distinction that seems related to the attributive/ predicative distinction[6]. Sproat & Shih propose that attributive modification can be either *direct* or *indirect* modification: direct modifiers are simple APs while indirect modifiers are reduced relative clauses.Sproat & Shih argue that this syntactic distinction is reflected in two properties: while direct modification is open to intersective and non-intersective modifiers and subject to ordering restrictions, indirect modification is limited to intersective modifiers and not

[6] Sproat R. and C. Shih. "The Cross-linguistic Distribution of adjective ordering restrictions".Dordrecht: Kluwer Academic Publishers. 1991. 593p.

subject to ordering restrictions, resembling relative clauses. If this analysis is correct, attributive adjectives cannot be generally reduced to predicative adjectives (i.e. to reduced relative clauses),supporting the conclusion that two types of adjectives have to be distinguished.

A further property distinguishing attributive and predicative adjective is multiple modification. In English, attributive adjectives can be stacked without coordination (35a), while predicative adjectives cannot: multiple predicative modification requires coordination (35b):

(35) a. the big red ball

b. *the ball is big red vs. the ball is big and red

The preceding discussion shows that the analysis of multiple adjectival modification is a complex problem going well beyond the widely studied conditions governing adjective ordering.In particular,the data discussed show that for the analysis of multiple adjectival modification in a language the analysis of multiple modification in general has to be taken into consideration.

As the brief review in this section shows,the syntax of adjectives still poses considerable challenges to linguistic analysis.An adequate analysis has to account for the fundamental differences observed between predicative and attributive adjectives, and also for the syntactic differences between different types of adjectives that may be found within a single language.

1.2 Adjective order in English:A semantic account with cross-linguistic applications.

Which is more correct, the "big fat cat" or the "fat big cat?" Why is a particular order preferred? In English, established Phrase Structure rules place no limit on the number of adjectives before a noun. The adjectives, however, cannot occur in just any order, and native speakers of English have very particular intuitions about what order is more correct, even if they have never been explicitly taught ordering rules. In this study, I seek to describe the mechanics of an underlying adjective order in English and explore if the same principles operate cross-linguistically.After outlining some previous work across disciplines on the subject,I prove the existence of a

preferred order using the results of searches from the Corpus of Contemporary American English and the British National Corpus.Additionally,I briefly discuss the prosodic differences between a given order and its alternative.Secondly, I develop a semantic theory that describes how pre-nominal adjectives are ordered based on their semantic properties,with adjectives that depict "intrinsic" properties closer to the noun, and adjectives that are "speaker relative" in a more distant position. In the theory, the use of multiple adjectives is described as being equivalent to a sequential series of restrictions placed on the set of properties for a given noun. This allows for a change in adjective order to affect the way in which we conceptualize of a noun, while also establishing an underlying order that is the most cognitively efficient. My findings demonstrate that a uniquely semantic theory is successful in describing what native speakers perceive as the "proper" order of adjectives in a diverse group of languages.

To study the sequence of pre-nominal adjectives in English was at its most prevalent in the 1960s, when it was first noted by psycholinguists that speakers have a preference for certain orders. At the time, one of the most popular strategies of contemporary psycholinguistics had been to interpret various laboratory phenomena in terms of constructs derived from linguistic theory. At the forefront of this work were three psycholinguists by the names of J.E. Martin,J.H. Danks, and S. Glucksberg (1971). In his 1969 paper, Martin proposed a semantic rule for explaining adjective ordering that was based on the qualities referred to by the adjectives-definiteness, absoluteness, or intrinsicalness. According to Martin, in comparison to size, color is more definite in meaning, changes less from object to object (absoluteness), and is considered a more intrinsic property of the object. Additionally, Martin claimed that the semantic dimensions of definiteness and absoluteness determine the "accessibility" of adjectives, which in turn determine their ordering. He defined "accessibility" in terms of how quickly participants could produce an adjectival description of a physical stimulus. He found that the response speed was correlated with ordering: The nearer an adjective was preferred to the noun, the more "accessible" it was.

In their study, Danks and Glucksberg considered violations of adjective ordering constraints by having participants complete a ranking test with six possible permutations of three pre-nominal adjectives. The results showed that the position of the adjective that was most closely related to an intrinsic property of the noun was the primary determinant of acceptability: the closer it was to the noun, the higher the sentence was ranked. This demonstrates a speaker preference to place adjectives that denote intrinsic properties of a noun closer to the noun.

In 1985, M.A.K Halliday published his first edition of *An Introduction to Functional Grammar,* where he provides a theory for adjective order that describes how adjectives "decrease in specifying potential" and become "increasingly permanent as attributes" as they approach the noun. Halliday's concept of permanence is a way of re-framing Martin's idea of "intrinsicalness" from the functional perspective rather than from the perspective of meaning. He also makes the claim that "the more permanent the attributes of a thing, the less likely it is to identify in context." This is similar to the parallels that Martine draws between intrinsicalness and accessibility, although Halliday did not do a psychological test to determine the validity of his assumptions about permanence.

In the 1990s, several studies were done on restrictions on the syntax of adjective ordering cross-linguistically (Sproat and Shih 1991, Svenonius 1993, Bernstein 1993, Cinque 1994, and Bouchard 1998, to name a few). These studies focused primarily on describing the variation of the internal placement of constituents within DPs across languages. Sproat and Shih looked at adjective ordering in Chinese, and found that it was relatively free in comparison to English when the adjectives were marked by particles. In general, their conclusions lead them to lean against the idea of a universal semantic description for adjective order. Despite this conclusion, they still established a general ordering hierarchy,Quality > Size > Shape > Color > Provenance. Cinque (1994) modified !7!

The existence of a preferred underlying adjective order of English can be proved by both corpus analysis and prosodic analysis. Let us, for the sake of simplicity, take a common case of two adjectives depicting size and color, "big" and "red." Case (a.)

below shows the adjectives occurring in their more common underlying order and case (b.) demonstrates the inverse, which is perceived by native speakers of English to be less correct. This would make SIZE > COLOR the proper underlying pre-nominal order. Using a corpus, we can determine and compare the ways in which the cases are actually used.

a). the big red house

b). # the red big house

My hypothesis for the corpus analysis is that "big red" will occur at a very high frequency, both in written and spoken language. I hypothesize that "red big" will only occur in contexts of spoken language where the speaker is giving an off-the-cuff description of an event or object. Within this description, I would imagine the speaker to pause often and insert discourse makers such as "um" or "like." Additionally, this type of description may elicit such an order because the object being described is being conceptualized or recalled at the same rate at which language is being produced. If the object were to be already conceptualized and simply being described using language, I predict that the underlying order would surface.

Using COCA, the Corpus of Contemporary American English, I searched for occurrences of "big red [noun]" versus occurrences of "red big [noun]." "Big red" yielded over 382 tokens in many contexts, and "red big" yielded 0 tokens. I then moved on to the BNC (British National Corpus). When I searched for "red big" on the BNC, I found only one occurrence of "red big." It was from a speaker categorized as "FLP," which is defined in the corpus as a speaker within a group of 10 Scottish women, who are having a discussion about weddings. The token was recorded on an unknown date and was transcribed as follows:

Example i.

FLP: And their bride has to wear er, all in red and er the bridegroo er groom has to wear a long costume with a **red big** flowers in front i aha and then they get married and there's erm band, the Chinese traditional band with drums and trumpets blowing all the time and er, all the guests have a very nice time.

Much as I expected, the speaker is in the process of describing a wedding. Her utterance is filled with what the transcriber writes as "er," the British equivalent to the modern American "um." In this context of off-the-cuff description, the Scottish woman says that the groom has to wear a "long costume with a red big flowers." Unfortunately, we do not have a recording of this utterance and the transcriber did not annotate it with the prosodic elements that would provide it with some spoken context. Additionally, it is possible that the previous mention of the word "red" in the phrase "all in red" made it contextually reasonable on a discourse-relevance level to list "red" first in the order. Another possible explanation for why this speaker may have ordered her adjectives in this manner is that in her dialect of Scottish English, it is possible that this is acceptable, although no other Scottish speakers in the corpus produced an inverse order and I found no evidence for this fact.

All other occurrences of these adjectives adjacent to one another in the BNC yielded case (a) order. Below are just some of the contexts in which case (a) was recorded. None of the instances in which "big red" occurred were uttered by a Scottish woman, so there is a possibility that my dialect theory may not be entirely invalid.

ii.(2619) Now why would Kurt be running around Soho with a **big red** woolly jumper on and having intense conversations with lampposts?

iii.(303) Inside were all the things they had asked for, and some they had not- some wine, two chickens, twelve **big red** roses.

iv.(901) Love does not involve giving fancy parcels tied up with **big red** bows.

v.(5406) And it, and it like, it run down me face there and I had a **big red** mark on me face.

While it was clear that color consistently occurred before size in both COCA and the BNC, with the only example of the inverse as my hypothesis predicted, I decided to investigate the other semantic categories of the adjectives to be sure it wasn't a unique case. I did searches for a variety of categories and their respective inverses, and found that although the inverses of the preferred order do exist in the corpus, they are fewer in number and can be explained in context.The semantic differences, as

well as other consequences, can be explained when the inverse cases are analyzed in their contextual environments. My theory will attempt to explain why an inverse order may produce a certain semantic shift, and why this shift is to be expected.

I would now like to return again to the analysis of "big red" vs. "red big," and discuss the prosodic differences between these cases; that is, if asked to read both cases out loud, what prosodic differences would an average English speaker, selected at random, produce? To answer this question, I created sentences with both case (a) and (b), which are designed to be read aloud in sequence without the reader having seen the paragraph before. This eliminates an improvisation variable, but will control for prosody and hopefully illuminate an underlying distinction between the two cases. Below is the paragraph to be read aloud. I asked a participant to read the paragraph aloud into Praat. The spectrogram for her reading is shown on the next page. I will look specifically at intonation and the temporal spaces between words to determine how the participant may have reacted to the adjective orders.

"And in the morning, I walked down the road to the **big red house** on the corner. I knocked on the door, and a woman wearing a **red big hat** entered. She smiled and said good morning."

In addition to the creation of `pitch contrast, the speaker also pauses for a significantly longer amount of time between adjectives in case (b). This suggests, once again, the speaker's attempt to either adjust for the ordering error or create temporal distance between the two adjectives in an attempt to express their "list-like" nature. In the orthography,we represent this "list-like" nature using commas, which allow us to freely order adjectives by making them independent syntactic entities that modify the noun equally and simultaneously rather than sequentially according to ordering restrictions.

In conclusion, it is possible to find proof of the prescribed adjective order not only in corpus data of American and British English, but also in the prosodic features of both cases when they are read aloud by an unsuspecting reader. These are two very different supporting cases for the existence of a "correct" order of adjectives in English, which strengthens the argument that a correct order indeed exists.

1.3 A semantic theory for the description of adjective order in English.

A semantic account of adjective ordering requires placing adjectives into semantic categories, which has been done and made available to learners of English by people who have developed grade-school textbooks and instructional materials. Grammarians have worked on this topic before,but adjective order seems to have been taught only in recent years to grade-school students and people acquiring English as a Second Language.This suggests that classifying adjectives into semantic categories is also a rather recent teaching tool for language instruction.The Internet, for example, has numerous sites dedicated to the instruction of English and English grammar which all refer to adjective ordering as "rule- based," claiming that there is a specific order which must be learned in order to have a full grammatical understanding of the English language.According to the British Council, a British organization for cultural relations, educational opportunities, and the instruction of English for children, proper adjective order in English (based on the semantic categories of the adjectives) is as follows, increasing in proximity to the noun from

1-8: 1.general opinion,2.specificopinion,3.size,4.shape,5.age,6.color,7.origin (nationality)8.material→(noun)

There are issues, however, with the order of the first three categories. The first issue lies in understanding the distinction between "general" and "specific" opinion. What is the difference? According to the British Council, a "general opinion" adjective would be something like "nice" or "interesting," whereas a "specific" opinion would be an adjective like "beautiful" or "curious." What makes "interesting" a more general opinion than "beautiful?" It's also difficult to classify "nice" as a general opinion, when it seems to have semantic variation; it can mean "pleasant", or it can be more specific and mean "kind" or "pretty." The distinction is theoretically difficult to grasp, especially when we attempt to apply this order to real world examples, as I will attempt to do. The second issue is with the relative order of shape and age; in my modified order, I will switch them. Additionally, "size" seems to be incorrectly placed.According to the British Council, the order in 1(a) would be correct, and the order in 1(b) would be incorrect.

