

Homework 1
11-721: Grammars and Lexicons, Fall 2010
Due Wednesday, September 29, 2010

1 Predeterminers, Determiners, and Adjectives

In this problem you will examine the distributional and morphological properties of three parts of speech in English: predeterminers, determiners, and adjectives. This is a realistic exercise: you are building a lexicon for your machine translation system or question answering system, and you need to decide on the parts of speech for some words. You look in a book and you find some tests for distinguishing determiners and adjectives. You have to apply the tests, imperfect as they are, and make your decisions. This exercise is based on a book whose title and authors are being withheld for now. Don't try to look it up.

The exercise has several purposes:

1. You will learn to apply tests.
2. You will learn to interpret the results of tests.
3. You will experience difficulty in categorizing words into parts of speech.

1.1 The Tests: distributional and morphological properties of predeterminers, determiners, and adjectives in English

1.1.1 Determiner Test 1:

Test: Determiners do not co-occur with *the* and *a*.

Example: Is the word *this* a determiner?

Test Sentences:

- (1) a.* The this book is about linguistics.
b.* This the book is about linguistics.
c.* A this book is about linguistics.
d.* This a book is about linguistics.

Conclusion: The word *this* passes Test 1 for determiners.

1.1.2 Determiner Test 2:

Test: If a determiner can occur with singular count nouns, it makes them acceptable.

You probably need to know some background in order to understand this test. English has count nouns and mass nouns, as do many other languages. Count nouns can occur with cardinal numbers or with *a*. Mass nouns can occur with *some*.

Count nouns:

- (2) a. Two books are on the table.
- b. A book is on the table.
- c. Twenty students are in the class.
- d. A student is in the lounge.

Mass nouns:

- (3) a. Some sand is on the table.
- b.* A sand is on the table.
- c.* Two sands are on the table.
- d. Some information is available on the Web.
- e.* An information is available on the Web.
- f.* Two informations are available on the Web.

The next fact is critical for Test 2: Singular count nouns cannot occur without a determiner in English:

- (4) a.* Book is on the table.
- b.* I saw book.
- c.* Student studied.
- d.* I talked to student.

Singular count nouns are fine with a determiner:

- (5) a. The/a book is on the table.
- b. I saw the/a book.
- c. The/a student studied.
- d. I talked to the/a student.

Example: Is the word *this* a determiner?

Test Sentences:

- (6) a. This book is on the table.
- b. I saw this book.
- c. This student studied.
- d. I talked to this student.

Conclusion: *This* passes Test 2 for determiners.

Example: Is the word *these* a determiner?

Conclusion: Test 2 for determiners is not applicable to *these* because *these* only occurs with plural nouns.

1.1.3 Determiner Test 3:

Test: Determiners that are about quantities can participate in a *partitive* construction.

In Examples (7)a and b, the partitive construction is *each of the students*. It is called partitive because it is talking about part of the set of students.

- (7) a. Each of the students has studied.
- b. I talked to each of the students.

This test is not applicable to *a*, *the*, *this*, *that*, *these*, and *those* because they are not about quantities. They express definiteness and proximity.

1.1.4 Predeterminer Test:

Test: There is just one test for predeterminers. They can occur before *a* or *the*.

- (8) a. *What* a party it was!
- b. I never saw *so big* an elephant.
- c. *All* the students left.

1.1.5 Adjective Test 1:

Test: Most adjectives can occur between *the* or *a* and a noun.

- (9) a. The *blue* book is on the table.
b. A *blue* book is on the table.
c. I saw a *blue* book.
d. I saw the *blue* book.

1.1.6 Adjective Test 2:

Test: Most adjectives can occur in predicative position, after verbs like *be*, *become*, *seem*, or *look*.

- (10) a. The test seemed *difficult*.
b. The book was *blue*.
c. The cut became *infected*.
d. The cake looked *yummy*.

Some adjectives can only occur in predicative position:

- (11) a.* I saw an asleep child.
b. The child was asleep.
c.* The ahead runner won the race.
d. The runner was ahead.

1.1.7 Adjective Test 3:

Test: Adjectives that describe gradable properties have comparative and superlative forms:

- (12) a. This copy is *darker*.
b. The *darker* copy is better.
c. The *darkest* copy is not good.
d. This student is *more studious*.
e. The *most studious* student won a prize.

1.1.8 Adjective Test 4:

Test: Adjectives that describe gradable properties can be modified with *very*.

- (13) a. That book is very blue.
b. The very light print is not readable.

1.1.9 Adjective Test 5:

Test: Adjectives that describe gradable properties can be modified by *so* in predicative positions, but not pre-nominal positions:

- (14) a. That book is so blue.
b. The sky seemed so dark.
- (15) a.* I saw the so blue book.
b.* I saw so blue water.
c.* The so light print is not readable.

Don't get confused by this: an adjective with *so* cannot occur between a determiner and a noun, but it can occur as a predeterminer, before the determiner:

- (16) I never saw so big an elephant.