1. (a) the nice beautiful big house

   (b) # the nice big beautiful house

My intuitions as a native speaker of English (and the intuitions of my English-speaking peers) tell me that 1(b) is actually the correct order. I affirmed these intuitions when I conducted a corpus search for "big beautiful" versus its inverse, which yielded 33 occurrences of "big beautiful" and only 13 of its inverse. Additionally, "nice" is an interesting case, as it changes its semantic value depending on its relationship to the size adjective. For example, "nice" in "the nice big house" carries the meaning of general appeal, with the house's size is contributing to that general appeal. However, "nice" in "the big nice house" seems to mean something more specific, perhaps in reference to the house's aesthetic appeal. Additionally, "the big nice house" seems to imply that there is a group of aesthetically appealing houses, and the speaker is attempting to identify the big one. Other adjectives, which Cinque refers to as "operators" behave similarly to adjectives such as "nice." These adjectives include "former" and "alleged," and are able to move more freely within a multiple-adjective NP, depending on the desired semantic outcome. The British Council's order does not include operators.

We therefore have two similar categories,one that is not mentioned by the British Council ("operators") and the other ("specific opinion"), which seems to include a larger variety of adjectives. These two categories seem to have two things in common: a scope- taking quality and an ability to move more freely, making them different from the other categories. With this generalization, as well as the changes I made to the ordering of age, shape, and size, I would like to suggest the following modification to the British Council's order.

1. scope-taking (take all adjectives) (alleged, former, nice)
2. size (big, small, fat, skinny, tall, short)
3. quality (formerly "specific opinion") (beautiful, ugly, silly, *little, *young)
4. age (old, new)
5. shape (square, round, rectangular)
6. color

7. origin (nationality)

8. material

→(noun)

*Adjectives such as "little" and "young" can be a part of multiple categories, although not simltaneously. This will be discussed later.

Let us take this modified order to be the proper underlying order. We then have to explain the semantic shifts that occur when adjectives are switched, as well as account for *why* this order can be taken to be the underlying one. At first glance, the order is seemingly arbitrary, but the above semantic categories can be farther consolidated into larger categories. These larger categories can be thought of as spheres in which the sub- categories lie, with the noun at the core of these spheres. If we begin with the noun and work backwards, we can make observations that can help us to establish our innermost sphere. Firstly, the categories closet to the noun, color, origin, and material, are very rarely found out of order (this can be affirmed by the COCA search). Secondly, these three categories attribute *intrinsic* properties to a noun, that is, they denote properties that are inherent in the object's physical existence (For example, an object cannot exist without being made of something). Lastly, as these three categories increase in distance from the noun, it is apparent that they become less intrinsic. We can therefore take color, origin, and material to make up our innermost sphere containing the adjectives that attribute intrinsic properties to the core noun.

Sphere 1: The intrinsitivity of material and color and the optimization of cognitive efficiency in the restriction of subsets.

To explore these observations, let us look at a simple case that makes use of the "material" and "color" categories, "red brick house." Let us first establish that "red brick house" is the preferred order, where "brick red house" is not. If we look at the properties that each of these adjectives attribute to the house, we can see that the material ("brick," in this case) is a slightly more intrinsic property of a house, or any noun, for that matter. To test the intrinsitivity property of adjectives that attribute "material" to a noun, we can attempt to imagine a house without the property of being

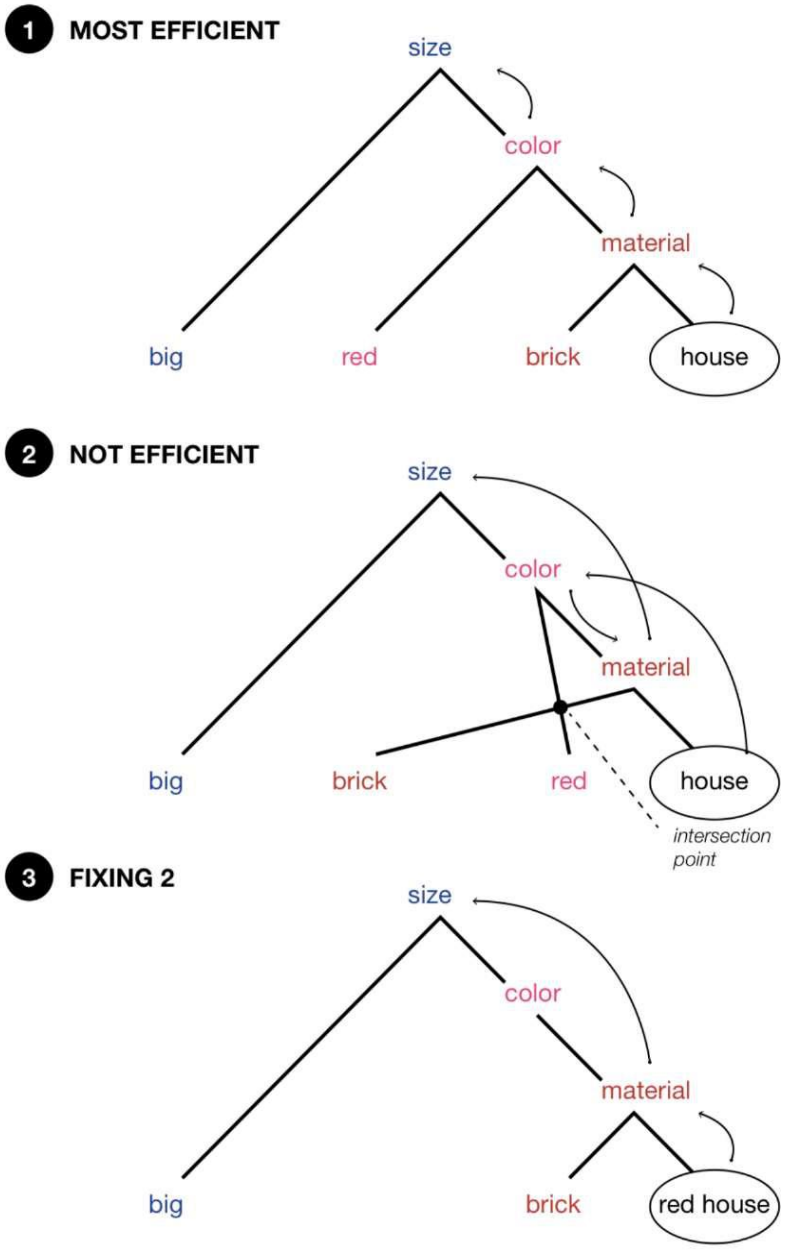
made of something. This seems impossible to do, because a physical object (such as a house), by nature, must be made of something. If someone were to ask a group of people to picture a house, one person may picture a wooden house, while another person may picture a brick house, but it would be impossible for either person to picture a material-less house.Therefore, we can consider material an intrinsic property of a physical object.Additionally, both color and material require no additional contextual information to be determined; however, we do require context to determine if something is big, small, beautiful, or ugly.

If we are to be in keeping with the order I have suggested and the observation that the adjectives denote decreasingly intrinsic properties as they get farther from the noun, the question then becomes, "What makes color a *less* intrinsic property than material?" If we use the same diagnostic above and attempt to picture a "colorless" house, some would argue that it is impossible to do so. However, it seems more plausible to imagine a "colorless" house than a "material-less" house. "Colorless" is a word in English that is used to describe something that is lacking color, so it seems that we are in fact capable detaching the property of color from an object successfully without losing our entire concept of it. Detaching the property of material from a physical object seems much less plausible. In fact, if I were to ask you to picture a "colorless house," it is likely you picture a glass house. The house is still made of something, but it does not have a color.

In an attempt to explain *why* to ordering rules are so strict within this first sphere, let us think of the order of the adjectives as the order in which we restrict the noun's properties into subsets, starting from the adjective closest to the noun and working outward. If we do this, then when we conceptualize of the NP "the red brick house," the order in which we restrict the set of houses is indicative of the order in which we attribute properties to the noun, and thus represents the order of the adjectives. We begin with the noun, which denotes the set of all houses. Then we begin to restrict this set with increasingly non- intrinsic properties. First, we create a subset of houses that are made of brick. Then, we take brick houses of varying colors and isolate the red ones. By doing this, we are being more efficient in how we describe the object we

wish to refer to. If we were to first isolate the red houses, we would not only conceptualize houses that are red, but also be cognitively required to assign some material (or materials) to them, since it is impossible to conceptualize of a material-less house. In short, it seems much more plausible for our brains to isolate a set of colorless brick houses than a set of red material-less houses. To be maximally *cognitively efficient,* it makes sense to begin by making a subset of brick houses of no particular color, and then make yet another subset of the red ones. When we reverse the order, the result is a less cognitively efficient concept; this is likely why reversing the order within sphere 1 is so rare.

When the order *is* reversed, however, what are the semantic consequences? Additionally, how can we conceptualize of a "brick red house" without being cognitively inefficient? If we think of a context in which saying "the brick red house" is acceptable, it is required that the discourse context makes it previously clear that we were already discussing a set of red houses. It seems plausible for someone to say, "We passed several red houses on our tour of Brussells. My favorite was the brick red house." Basically, saying the "brick red house" in a grammatically correct fashion simply requires that you begin with a set of red houses before attributing other properties, such as material, to the set. In doing this, you also avoid the problem of cognitive inefficiency. Diagrams 1, 2, and 3 below demonstrate this process. In diagram 1, the context-free underlying order, which is also the most cognitively efficient, is depicted. In diagram 2, the context-free reversed order is shown, demonstrating the cognitive inefficiency of conceptualizing of the adjectives in that order. Lastly, diagram 3 demonstrates how in context, this problem can be fixed by altering the starting point form which we begin restricting subsets of properties. For the purpose of including another contrastive semantic category from another sphere, the phrase shown below is "big red brick house."



Sphere 2: Age and shape -- Internally comparative adjectives and internal relativity

Color is the final semantic subcategory in Sphere 1, making age and shape the next two semantic categories as we work outward from the noun. Age and shape, in terms of their relationship to sphere 1, are semantically less intrinsic than properties such as material and color, but this is not what places them in a unique sphere. What

distinguishes age and shape from the categories in sphere 1 is their ability to be *internally comparative.* Unlike material, origin, and color, age and shape can be comparatives; for example, we are capable of saying that one thing is "rounder" or "older" in comparison to another thing, or to itself at a previous point in time. We are not capable, however, of saying something is "more brick." We can't really say that something is "more French" than something else; if we do, we mean French-like in quality rather than the property of being from the country of France.

Something that distinguishes age and color from the remaining semantic categories is that they are not semantically deictic. This is what I have intended to convey by describing these adjective as *internally* comparative and *internally* relative; such adjectives do not require information from an external context to be determined as true or false, and additionally, they require no information about the speaker's beliefs. For example, if a man were to be alone in an empty room with no other people or things to compare him to, one would still be able to assess his age. Signs of age can exist independent of any context, allowing us to be able to say a man is "old" without needing any comparison class. The same is true for shape. If a table were to be sitting alone in an empty room, we would still be able to determine if it were square, rectangular, or round.

Unlike in sphere 1, sphere 2 adjectives do not possess the same necessary intrinsic properties and it is therefore not obvious that reversing the underlying order within sphere 2 is cognitively inefficient. For example, saying "the old round table" is not necessarily more cognitively efficient than saying the "round old table," it just elicits a different cognitive process in terms of the sequence of which we denote the set of properties of the table. How do we know then, that age comes before shape in an underlying pre-nominal adjective sequence? Speaker intuitions tell us that "it depends on what you are trying to say," but a COCA search for "old square (noun)" yields 9 occurrences, whereas the inverse yields 1. This shows us that whether speakers are aware of it or not, they are demonstrating a slight preference for saying age before shape, so this must be what feels natural.

How then, do we explain this preference? Because sphere 2 adjectives are characterized by their internal relativity, I believe that it is logical to assume that like the intinsitivity property in sphere 1, the internal relativity property is also scalar. It appears that as we get farther from the noun, the adjectives decrease in intrinsitivity and increase in relativity. Shape is a less relative property than age, because it requires no temporal scale. Age is a property that is impossible to determine without the presence of a time, but it is internally relative (rather than externally relative) because it relates an object to the quantity of time that the object itself has been in existence. Determining shape requires no such information, and is therefore a more intrinsic property, placing it closer to the noun than age.

If we were to cross the sphere boundary, we would see that reversing the order seems much less natural. If we take a sphere 1 adjective, for example, "red," and inverse it with a sphere 2 adjective, "old," the result is a non-preferred NP. Saying the "old red table" is clearly preferred to saying the "red old table," and this is likely due to the fact that the reversed order involves placing a sphere 1 (intrinsic) adjective farther from the noun that a sphere 2 (internally comparative) adjective. The semantic consequences of reversing the sphere order are similar to the semantic consequences of reversing the order of the subcategories within sphere 1. If reversing the order, it is necessary to have a context in which the starting set is pre-established before additional properties restrict it. We have thus far established the following order of adjectives before a noun.

((Sphere 2 AGE > SHAPE) (Sphere 1 COLOR > ORIGIN > MATERIAL) (noun))

Sphere 3: Quality and size -- Externally comparative adjectives and speaker relativity

Continuing outward from the noun, the next two semantic categories are quality (what the British Council referred to as "specific opinion") and size. I made the decision to eliminate matters of opinion; however, adjectives that denote "quality" can, in fact, be words that denote the opinion of the speaker. Unlike the adjectives in the first two spheres, quality words such as "beautiful," "funny," and "interesting," require a speaker who has access to an external comparative class. Words such as this

are difficult to define without also understanding their opposites. How can a speaker understand if something is beautiful, funny, or interesting, without first being informed by the context of what makes something beautiful, funny, or interesting and what does not? To a large degree, the definition of quality adjectives are fixed by societal norms and are established a community of speakers; for example, what is "beautiful" to Americans is very different than what is "beautiful" to other cultures. Quality adjectives, to a degree, are a matter of the speaker's relationship to the object, and the speaker requires an external context to determine the quality of that object. This need for an external context is what makes these adjectives *externally comparative* rather than internally comparative, making them different then sphere 1 or sphere 2 adjectives. Additionally, we can say that these sphere 3 adjectives are *speaker relative;* that is, they depend on the context of the speaker and rely on the speaker's observations to be determined as true or false.

Even more externally comparative (and therefore speaker relative) than quality is size. Let us return briefly to the "alone in an empty room" test. If an observer saw an object alone in a colorless, empty room, he would be able to assess its material, color, and shape without any other information. Age would be more difficult to determine, since the observer would need some reference to time and the object's internal "lifespan." Assessments of quality would require the speaker to contribute some information from his own external context from outside of the empty room, and size would be nearly impossible to assess. Without another object next to it, or an idea of how "big" the room is, the size of that object would not be able to be determined. The speaker would need not only his own information, but any assessment of size would *require* an external comparison class. If that object were an elephant or a mouse, we would have no way of knowing if either creature were big or small without having other creatures to compare it to or the speaker itself. We can therefore say that size, like quality, is also externally comparative and speaker relative. This would result in it being the most distant adjective from the noun in almost every context-free case. According to COCA, size is almost always preferred in the external-most position as

possible from a noun. To assess an object's size prior to assessing its other more intrinsic properties would be cognitively inefficient.

This leaves us with a final explanation for the underlying order of pre-nominal adjectives. The noun is preceded by those adjectives that contribute the most intrinsic properties, and as we work outward from the noun, the adjectives become increasingly comparative, first internally (requiring no or minimal outside information), and then externally (requiring information from an external context). Additionally, intrinsitivity decreases as we get farther from the noun. The closer the adjectives are to the noun, the less they have to do with the speaker and his or her external world and the more they have to do with the intrinsic properties of the noun's existence.

Outside of the spheres: the scope-taking adjectives

The final subcategory, which the British Council referred to as the "general opinion" category, lies outside of the spheres. I have chosen to call this category the "scope-taking" category, because adjectives of this sort have the capability of moving freely between subcategories depending on the intended meaning. These adjectives, when context-free, can usually be found as far from the noun as possible, since they are capable of modifying the entire NP and all of the adjectives within it. In some ways, they are as "adverbial" as possible without being actual adverbs. "Former and alleged" fit well into this category but are operators, and have a stricter semantic value. "The former obese mayor" means that he is one in a series of obese mayors, and he is the previous one in the set to which the speaker is referring. However, "the obese former mayor" means that there are a series of former mayors, and he is the obese one. Non-operator scope-taking adjectives operate a similar way, although they have the ability to shift semantically, as demonstrated below.

1. the **nice** big long French baguette
2. the big **nice** long French baguette
3. the big long **nice** French baguette

"Nice," when in the left-most position, almost has an adverbial-like behavior, in that it seems to modify not just the baguette, but also all of its other qualities.

Anywhere it goes, it seems to modify all of the adjectives that come after it, making it scope-taking. The farther it gets from the noun, however, the less intrinsic the properties that it denotes become. In its most distant position, "nice" has a more general externally relative meaning, in that it compares the baguette not just to other baguettes, but other objects in the speaker's context. As it approaches the noun, it takes on a more noun-relative scope, assessing its aesthetic quality. Many "quality" adjectives can be removed from their subcategory and be brought outside of the sphere for the purpose of comparing the noun to a broader external comparative class. In some cases, doing this actually changes the semantic value of the adjective. "Interesting," and "curious" are some of these, as demonstrated below, when interacting with the other categories from spheres 1, 2, and 3. In the below examples, I have used size, a sphere 3 category.

4. the interesting small paper
5. the small interesting paper

In case (4), the paper is small, and is interesting in comparison to other things in the world. In case (5), the paper is interesting for a paper, and is small in size.

6. the curious little man
7. the little curious man

Between cases (6) and (7), curious has a more distinct semantic difference. In case (6), curious means odd or bizarre, which is an assessment that relates the man to a broader class of things in the world. Case (7) prompts a different understanding of curious, meaning inquisitive or questioning, which are properties that are more person-relative. He is still small in stature in both cases; it is only the semantic value of "curious" that changes, suggesting that "curious" is the one switching semantic categories, rather than the size adjective.

In some cases, an inverse order is actually the convention, because certain adjectives have come to take on a popularized different semantic value depending on the context in which they appear. If searched in a corpus, these conventional adjective pairs would likely occur with more frequency. These cases, on the surface, appear to be exceptions to the underling AO, but in reality, such an inverse order actually

results in a semantic shift, making the out-of-place adjective more fitting with a different semantic category. Examples of this usually involve the size adjective "little," because "little" is used to mean more than just small in size; it has the additional meaning of "cutesy" or "child-like," and appears to only occur in the inverse position in cases such as "pretty little liars," or "silly little boy," where it does not entirely mean physically small in size. Another case that demonstrates a semantic shift is the use of "old" in "big old dog." This case, unlike the previous case, is not a surface violation of the underlying AO, but "old" does display a conventional semantic shift from the "age" category to the "quality" category. When it occurs after "big," old does not mean old in age, but tends to retain a more quality-oriented meaning of familiarity and strength. If we contrast this with "small old woman," we see "old" shift back into the age category. We will be able to explore semantic shifts such as this with regards to placement cross-linguistically when we attempt to apply the theory to English.

Tricky cases: using multiple adjectives from the same subcategory.

The next question becomes, "Are there ordering restrictions when we use multiple adjectives from the same subcategory?" First it is important to make note of the fact that we can only use multiple adjectives from the same category if they are age, quality, or size adjectives. It does not make sense to say "the red blue car," the brick glass house" or the "rectangular circular table." To summarize, sphere 1 subcategories do not have the ability to be repeated, but sphere 2 and sphere 3 adjectives do. Let us look at the effects of this in the following examples below. Age:

♂. my new old car

MEANING: The car is old, but I have recently acquired it.

♀. my old new car

MEANING: I once had a car that was new, and now I do not.

the young old man

MEANING: The man is old, but young for an old man.

the old young man

MEANING: The man is young, but old for a young man. Size:

10. the big small dog

MEANING: The dog is small, but big for a small dog.

11. the small big dog

MEANING: The dog is big, but small for a big dog. Quality:

12. the lazy crazy man

MEANING: the man is mentally disturbed, and generally lacks motivation

13. the crazy lazy man

MEANING: the man is by nature unmotivated, and does things that are bizarre, but is not necessarily mentally disturbed.

In the above examples, there does not appear to be a preferred AO, therefore, there are no apparent AO restrictions on the use of two adjectives from the same subcategory.

There are, however, semantic differences between the pairs above, which can be summarized as such: the adjective closest to the noun attributes internal properties to the noun, and the adjective farther away from the noun distinguishes it from a broader external context or set of nouns. This is consistent with my theory that as an adjective gets farther from the noun, intrinsitivity decreases and speaker relativity increases. The adjectives farther from the noun are externally comparative, while the adjectives closer to the noun are internally comparative. In sphere 1, the adjectives are not comparative at all.

Chapter II. Prenominal adjective strings.

2.1 Adjective word order does not happen haphazardly.

Adjectives in English are believed to have a specific word order when conjoined attributively.Despite transformational grammar theories, there are reasons why syntactic analyses don’t always work. Here is cause for psycholinguistic analysis.Researchers have determined that prenominal adjective phrases have word orders that are based more on semantics, rather than syntax. The areas of discussion

include the general adjective word orders as fixed, restricted, and free. Topics include experiments that have been used to help determine how we perceive and order multiple adjectives when speaking. Other discussions include adjective ranking, intuition, perception, order of events, primacy and recency, and proximity.

Imagine 1) a car, 2) moving swiftly, 3) of a particular color, and 4) style (model or age). How could you describe it? If you were constrained to modifiers placed before the noun, in what order would they be placed? Typically, you may have:

(17) a ... fast, red, late-model car

(18) a ... fast, late-model, red car

(19) a ... late-model, red, fast car. More adjectives added will undoubtedly create more variables. Perhaps one of the above sounds right, but why disqualify the others?

Now, say that instead of imagining it, you actually saw it. Would it be a matter of what's actually important, or more impressionable? Or, what was noticed first...the color, the speed, the object? If you saw "a big red barn," was the color noticed first, or the mass?

Many believe it depends on the sequence of events that the observer had witnessed, whether it was first or last. This phenomenon is sometimes called primacy or recency effects. First impressions are believed to be stronger than later ones. If those perceptions are altered, how would they affect the sequence of adjectives?

Adjective ordering has been explained through transformational rules, embedding rules, relative clause reduction rules, obligatory transposition rules, left branching rules, multi branching rules, and so on.' None appear to be more or less satisfactory than the other in explaining adjective word order in natural speech.

Transformational theories often explain what had already been spoken; these sentences are rearranged, or transformed, for analysis. These transformations are simply an after the fact analysis.

The purpose of this chapter is to look at theories and experiments that have searched for reasons why we intuitively sequence adjectives into speech specific patterns.

Although adjectives are word classes in themselves, they have subcategories that can be classified, placed in comparative classes,placed in hierarchal positions,given status and rank,and given semantic, syntactic, and morphological criteria. For the most part, adjectives are simply referred to as modifiers.Though it's seldom that we encounter three or more modifiers for a noun at a time, the question of how they're distributed hasn't been adequately answered by transformations. At best, most of the literature on this subject is the way the phrases are *generally* presented. Meaning, often the sentences used are examples using particular situations and contexts.

The adjectives discussed in this paper will be prenominals asyndetically conjoined.The main reasons for looking at this type of adjective order are: 1) this is the way people often speak. We usually omit conjunctions when using adjectives, often for economy of words or for dramatic results, and 2) adjective strings tend to occur more often attributively than predictively.

Transformations will not be addressed in depth here for two reasons: 1) people have spoken for years without knowing transformational rules, and 2) the rules are post hoc.These rules attempt to reorder phrases. Transformational rules often derive strings that takes one transformational rule, and produces a subsequent underlying string to use with another transformational rule, and so on. They are designed to show what has already been decided and spoken by the speaker. What is being sought here are the reasons why we naturally order adjectives the way we do.

Therefore, I will argue here that the study of prenominal adjective phrases requires more than the application of transformations. Psycholinguistics and semantics must be considered if we're to understand what motivates us to order prenominal adjectives the way that we do.

Chomsky and generative grammar.

A quick overview of Chomsky's generative grammars reveal that he developed a set of criteria to study transformational grammar. In "Aspects of the Theory of Syntax," Chomsky proposed five tree structures that could be used, depending on the types of sentences studied.He described specific weaknesses in generative grammar constructions.

Chomsky noted that nested and self-embedded constructions contribute to unacceptability, as his concern is with the "organization of memory" and its finite state (or, the limitations of memory for dealing with such constructions).His 4th and 5th constructions, left and right branching constructions, also have problems of acceptability. Of the five constructions, Chomsky suggests that multiple branching constructions are "optimal in acceptability".However, there's an inherent problem with multiple branching.

Multiple branching constructions seem the most plausible for analyses. Yet, Chomsky claims that, "In fact, there is no grammatical motivation for any internal structure," with a coordinated structure such as *[[[[tall young] handsome] Intelligent] man]* vs. *[tall [young [handsome [Intelligent man]]]]*. How would this be handled in a coordinating (multiple branching) scheme? Chomsky states that, this is the *weakest* assumption. "The burden of proof rests on the one who claims additional structure beyond this...that there are perceptual grounds for analysis, or something of this sort" [7].

That being the case, then why consider syntactic arguments at all when "psychological mechanisms" are used to process those sentences? Martin points out that "perceptual grounds" are needed. This implies that psycholinguistic arguments should take precedence over syntactic ones. After all, isn't perception and intuition used for analysis, especially when interpreting deep structures or metaphors? It goes to follow that transformations are of limited use. They can be used to decrease nesting, and "to reduce the perceptual load," yet don't seem to account for psycholinguistic motives behind natural speech. It follows that if intuition is used when we use adjective strings, intuition should be of value in explaining why we arrange adjectives naturally in their preferred word order. Syntactic analysis will not explain why prenominal adjectives are ordered the way that they are. In fact, Martin doesn't believe that it's an issue that can be made on the basis of syntax alone. Free word order or fixed?

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[7] Chomsky, Noam. Aspects of the theory of syntax. Cambridge, M.I.T. Press, 1965.301p.

Although word classes and whole constituent phrases can be moved within the sentence, there are instances where adjectives have less mobility, and, in fact, are fixed. First we'll look at what will not be discussed, as context and semantics restrict specific adjective movement.

Collocations and compounds.

Phrases such as lead foot, flat foot, green thumb, labor conditions, ice water, fold down table, and other phrases have become common and are fixed in English language. These words are commonly associated, and many have become cliches or idioms.

How others have viewed adjectives.

Adjectives consist of a word class that has taxonomies. In other words, their meanings can be subdivided into related categories. Just as "mutually suitable" word classes can be substituted within a sentence, suitable meanings of each related category of an adjective can also be substituted provided they are mutually suitable in semantic meaning. And by using Dixon's examples (below), one can see how those semantic types (or his taxonomies) can be substituted within a sentence.

Of these taxonomies, Dixon proposed his "seven semantic types which make up the word class Adjective".These classifications are:

iii. Dimension: big, large, little, etc.
iv. Physical property: hard, soft, heavy light, etc.
v. Color: red, black, white, etc.
vi. Human propensity: jealous, happy, kind, etc.
vii. Age: new, young, old.
viii. Value: good, bad, proper, perfect, etc.
ix. Speed: fast, quick, slow, etc.

Preferred adjective order and proximity.

Grammarians have commented on where adjectives should be placed in relation to the noun.

In Henry Sweet's "English Grammar" (under the heading "More than one adjective"), he wrote, "When a noun has more than one modifier, the general

principle is that the one most closely connected with it in meaning comes next to it". To illustrate this, he chose to show that the closest adjective instinctively becomes "logically a modifier" of the noun. Two of his examples are "the three *wise men,"* meaning, "the three sages"; and, "a tall *black man,"* meaning, "a tall *negro."*

Selection restriction merely restricts the selection of words that can be conjoined. It relies on "an intuition of what the 'normal' or 'literal' use of the language allows" . Below are some selective restrictions for adjectives, which means that free word order is not permitted.

Intensifiers.

Brown & Miller note that an adjective within an adjective phrase is often an optional modifier taken from a class called intensifiers .

	Adj. phrase: (*Intensifier*	*Adj)*	
tha	*very*	*old*	man
tha	*rather*	*strong*	cider
an	*extraordinarily*	*long*	story

Modifier affinity and petrified compounds.

By the same rules, Norman & Rumelhart show that there is a modifier affinity at work here. The modifiers they chose didn't necessarily have to be intensifiers, but merely have to possess an immediate relationship to a noun .

The example shows that "blue cheese dressing" is parsed as:

c. blue + cheese

d. (blue cheese) + dressing,

as *blue* modifies *cheese,* and not the dressing. The authors state that, "The tendency of a modifier to refer to an object is referred to an its *affinity* to the object. Affinity is a measure of the node-space distance between the modifier and its possible objects" [8]. There's such a close correlation between the two, that the phrase can't be broken up.

Norman & Rumelhart also refer to a "named subset," which can't be transposed or interrupted either; "A named subset is a subset of a class that has special properties

[8]Norman, Donald A., and David E. Rumelhart, and the LNR research group. Explorations in cognition. Publisher, San Francisco: W. H. Freeman, 1975.156p.

not derived from the name." Their example is "green grape," which is small and seedless. Nevertheless, it's a subset of a grape that is green. They also include idioms such as "white elephant," as it's neither an elephant or white. This phenomenon has also been described as a "petrified compound" by Vendler . His examples are *Basque hat, Polish notation,* and *Turkish coffee.* "Due to the uniqueness of the link, the compound cannot be broken up and any other adjective, regardless of its rank, comes before."

Rote.

Rote is just one more example of consistency of phrases. "The simplest way of controlling the order of a string of words is to memorize the string as a single rote unit (online, *Basic Syntactic Processes).*

Proximity has it's reasons.

Regardless of whether the proximity of the words shown above were in an obligatory or optional position, their proximity tend to dominate the idea of the sentence. Other word classes use proximity too. To illustrate this, Lindner used verbs and particles to illustrate this principle. Here, words that are optionally placed next to a verb evokes a stronger overall impression of the predicate. In other words, other word classes use proximity for much of the same reason adjectives do.

2.1. A Question of context and restriction.

In the previous chapter, the restrictions discussed contributed to fixed order adjective phrases. This section discusses the adjectives that are allowed a *freer* word order, and the reasons why we might be inclined to place adjectives into a preferred word order. Context and semantics help to determine the placement of adjectives.

It isn't difficult to find literature on intuition, as it being used to describe what an informant or native speakers use when deciding on what is correct or improper grammar. As noted before, despite the logic and system of transformational rules claimed to be used in analysis, it's the linguist's intuition that's the deciding factor. Needless to say, it is how we *feel* about the words being used and what they convey to others that's important. Fortunately, we pretty much agree on what words *generally* mean.

Adjective rank, privilege of occurrence, and specialization.

As stated before, it was William Ward who offered one of the earliest justifications for the placement of substantives in relation to adjectives, "...too much distance...may occasion obscurity". Prior to that, it was less important to have a specific word order due to the English case system. On inflection reduction, Robertson & Cassidy wrote, "whereas Old English adjectives had 13 different inflectional forms, Modem English adjectives have only 2". As English evolved, people intuitively developed word order conventions.

Martin states that Henry Sweet was one of the first to address the effect of meaning with specialization, that there is a "gradation of increasing specialization" of an adjective phrase. By his implication, a gradation implies a difference, or that an hierarchy of word meanings exist.

Paul Ziff's idea on adjective specialization had to do with assigning them *relative ranks*. By ranking adjectives, we assign them a *privilege of occurrence.* This privilege is assigned due to the relative number of nouns they can modify. Adjectives having higher rank are more flexible, can be used in more environments, yet are considered less specialized. Lower ranking adjectives are considered more specialized, and are limited to their use with nouns.

Martin explains:

By this Ziff means that the high-ranking adjectives such as good can appropriately modify more nouns that can the lower ranking adjective red. For example, good may modify the noun music, whereas red cannot. On the other hand, every noun which may be modified by red can be modified, in some context, by good.

By using Ziff's example, Martin states that a privilege of occurrence should be considered as a means to determine preferred adjective order, "especially with attributive adjectives." Ziff's example is $[a_1 + a_2 + noun]$ and *not* $[a_2 + a_1 + noun]$. For example, "little white house" is preferred over "white little house." The word "little" has the greater privilege of occurrence as "a little sonnet" is preferred over "white sonnet"; and, "a little trip" over "a white trip." Yet, problems exist with giving words special privilege.

The problem here is that privilege of occurrence doesn't always work out so easily. Ziff claims that by using the phrase "intelligent old man," *old* commonly has a higher privilege of occurrence since it can be used in more contexts than *intelligent* can as a modifier. So, using *old, young,* and *good:*

More probable	Less probable, yet has special emphasis
an intelligent *old* man	an *old* intelligent man
a pious *young* girl	a *young* pious girl
the handsome *young* man	a *young* handsome man
the damn *good* pit	the *good* damn pit

Although Ziff's idea is persuasive, he couldn't account for the exceptions noted above. He wrote that, "some other principle other than simple privilege of occurrence must be at work here. ...I can provide no satisfactory syntactic characterization".

A case against definiteness.

Danks and Glucksberg refute Ziff's idea that there exists a viable reason to rank adjectives by their privilege of occurrence. They do, however, agree with Martin, Annear,and Vendler,that attempts are in vain if one tries to explain adjective ordering with syntactic rules alone. They believe that it's necessary to consider a semantic solution.

Danks and Glucksberg's proposal was to look at the *intrinsicalness* of the property donated by the adjective in relation to the noun. This is unlike Ziff's rule, which constrained the more definite adjective closer to the noun.Danks & Glucksberg state that the more intrinsic a property the adjective has to the noun, the closer it will be placed in relation to it, such as the *big red Swiss tables*, or *red Thai candles*. *Swiss* and *Thai* have a more intrinsic property of the objects they modify than their color, and *big* is not intrinsic at all. They claim that when speakers wish to distinguish a particular object, they often use adjectives. For example, *red* is used to distinguish among many tables if the color is used in the phrase *red table.* This infers that the speaker would most likely exclude tables that are *not* red when they specifically designate *red tables*.

This line of reasoning leads to the general principle that the most discriminative adjective tends to be placed first in a string of two or three adjectives. Which adjective is most discriminative would be determined by the pragmatic demands of the communication situation. Thus, if a speaker intends to refer to one of two tables, one of them Swiss, one German, and both red, he would say *Swiss red table,* and not *red Swiss table*[9].

Using the intrinsicalness of ordering two adjectives, one would look at the pragmatics of what is to be expressed. For example, if there were two young small boys, and depending on what a person wanted to characterize, the size or the age, that adjective would go in the first intrinsicalness position. The ordering would satisfy the intrinsicalness and pragmatic rules. The intrinsicalness of three adjectives presents its own problems, however. What happens when a person wants to specify one object or a set of objects out of a larger group of objects? “Absoluteness, which by its common definition seems intuitively related to intrinsicalness, is operationally related to our notion of a pragmatic communication rule”.

Zeno Vendler also sought the *natural order* of adjectives in unbroken prenominal strings, which was “the problem that motivated this whole study”. The difference between Vendler’s and Ziffs work is that Ziff assigned a privilege of occurrence with the rank of adjectives;Vendler believed that intuitively, the various kinds of adjectives determine the ordering of transformations. In other words, “Thus, by postulating an ordering of transformations, it may be possible to explain the ordering of adjectives in terms of the ordering of transformations which derive them” .

Vendler first sees that there are different transformations needed to analyze prenominal strings versus uncoordinated strings that are treated differently: **long and Polish words/*s. *long, Polish word*. Once uncoordinated phrases are established, transformations are “applied in a definite order,” and that “the order stipulated by the classification of adjectives given...”. For example, Vendler claims that a given noun *N* and two adjectives A_z and A_y, is such that $_z$ is higher in rank than $_y$.As it turns out,

[9] Danks, J. H., & Glucksberg, S. 1971. Psychological scaling of adjective orders. Oxford: Oxford University Press. 2008.155p.

he states that A_z A_y N will typically be the outcome. His “classification of adjectives given” is still basically the same as ranking, yet is more specialized for two reasons: 1) through transformation, the more *substantial* adjective occurs next to the noun (although not of a higher rank according to Ziff’s definition), and 2) regardless of importance, it is nonetheless placed in an hierarchy or rank relative to other adjectives.

The problem with adjective rank and multiple meanings.

Jean Aitchison addressed retrieval and the problem of ranking. How do we categorize or rank words like adjectives since there aren’t any clear cut boundaries of meaning from word to word? And, if that’s the case, would a preferred word be in an assigned first, second, or third position in a phrase if we are to subscribe to the theory of ranking, for example?

English is riddled with polysemous words, or words with “multiple meanings” . Also, we all have our own ideas of what words mean; we each process words we know in relation to the meaning we're accustomed to. Several ways of dealing with this is by the *prototype theory,* which helps us to categorize words. “Humans then, appear to find some instances of words more basic than others” Aitchison implies.

In Aitchison’s book, Eleanor Rosch, a cognitive psychologist at University of California Berkeley, designed an experiment that show how people define semantic sets, or how some people might regard some types of birds “birdier” than others, or some vegetables as more vegetable-like than others. The instructions read:

“This study has to do with what we have in mind when we use words which refer to categories.... Let’s take the word red as an example. Close your eyes and imagine a true red...an orangish red...purple red...some reds are redder than others. Think of dogs.... .

With those instructions and a questionnaire, the students were asked to rate a category against the examples given. The categories listed comprised of basic names such as furniture, fruit, vegetable, bird, and so on. The category fruits, for example, had: orange, lemon, apple, peach, etc. It was found that “good exemplars” scored higher .

Among the higher exemplars scored, *robin* was associated with bird over the other alternatives (in descending order): sparrow, canary, blackbird, dove, lark, parrot, pheasant, albatross, toucan, owl, flamingo, duck, peacock, ostrich, emu, penguin, bat (Appendix B). This was attributed to frequency of usage, or that people just happen to have a stronger association to particular words because they use them more frequently. “It took longer to say ‘Yes’ to ‘A penguin is a bird’ than it did to ‘A sparrow is a bird’’. Other associations that fared better were guns and daggers for weapons; saws, hammers, and screwdrivers for carpenters tools; shoes and stockings for clothing. Frequency of usage seemed to coincide with exemplar rankings in specific geographic areas.

What couldn’t be explained was that word frequency alone couldn’t account for the answers given. The results for furniture, for example, yielded love-seat, davenport, and cedar chest over refrigerator. Rosch states that since refrigerators are a standard part of American life, “prototypical” examples were chosen instead, and it wasn’t entirely clear why. Again, it was assumed that people chose an "ideal exemplar," or "prototype". In turn, people will tend to use prototypes to associate with more commonly available words. It’s also more convenient to associate the prototype with “damaged examples,” it was found. Damaged examples are those that are part of a group and shares the primary features of the prototype except that it has been altered in some way. (A one-winged robin that can't fly is still considered a bird.)

Another interesting feature that Rosch had noticed was that people had an overall faster response to good exemplars. For example, ”it took longer to say ‘Yes’ to ‘A penguin is a bird’ than it did to ‘A sparrow is a bird”. Yet, the good exemplars are ones that weren’t expected: furniture yielded love-seat, davenport, and cedar chest over refrigerator (as noted above). Rosch’s question was, if students were simply responding quicker to words that were more commonly used. “Obviously, frequency of usage is likely to have some effect” .

As far as word associations are concerned,co-ordinates tend to be the most common way that words of the same detail are clustered together.This allows us to use words within the same detail, yet keep their semantic distinction further apart.

Co-ordinations are, “words which cluster together on the same level of detail, such as salt and pepper, butterfly and moth...”. Although the results in these experiments included nouns with adjectives, adjectives have been seen to have semantic representations that cluster together as well.Word associations, therefore, may alter the adjective hierarchy.

Adjective order is not a function of syntax.

Martin has argued that preferred adjective ordering “has not shown to be a function of syntax”.He explains that first, “speakers generally choose nouns before modifying adjectives on common sense grounds. Second, there are certain adjectives that must be chosen after the choice of the noun on logical grounds.” The procedure for choosing an adjective is a context sensitive procedure, and that it’s necessary to consider the noun and the denotation of the adjective selected. He argues for the *definiteness of adjective denotation,*

Adjectives which denote the same property regardless of the meaning of the modified noun are said to be more definite in denotation than adjectives which denote different properties in the context of different nouns.

Adjectives that are preferred closer to the noun “will generally have a higher temporal accessibility than those preferred further from the noun” . In other words, his example shows that a *large red barn* can be seen as red not having the need for a barn to express its denotative properties. Red is apparent as an adjective without the noun. It has a definite quality. Large, however, requires a sense of *reference* to the barn to express its denotative properties within the context. One could refer to a large grain of sand or a large planet, but red is red.

Because of this strong association that’s been established intuitively, a higher temporal accessibility exists for adjectives closer to the noun, and are “more easily learned as responses...generally capable of stronger associations with the noun” . Martin notes that Shapiro described a “response latency indicative of associated strength” with those adjectives that are preferred close to the noun. Therefore, the adjective preferred closer to the noun will have a higher temporal accessibility; thus,

that an adjective chosen closer to the noun is chosen *prior* to the choice of adjective further from the noun .

2.3 Multiple words,lexical search speed and negation.

There were two encoding hypotheses that Martin wanted to test. First was “that adjective order is closely related to adjective accessibility”.Second, he then wanted to see if adjective order is related to the speed of adjective decoding. The first hypothesis on encoding was supported; the second hypothesis on decoding wasn’t . (Only two experiments for encoding adjective accessibility will be covered.)

In his first experiment, four colored circles were shown:

(i) one large red circle,

(ii) one small red circle,

(iii) one large yellow circle, and

(iv) one small yellow circle.

To test the independent variable, Ss were asked to describe each of these figures in adjective-adjective-noun phrases when the figures were presented, e.g., *that is a large red circle.* By giving the order of adjectives, Ss assigned ranks to the adjectives asked for (encoding = producing).Adjectives appearing first in order would be given a higher rank.

To test the dependent variable, Ss were asked to respond to either value, the *size* or *color* as quickly as possible when the figures were shown. As it turned out (and predicted), there was a *longer latency response* with the dimension *size.* This gave evidence that “color adjectives are more accessible than size adjectives” . (Note: In Martin’s theory of denotation, since the noun is chosen first, the adjacent adjective is retrieved first. In this example, it is the color that’s chosen first.)

Again, his second experiment of encoding was to determine adjective accessibility, and followed the same basic premise and procedure of the colored circles; however, four hand drawn faces were shown: two older (happy and sad) faces, and two younger (happy and sad) faces. The experiment called for Ss to use the mood

adjectives *happy* or *sad*\ the age adjectives were *young* or *old* [10]. It was predicted that because of age being of lower rank, it would be closer to the noun and elicited faster response times rather than *age-mood-noun.*Of the 18 Ss chosen, 14 consistently assigned age adjectives a lower rank than mood adjectives, i.e., produced phrases like *happy old man*. Subsequent experiments used similar themes with *happy* or *sad* and *dumb* or *smart, honest* or *dishonest, intelligent* or *unintelligent,* and (triplets) *tall, bright, lamp* and *tall, bright, mountain.* As it turns out (and supported by the first hypothesis), it is often possible to predict relative adjective order.

Multiple entry hypothesis and decision latency.

Jastrzembski & Stanners reported that words that have multiple meanings have multiple memory entries,therefore contribute to faster response times when searched.The experiments conducted were in line with those conducted by Rubenstein and Clark.Rubenstein and Clark set out to show that, conversely, homographs could be accessed quicker than nonhomographs. The study done by Jastrzembski & Stanners sets out to increase the number of meanings in the words (originally, the homographs in previous tests) to see if there was an increase of lexical search speed when trying to access a word's alternate meaning).

The basic design by Rubenstein and Clark was a word-nonword decision. When a visually presented letter string was shown, Ss simply had to decide as quickly as possible whether or not it was an English word; this resulted in a response time for word-nonword recognition. The study by Jastrzembski & Stanners added more words with more meanings. When response times were compared to two groups of HNM. and LNM, those with the higher number of meanings had shorter response latencies.

The results were conclusive; shorter response latencies occurred with HNM words. According to Jastrzembski and Stanners, the decreased latency effect supported 1) the "multiple entry hypothesis," and 2) determined that a "memory search process terminates when an entry is detected".

Adjectival negation.

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[10] Martin,J.E.. Semantic determinants of preferred adjective order. Journal of Verbal Learning & Verbal Behavior, Vol 8(6), 697-704. 1999

Negation has an adverse time effect on sentence comprehension. If latency is a consideration in adjective response, then negation should be considered as a factor in determining latency and prenominal ordering of adjectives. Although one can not use not with asyndetic phrases, one can use negative prefixes such as *un- (happy,* for example), or any sequence of *[not + adjective*], or simple lexical entries such as *sad* or *doubted.*

Although Sherman discovered that four main negatives were the most problematic (in order from the most difficult: *doubt, not, no one,* and *-un*), the study did contain adjectives and correlates with lexical search speeds. Appendix C shows the results and sample questions used for experiment one.

Mark Sherman's study on adjectival negation claims that negatives are cognitively more complex, which is demonstrated by an increase in verification time. No more will be addressed on this matter, as the key results of the study showed that 1) either overt words (such as prefixed *unhappy* [an adjective]) or implicit words (such as *sad* [an adjective]) did not consistently increase sentence difficulty providing there weren't additional negatives within the sentence, 2) multiple negatives increased the complexity, and 3) different types of negatives varied the complexity of comprehension, which could not be predicted .

Martin's research into adjective ordering made him a follower of Annear's transformational conclusion on adjectives, which stated that adjective order is not a function of syntax[11]. Martin demonstrated that color should be closer to a noun than dimension. Martin also experimented with adjectives of age and mood, with corresponding results.In later research, he defines his idea of adjective denotation- that adjectives closer to the noun have a higher temporal accessibility.

Reaction time (latency) was found when Martin and Rosch conducted their tests with associated words. The results of Martin and Rosch's have the implication of stating that 1) there is a time factor associated with familiarity, and 2) that the majority of the selected words of the test subjects were predictable as their faster response times tended to be closer to the noun.

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[11] Danks, J. H., & Glucksberg, S. 1971. Psychological scaling of adjective orders. Oxford: Oxford University Press. 2008.155p.

Jastrzembski & Stanners' multiple entry hypothesis calculated the measure of decision latency.With it, they found that words with higher number of meanings allowed for faster searches that terminated once a meaning was found. Sherman found that words that carried negative connotations placed within a sentence required a longer time for a person to fully understand the sentence, resulting in an extended latency time.

One can infer that a faster response to specific words correlates to a more *natural* response in conversation and may give credence to Martin's denotation theory.

Chapter III.Functions of atributive adjectives in Modern English.

3.1 Theoretical background.

This is chapter about premodification in the English noun phrase, focusing on functions of attributive adjectives. Modification in general is an issue that has received comparatively little attention in linguistic research, at least outside the field of syntax; Although there are some systematic descriptions of premodifier functions to be found in the literature, much remains to be done. With this study I hope to take a step towards a better understanding of what pre-nominal adjectives actually 'do'.

Over the last four or so decades, there have been sporadic attempts at accounting for functions of attributive adjectives. One of the most thorough and exhaustive studies presented so far is probably Warren's *Classifying Adjectives*,in which it is suggested that premodifying adjectives may **identify, classify** or **describe**.

Classifiers and identifiers are claimed to differ from descriptors in that they somehow restrict the range of the head noun; the former restrict semantic range, pointing to a subcategory, and the latter restrict reference, indicating a certain referent or group of referents within the class denoted by the noun. An example of a typical classifier is *polar* in *I saw some polar bears at the zoo,* where *polar* indicates a subcategory within the class of bears. An example of a typical identifier is *red* in *Give me the red book*, where *red* 'picks out' the intended referent from the class of books (or rather, from a contextually determined set of books).

Descriptors, on the other hand, are seen as optional elements adding extra, non-restrictive information. An example of a typical descriptor is *cuddly* in *I saw some cuddly teddies,* where the adjective simply adds descriptive information about the teddies in question.

Warren suggests a number of ways in which each function can be recognized. One is to look at morpho-syntactic behaviour, since an adjective taking on a certain function also takes on specific morpho-syntactic features. Descriptors and classifiers are distinguished by the fact that the former are gradable and predicating, whereas the latter are not:

1. a) I saw a *very cuddly* teddy.
   b) I saw a *cuddlier* teddy.
   c) I saw a teddy. It was *cuddly.*
2. a) * I saw a *very polar* bear.
   b) *I saw a *more polar* bear.
   c) * I saw a bear. It was *polar.*

As for identification,Warren only brings up ability to appear in predicative position, claiming that adjectives in this function are generally non-predicating. Those that are potentially descriptive may however appear predicatively in restrictive relative

clauses, so that 3 a is fine, whereas b is not (at least not if we want *red* to retain its identifying function):

3. a) Hand me the book that is red.

b) * Hand me the book. It is red.

Classifiers and descriptors can supposedly also be told apart by testing whether the adjective in question accepts the prefix *non-*.If it does, it is most probably a classifier.Thus eg *non- conventional arms* can only mean 'arms that are not of the conventional kind' [12].

Because descriptors are non-restrictive, yet another way to decide whether a certain adjective functions as a descriptor rather than a classifier or an identifier is to see if it can be added more or less as an afterthought. We can for example turn an utterance such as *This is a musical boy* into *this is a boy who (I may add) is musical* without any syntactic, semantic or communicative consequences. Thus, we can conclude that *musical* in this case functions as a descriptor.

Finally, functions can be distinguished by using special eliciting questions: Identifiers are claimed to respond to *Which (part of) X?* or *How much of X?* , classifiers to *What kind / type of X?* and descriptors to *What is / are the X(s) like?*.

The aim of this cahapter is to examine how well the model presented by Warren fits actual data. Does it account satisfactorily for all instances of attributive adjectives, or are there situations in which adjectives seem to have some other function, not included in Warren's tripartite description? If so, what would these functions be? In order to be able to answer these questions, I have analysed material taken from the written part of the British National Corpus (the BNC),consisting of 1000 noun phrases with one attributive adjective. With each phrase I have examined the adjective in accordance with the various tests suggested by Warren, so as to determine its function.

My analysis of the material showed that although the model suggested by Warren is clearly attractive, it does not give a full picture of premodifier functions. As can be seen from Table 1, as much as 17,4% of the analysed examples were indeterminate in

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[12] Warren,B. Classifying Adjectives. Gothenburg: Acta Universitatis Gothoburgensis.1997.158p.

some way. Put another way, adjectives that do not clearly fit any of Warren's functions are more common than both unequivocal identifiers and unequivocal classifiers.

	n	%
Identifiers	157	15,7%
Classifiers	109	10,9%
Descriptors	560	56,0%
Indeterminate	174	17,4%
Total	1000	100%

Table 1: Distribution of functions

There are basically two ways in which the adjectives in my material are indeterminate: they either seem to fulfill some function other than identification, classification and description (9,1%), or they appear to perform two functions at the same time (8,3%).

3.2 Additional Functions

Among the 174 adjectives that are indeterminate in some way, 91 are of the kind that seem to have some function other than those suggested by Warren. Interestingly, these adjectives all seem to deviate from Warrens threefold model in exactly the same way: they are all clearly restrictive and non-descriptive, without being either classifying or identifying. Some examples:

1) It is often a good idea to have several *small* aquaria instead of one larger one.

2) There had to be a *clear* decision about how to complete the relevant information.

3) Trim *thick* roots into sections, cutting the upper end horizontally.

In each of these examples, it is clear that the adjective is not there to add optional, descriptive information about something. In (1), we are not talking about certain aquaria to which we add the information that they are small; rather, we are using the adjective to single out aquaria that have a particular, crucial characteristic - it is aquaria that are small that should be used, no others. Likewise, in (2) and (3) we are not talking about a decision which, by the way, happened to be clear, or some roots that, incidentally, are thick. Instead, in (2) we are saying that the decision needed had

to be clear, and in (3) that roots should be thick in order for the instruction to apply to them.

Although the adjectives in (1) - (3) do not seem to be used to add descriptive information, and although they are clearly restrictive, they can nevertheless not be interpreted as either classifiers or identifiers. We are not talking about certain kinds of aquaria, decisions or roots here, nor are we identifying some particular referents.

If we apply the various tests suggested by Warren, we see more clearly that none of the original functions fit the adjectives used in (1) - (3). As for gradability first, the adjectives can all be graded without semantic, syntactic or functional consequences:

(1a) It is often a good idea to have several *very small* aquaria.

(2a) There had to be a *reasonably clear* decision.

(3a) Trim *medium thick* roots into sections.

Since grading is possible, the adjectives do not behave like classifiers. Nor do they behave quite like descriptors, however. Although it is semantically, syntactically and functionally possible to grade *small, clear* and *thick* in these examples, it still has restrictive consequences, since it modifies the respective characteristics used to single out precisely that to which the respective utterances are intended to apply.

The 'predicative position test' next, shows that the adjectives in (1) - (3) behave exactly like identifiers (and consequently not like classifiers or descriptors): they can appear in predicative position, but - if they are to be interpreted in the same way, and have the same effect upon the addressee as in the original examples - they can appear predicatively only in restrictive relative clauses:

(1b) It is often a good idea to have several aquaria that are *small.*

(2b) There had to be a decision that was *clear.*

(3b) Trim roots that are *thick* into sections.

Still, the relevant nounphrases in these examples clearly do not have definite or even specific reference, and thus, since there are no specific referents to identify, the adjectives can not be interpreted as identifiers.

As for use of *non-,* none of the adjectives take this prefix. Hence, a classifier interpretation is not supported in this respect either:

(1c) *It is often a good idea to have several *non-small* aquaria.

(2c) *There had to be a *non-clear* decision.

(3c) *Trim *non-thick* roots into sections .

We have already discussed the 'afterthought aspect' and established that the adjectives in (1) - (3) are not used to add extra, incidental information about something. Now we are left with only one test - namely the 'eliciting question test'.

It could perhaps be argued that the adjectives in (1) - (3) could be elicited with the question *What kind? - What kind of aquaria should we use? What kind of decision is needed? What kind of roots should be trimmed?*. Still, it seems to me that this does not necessarily mean that the adjectives are classifying. Although we often use the word *kind* when we ask about something, we don't necessarily expect the response to be about kind (class). Hence, we could perfectly well answer a question such as *What kind of sofa are you looking for?* with *A big and comfy one,* just as well as with *A sofa-bed / settee / chesterfield...* .It seems to me that a slightly more reliable test (which still depends on intuition, just as the eliciting question test does) is to ask our selves if something really constitutes a particular category. To me, aquaria are not classified into sub-categories on the basis of their size, nor are there different kinds of decisions based on degree of clarity, or different kinds of root based on degree of thickness.

Summing up then, the data that I have examined seem to suggest that apart from the three functions put forth by Warren, there is a further function performed by attributive adjectives. We could perhaps call this fourth function Stipulation, since what we do in this case, is to use the adjective to stipulate what something should be like for the utterance to apply to it.

Simultaneous functions

The remaining 83 adjectives that are indeterminate in some way, fall into two groups. Both comprise adjectives that seem to be performing two of Warren's functions at once, but they differ in terms of which combination of functions they involve: in one group we find adjectives that appear to be classifying at the same time

as they identify, and in the other we have adjectives that seem to be classifying at the same time as they describe.

Adjectives that classify and identify at the same time.

37 of the adjectives that seem to have a double function appear to be classifying and identifying at the same time. In fact, Warren herself has noted (more or less in passing) that classifying adjectives may sometimes take on an extra identifying function. To illustrate this, she gives the following example, where the adjective *polar* in (4a) is clearly classifying, indicating a certain kind of bear, at the same time as it serves as an identifier, pointing to a particular referent:

4) Which bear did you like best?

a.The polar bear

b.The cross-eyed bear

Other examples of this phenomenon are the following:

5) Will the *foreign* secretary also help to provide a breathing space for the Russian Government [...]?

6) ...many people within and outside the *scientific* community do believe that neurophysiology has advanced

7) This lack of interest goes right through the *educational* system

In all these examples, the adjectives are clearly classifying - they point to a particular kind of secretary, community and system respectively, and from a morpho-syntactic point of view they behave like typical classifiers, being non-gradable and non-predicating:

(5a) *Will the *awfully foreign* secretary also help to provide a breathing space for the Russian Government?

(5b)*Will the secretary *who is foreign* also help to provide a breathing

space for the Russian Government?

(6a) *Many people within and outside the *rather scientific* community do believe that neurophysiology has advanced .

(6b) *Many people within and outside the community *that is scientific* do believe that neurophysiology has advanced .

(7a) *This lack of interest goes right through the *highly educational* system.

(7b) *This lack of interest goes right through the system *that is* educational.

However, the adjectives in these examples are equally clearly used to identify particular referents: the foreign secretary (not some other secretary), the scientific community (not some other community), and the educational system (not some other system) respectively.

Adjectives that classify and describe at the same time

The remaining 46 adjectives with double function all seem to be classifying and describing at the same time, although I realize that this claim calls for a specification of what exactly is meant by the word *describe.* A common, intuitive understanding of the term seems to be that when we describe, we add 'property information', so that saying that something is *big, soft* and *cuddly* would be typical description. To me, however, any kind of propositional content could serve descriptive purposes, regardless of the exact kind and structure of this content. With this view, to describe is simply to add more specific information about a certain referent (that may or may not be known to the addressee as well as to the speaker). In fact, I think that I am not alone in this interpretation of the term. This interpretation is, I think, supported by the fact that we may well answer a question such as *How would you describe the perpetrator?* with *Well, it was a man, and he...* where *man* - conveying 'kind-information' rather than 'property-information' - is used to describe (add information about) the perpetrator in question.

Lets look at some examples of adjectives that seem to classify and describe at the same time:

8) Films taken by a *submersible* robot established that the ship had sunk as a result of a large explosion .

9) Anaesthetised mice were placed supine on cork boards and steadied by *elastic* bands around the four limbs .

10) Years later they even kept a *black* panther for a while, until there were complaints and they were forced to send it to a wildlife park

In (8) - (10) the italicised adjectives are all clearly classifying, indicting a particular type of robot, pepper and panther respectively. However, when it comes to what the speaker uses them for, it is primarily to supply more specific information about something - the robot, the bands and the panther respectively.

Concluding functional simultaneity

Although Warren does note that adjectives sometimes seem to perform two functions at once, she does not elaborate on this observation (nor does anyone else, at least not as far as I am aware).Nevertheless, it seems to me that functional simultaneity is more than insignificant coincidence;after all, it occurs a little too often to be dismissed without reflection.

How then should we interpret functional simultaneity? To me, it seems to suggest that classification is of an essentially different functional kind compared to description and identification.If it was not, one and the same adjective could not be classifying and identifying or classifying and describing at the same time, any more than for example a noun phrase can function simultaneously as subject and object. Seeing classification as a different kind of function easily solves this: if once again we draw a parallel to noun phrase functions, we see that one and the same noun phrase may very well function as eg subject and agent at the same time, simply because these are two completely different kinds of function, existing on different functional levels.

Consequently, because of the functional simultaneity exhibited by my data, I think that there is good reason to assume that the functions suggested by Warren are of two different kinds.

In the next section I will elaborate on the ideas that I have put forth so far the suggestion that classification, description and identification are not the only functions performed by attributive adjectives, and the idea that classification is of an essentially different kind compared to description and identification and suggest an alternative way of looking at attributive adjective functions.

An alternative analysis

Examining my data I discovered that attractive as it is, Warren's model does not give a full picture of attributive adjective functions. First, adjectives sometimes seem to perform some function other than description, identification or classification. This suggests that the original model needs amending with at least one more function. Second, adjectives sometimes appear to perform two of the original functions at once: either description and classification or identification and classification. This implies that classification is of an essentially different kind compared to description and identification.

I suggest that in discourse adjectives function simultaneously on two different levels the **conceptual** and the **communicative** level respectively.Conceptual functions are to do with what words themselves do, that is, what kind of conceptual structure they conjure up in the mind of the addressee. As such, they are quite unaffected by particular speech situations. Communicative functions, on the other hand, are to do with what the speaker does, that is, for what communicative purposes (s)he uses a certain word in a certain situation.Consequently, communicative functions are highly dependent on the speech situation at hand.I will come back to the independence / dependence relation between kind of function and speech situation at the end of this section, but first I have to go into some detail about what conceptual and communicative functions there are.

Lets start with the functions already suggested in the original model. I consider classification to be a conceptual function, whereas description and identification are communicative. In classification, the adjective itself calls up a type-concept in the mind of the addressee; among all the different type-concepts that we have, the classifier (in combination with the noun) helps specify one particular type. In description and identification on the other hand, it is the speaker who 'does' something, using a certain adjective in order to add information about something, and to identify a particular referent respectively.

Next, supported by the results of the present study, I suggest that there is yet another function on the communicative level, apart from description and

identification. I call this function **stipulation.** In this function the speaker uses the adjective to tell the addressee what something should be like in order for the utterance to apply to it.

Now, at this point we have established that there are three communicative, but only one conceptual function that attributive adjectives may perform. Since I believe that the conceptual and the communicative level co-exist in discourse, so that adjectives always function on both levels, there is obviously something wrong with this picture: It suggests that from a conceptual point of view all adjectives will be classifying (since classification is the only function found on this level). Clearly I do not think that all adjectives are classifying. I do not think that eg *huge* in *They have a huge house* would under any normal circumstances point to a subtype of *house*. Thus, there must be at least one more conceptual function.

The communicative function of *huge* in an utterance such as *They have a huge house* is clearly description - the speaker uses the adjective because (s)he wants to add some information about the house in question. But what does the adjective in itself do, that is, what conceptual function does it have? We have already dismissed the idea that it is classifying; it does not specify type. Rather, it seems to elaborate on an **instance** of the type known as 'house'. In order to see what I mean by this, we have to leave adjectives for a minute, and look instead at the conceptual aspect of nouns. In particular, we need to make clear the distinction between **type construal** and **instance construal**[13].

Very generally, the idea here is that the propositional content of a noun is construed in different ways depending on whether it is numberless, or has a distinct notion of singular or plural added to it. With a numberless noun, the propositional content is construed in terms of a **type**, whereas with a distinctly singular or plural noun, the content is looked upon in terms of an **instance.**

In type construal, we emphasise the sense of an abstract, decontextualized category, something used for categorizing potential members, but not representing a member as such. That is, we know that the type in question may be instantiated an infinite

[13] Langacker, R. W.. Foundations of Cognitive Grammar (vol 2). Stanford: Stanford University Press. 1991.198p.

number of times, and that each instance is individual and separable from any other instance, and may have idiosyncratic properties that are not shared by other instances and so on and so forth, but all this knowledge is backgrounded, and instead the sense of unity, generalisation and abstraction is highlighted. This could be represented graphically as in Figure 1a. The figure as a whole represents a concept. The symbols in the top half, as well as the way in which they are highlighted and backgrounded respectively, represent information about construal. In this case the large ellipse (representing type) is highlighted, whereas the smaller ones (representing instances) are backgrounded. Hence, what we have here is a concept construed as type. The lower half of the square represents propositional content of the concept in question - in this case the concept BEAR

Figure 1a: Type construal

In instance construal on the other hand, we look upon the propositional content in terms of an instance of the type, that is, we conceptualise a member or manifestation of the category. Here the situation is reversed then: we **know** that there is an abstract, generalized type to which the instance belongs, but this knowledge is backgrounded, and instead the sense of individuality is highlighted. This means that although the propositional content remains the same, prototypical, generalized specifications, which are highlighted in type construal, are backgrounded in instance construal, and serve instead as a sort of default base against which new specifications, particular to the instance can be made. This is seen clearly from the fact that with an instance concept we can often contradict specifications made by the bare noun: Although notions such as for example FOUR LEGS, THICK FUR and GROWLING SOUND are central to the generalized **type** conception of BEAR, we have no problems

imagining an **instance** that has three legs and no fur and that whimpers rather than growls.

Instance construal can be illustrated as in Figure 1b, where the numberless type concept BEAR has merged with the singular number concept (0), and given rise to an instance concept BEAR 0. (The parentheses represents the fact that prototypical specifications have been toned down and function more as a default base).

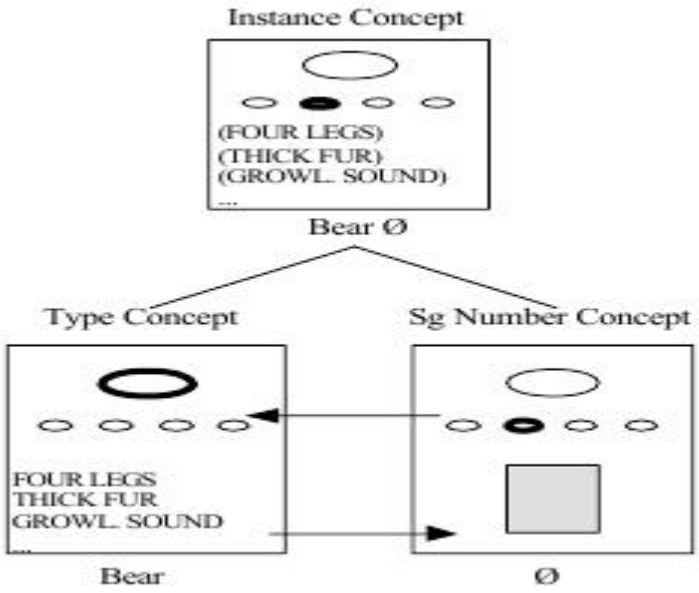

Figure 1b: instance construal

Lets now go back to the conceptual functions of adjectives. As I have already hinted, I believe that adjectives may apply either to type or to instance. If they apply to type, they are classifying, indicating a certain subtype. If they apply to instance on the other hand, they are what we might call **instance elaborating,** developing a certain aspect of what is conceptualised as an individual instance of a type. This could be represented graphically as in Figure 2a and b.

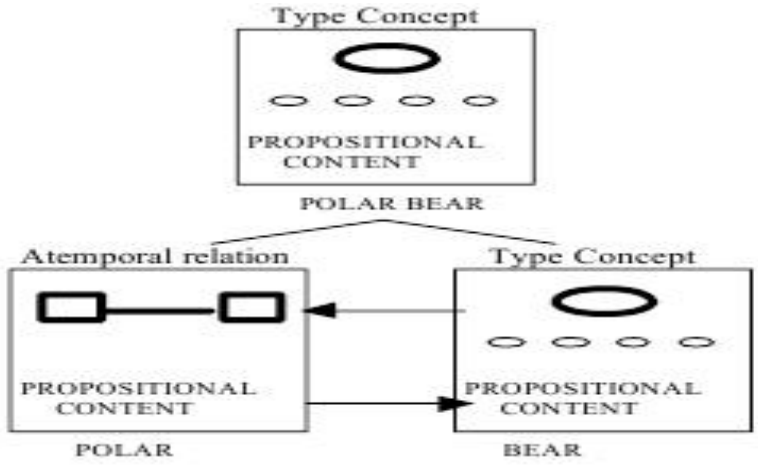

Figure 2a: Classification

Instance Concept

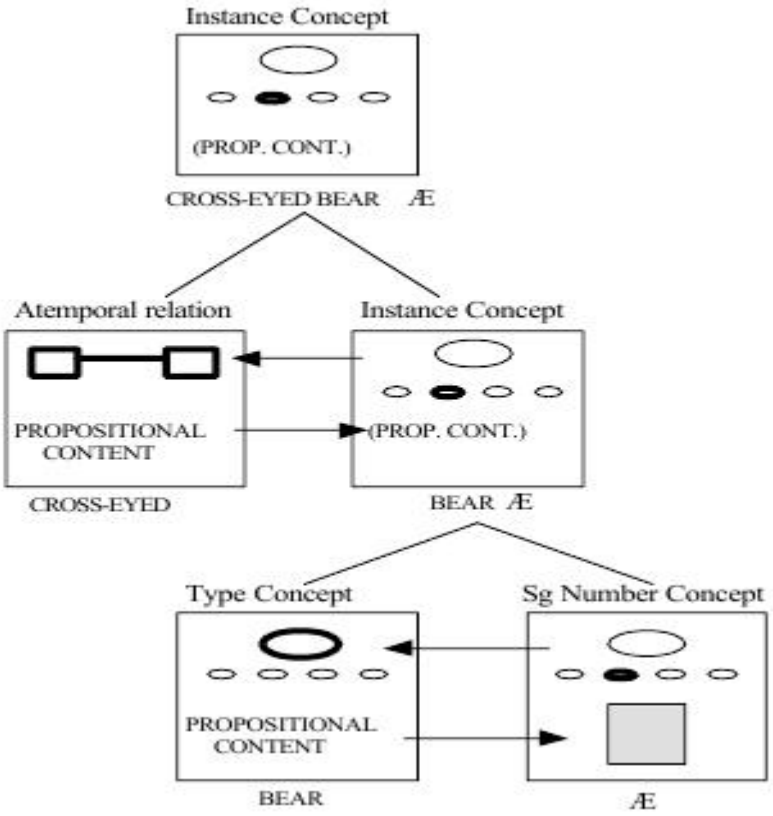

Figure 2b:Instance elaboration.

In Figure 2a we see that *polar* has the conceptual function of classification, applying to a type concept, and giving rise to another, more precise type concept.

Cross-eyed in Figure 2b, on the other hand, applies to an instance concept which in turn has arisen from the integration of a type concept and a number concept (hence

the extra level in figure 2b). It elaborates a certain aspect of the imagined bear, and so it gives rise to another, more precise instance concept.

Now, before concluding this paper, there is one more issue that needs some elaboration. I mentioned before that because conceptual functions are to do with what words themselves do, whereas communicative functions are to do with what the speaker does on a particular occasion, conceptual functions are constant and unaffected by speech situation, whereas communicative ones are not. This is seen clearly from the following examples, where the conceptual function of *polar* remains the same, regardless of speaker intentions and speech situation, but where the communicative function changes in accordance with what the speaker uses the adjective for:

(11) Which bear did you like best? The *polar* bear.

Conceptual function: Classification

Communicative function: Identification

(12) I saw a *polar* bear at the zoo today.

Conceptual function: Classification

Communicative function: Description

(13) They need a *polar* bear for the zoo.

Conceptual function: Classification

Communicative function: Stipulation

CONCLUSION.

We started out with an attempt to describe the Analysis of Syntax of Prenominal Attributive adjectives in Modern English language.Against the claim that this space is uniquely occupied by specificity adjectives in Modern English language.We have shown that at least in English language there are three types of readings of prenominal adjectives: generic readings, taxonomic episodic readings and specific episodic readings.We have shown that there are specific syntactic and lexical means which characterize the three types of readings realized in prenominal positions.Specific readings are a subclass of appositive (nonrestrictive or nonintersective) readings and this property naturally follows from the analysis of specificity adjectives as DP-adjectives. The syntax we have constructed allows for a simple compositional analysis of DP containing specific adjectives, relying on the idea that DP have peripheries and, under the split DP analysis, there is a syntactic space between a higher and a lower determiner,where (focused) specific adjectives merge. This allows them to be DP-sisters, that is, predicative adjectives which make an independent assertion, representing the speaker's information status with respect to the referent of the DP.The analysis of the data has shown that, syntactic things being equal,linearization also gives preference to the functor + argument structure.The prenominal space is uneven, including attributive and predicative adjectives.However,there are some common properties of these adjectives: they are non-intersective; they combine with the NP/DP by functional application, and they check a modal or quantificational feature which allows them to remain in prenominal position.

The importance of various premodification strategies (prefixation, compounding, adverbial modification) and of coordinated attributive structures accounts for the fact, confirmed by a diachronic analysis, that the attributive use of a-adjectives is a relatively recent phenomenon. Its rise hinges upon the more general increase in the grammatical complexity of attributive constructions which have progressively become available since the nineteenth century.

A quantitative analysis of the proportion of attributive uses in which the semantic and the phonological constraints are satisfied or violated has come to the conclusion

that they are not mutually exclusive (and do not rule out the contribution of further constraints, either). To the extent that meaning and rhythm can be weighed against each other, the relation of power is item-specific rather than of a principled nature. While only a few adjectives (e.g. *agog, aghast, askew)* easily tolerate infractions of both the semantic and the phonological constraint, some show an extreme sensitivity to either one or the other.*Aloof* and *awry,* for instance, rarely violate the semantic criterion. Contra Jacobsson, for some *a-* adjectives in particular (e.g. *awake, asleep),* the avoidance of stress clashes turns out to be a more incontrovertible requirement than the semantic specification. For many others (e.g. *ashamed, averse, aware, afloat, afraid* and *akin),* there is a strong tendency to conform to both the semantic and the phonological restriction.

My aim with this study was initially to find out whether or not the functional model suggested by Warren accounts for all instances of attributive adjectives in English.I found that the answer to this question was no; in 9,1% of the examples studied, adjectives seemed to have some function other than those suggested in the original model. I did, however, also discover something else, apart from what I originally set out to investigate, namely that the original model sometimes fitted a little too well, in that adjectives appeared to perform not one, but two of the suggested functions at once. This led me to conclude that not only does the original model need amending, it also has to be construed in a different way: Rather than seeing functions as comparable and on a par, we should consider the possibility that they are in fact of two different kinds.

What I suggest then is that in discourse, attributive adjectives function simultaneously on two different functional levels:the conceptual and the communicative level respectively. On the conceptual level we find (at least) instance elaboration and classification, and on the communicative level we have description, identification and stipulation.Conceptual functions are functions of the adjectives as such, whereas communicative functions are the communicative uses to which the adjectives are put by the speaker.

The task has been to find out why prenominal adjective string patterns are produced in the mind of the native speaker. There are fixed conventions for speakers and many are restricted semantically due to their proximity of the noun (*blue cheese + dressing* for example). The other extreme is “free” or preferred word order that we have the option to exercise.

According to those who have pursued this topic, relative ranks give adjectives a special status that place them in a preferred order furthest from the noun, or to be the words that are chosen to be spoken first. Perhaps this may attribute to the primacy effect.Danks & Glucksberg defined the idea of intrinsicalness, which claims to have the adjective placed closer to the noun because of its inherent association with the noun modified.

Students may be a key in finding how we develop those patterns of preferred adjective ordering. Although they are not sophisticated with the vast semantic shades of meaning of many words, they do understand specific patterns of adjective placement by conveying their linguistic responses, or *post-labeling*.

The research documented in this thesis clearly shows that the English adjective ordering scheme is merely a linguistic convention, rather than a universally innate ordering system.While there exist multiple possibilities for study and analysis in this field, this pilot study demonstrates that linguistic families are not primary factors in determining how L2 learners of English construe adjective placement. Pre-nominal adjective ordering exists in English as linguistic tradition, and is not related to other languages' adjectival traditions.

The list of used literature

1. Abney S.The English Noun Phrase in its sentential aspect. PhD diss., MIT,Cambridge,MA.1997.233p.
2. Albertazzi, Liliana. Continua, adjectives and tertiary qualities, 1997.129p.
3. Alexiadou & C. Wilder (eds) Possessors, Predicates and Movement in the DP. Amsterdam: 1998.332p.
4. Baker, M.. Lexical Categories. Verbs, nouns and adjectives. Cambridge: Cambridge University Press. 2003.169p.
5. Brown, E. K. and Jim Miller. Syntax: a linguistic introduction to sentence structure. 2nd ed. London: Harper-Collins Academic, 1994.223p.
6. Cinque, G. The syntax of adjectives. A comparative study. Cambridge, MA: MIT Press. 2010.222p.
7. Chomsky, Noam. Aspects of the theory of syntax. Cambridge, M.l.T. Press, 1965.301p.
8. Dixon, R.M.W. Where have all the adjectives gone? and other essays on semantics and syntax. Berlin: Mouton. 1982.267p.
9. Doetjes, J. "Adjectives and degree modification". Oxford: Oxford University Press. 2008.155p.
10. Danks, J. H., & Glucksberg, S. . Psychological scaling of adjective orders. Oxford: Oxford University Press. 2008.155p.
11. Frawley, W. Linguistic Semantics. Hillsdale: Lawrence Erlbaum Associates. 1992.112p
12. Hay, J., Kennedy, C. and Levin, B. "Scalar structure underlies telicity in 'degree achievements'". Proceedings of SALT 9: 1999. 124-144.p.
13. Halliday, M.A.K.. An Introduction to Functional Grammar (2nd Ed). London: Edward Arnold. 1994.125p.
14. Jastrzembski, James E. and Robert F. Stanners. Multiple word meanings and lexical search speed. Journal of Verbal Learning and Verbal Behavior: 1994, 534-537pp.

15. Jones, Edward E. and George R. Goethals. Order effects in impression formation: Attribution context and the nature of the entity.New York: General Learning Press, I992.232p.
16. Kayne, R.. Parameters and Universals, New York, OUP 2000.112p.
17. Larson, R.K. and Cho, C.. "Temporal adjectives and the structure of possessive DPs". Natural Language Semantics 11:. 2003. 247p
18. Langacker, R. W.. Foundations of Cognitive Grammar (vol 2). Stanford: Stanford University Press. 1991.198p.
19. Levi, J.. *The syntax and semantics of complex nominals.* Academic Press. Longobardi, 1978.158p.
20. McNally,L.and Kennedy, C. (eds).. Adjectives and adverbs. Oxford: Oxford University Press.2008.166p.
21. Martin, J. E. Semantic determinants of preferred adjective order. Journal of Verbal Learning & Verbal Behavior, Vol 8(6),1992. 697-704.
22. Norman, Donald A., and David E. Rumelhart, and the LNR research group. Explorations in cognition. Publisher, San Francisco: W. H. Freeman, 1975.156p.
23. Paul Ziff. Semantic analysis. Ithaca, N.Y.: Cornell University Press, 1990,172p.
24. Scott, G.-J., "Stacked Adjectival Modification and the Structure of Nominal Phrases". Oxford University Press, Oxford. 2002. 120p.
25. Sproat R. and C. Shih. "The Cross-linguistic Distribution of adjective ordering restrictions".Dordrecht: Kluwer Academic Publishers. 1991. 593p.
26. Scheffelin, Margaret A. Childrens' understanding of constraints upon adjective order. Journal of learning disabilities:1971.122p.
27. Sweet, Henry. A new English grammar: logical and historical. Oxford: Clarendon Press, 1998.130p.
28. Scheffelin, Margaret A. Childrens' understanding of constraints upon adjective order. Journal of learning disabilities: iss 5, pg 264, 1971.
29. Vendler, Zeno. Adjectives and nominalizations. Mouton & Co., N.V., The Hague, Pahs, Mouton, 1968.177p.

30. Ward, William. An essay on grammar. Menston (Yorks.), Scolar P., English linguistics, 1997.202p.
31. Warren,B.Classifying Adjectives.Gothenburg: Acta Universitatis Gothoburgensis. 1997. 158p.
32. Блох М.Я.”Теоритческая грамматика англиjсгого языка“.М.1991.383с.
33. Волкова Л.М.”Теоритческая грамматика англиjсгого языка“.Киев.1999.30с.
34. Иванова И.П.”Теоритческая грамматика современного англиjсгого языка“. М.1999.287с.
35. Раевская М.М.”Теоритческая грамматика англиjсгого языка“Киев.1999.292с

1. http://citeseer.ist.psu.edU/context/1396045/0
2. http://www.icsi.berkeley.edu/~bbergen/cogsci110/lectures/lecture10.html
3. http://www.mitteleuropafoundation.it/Papers/LA/.
4. http: //www.blackboard.com/
5. http://www.grammar.about.com