1.1.10 Determiner Test 4:

Test: A determiner that describes a gradable property may be modified with *so*. In order to pass this test, the word must be in pre-nominal position.

- (17) He made so many mistakes.

Determiner Test 4 and Adjective Test 5 are easily confusable, and in fact, some pieces of data might be relevant to both tests. In order to pass Adjective Test 5, the word must be able to appear with *so* in predicative position, but not in prenominal position. In order to pass Determiner Test 4, the word must be gradable and occur with *so* in prenominal position.

1.1.11 Adjective Test 6:

Test: Another partitive construction: Gradable adjectives may occur in this construction.

- (18) a. The *largest* of the books couldn't fit in the box.
b. I have addressed the *most important* of your criticisms.

Determiner Test 3 and Adjective Test 6 are easily confused. Determiner Test 3 is about partitive constructions like *many of the students*. Adjective Test 6 is about a construction that involves a superlative plus a partitive (*the largest of the boxes*).

1.2 Summary of tests

- **Predeterminer Test:** Occurs before *the*, *a*, or *an*.
Template: PREDETERMINER the/a/an NOUN
- **Determiner Test 1:** Does not occur with *the*, *a*, or *an*.
Template: * DETERMINER the/a/an NOUN
Template: * the/a/an DETERMINER NOUN
- **Determiner Test 2:** Makes a singular count noun acceptable.
Template: DETERMINER COUNT-NOUN
- **Determiner Test 3:** Partitive construction.
Template: DETERMINER of the NOUN
- **Determiner Test 4:** Gradable determiners occur with *so* pre-nominally.
Template: so GRADABLE-DETERMINER NOUN
- **Adjective Test 1:** Occurs between *the*, *a*, or *an* and a noun.
Template: the/a/an ADJECTIVE NOUN
- **Adjective Test 2:** Occurs in predicative position.
Template: be/seem/become/look ADJECTIVE
- **Adjective Test 3:** Gradable adjectives have comparative and superlative forms.
Template: more ADJECTIVE
Template: most ADJECTIVE
Template: ADJECTIVE-er
Template: ADJECTIVE-est
- **Adjective Test 4:** Gradable adjectives can be modified by *very*.
Template: very ADJECTIVE
- **Adjective Test 5:** Gradable adjectives do not occur prenominally with *so*, but do occur in predicative position with *so*.
Template: * DETERMINER (optional) so ADJECTIVE NOUN Template:
be/seem/become/look so ADJECTIVE
- **Adjective Test 6:** Gradable adjectives occur in the partitive superlative construction.
Template: the ADJECTIVE-est of the NOUN Template: the most ADJECTIVE
of the NOUN

1.3 Interpreting the results of tests

Write two things in each cell of the following table: (1) P if the word passed the test or F if the word failed and (2) the number of the example that supports your conclusion. Leave the cell blank if there was no relevant data. Use my grammaticality judgments.

There are a few possibilities:

- There was no relevant data: leave the cell blank.
- There is one piece of relevant data: put the example number and the test result (P or F) in the cell.
- There is more than one piece of relevant data, and both have the same result. We will count it right if you list one example number in the cell.
- There is more than one piece of relevant data, and the results are different. This might or might not arise depending on how you interpret the tests. If you think you have found a case like this, write both results and both example numbers in the cell.

	enough	sufficient	much	many
PreDet				
Det1				
Det3				
Det4				
Adj1				
Adj3				
Adj4				
Adj5				
Adj6				

- (19) a.* Enough the books were given to the class.
b.* The schoolboard provided the enough books.
c. The student has read enough of the books.
d.* The bank gave them so enough money.
e.* The funds were so enough.
f.* The funds were very enough.
g.* The most enough of the funds.

(20)

- a. The accounts were filled with the sufficient funds.
 - b. The banker gave them a sufficient amount.
 - c.* Sufficient of the books were given to the class.
 - d. These funds were very/so/more sufficient.
 - e. The most sufficient of the funds.
- (21)
- a.*Much the/a water was spilled.
 - b.*The much water was spilled.
 - c. Much of the water was spilled.
 - d. So much water was spilled.
 - e. The water was so much.
- (22)
- a. Many a student has taken this class.
 - b. I remember the many students who have taken this class.
 - c. Many of the students have taken this class.
 - d. I saw very many students.
 - e. So many students have taken this class.
 - f. The problems were so many.

1.4 Optional Extra Credit: Applying the tests

- Apply each test to the word *numerous*. You should write one or two sentences for each test. For each test, you should do three things:
 - Apply the test: Insert the word *numerous* into each template mechanically and write down a sentence or phrase.
 - Judge grammaticality: Judge whether the sentence or phrase is grammatical. If you are not a native speaker of English, ask a native speaker for a grammaticality judgment. Then interpret the results.
 - Interpret the results: Did *numerous* pass or fail the test?
- Find one test for determiners that *each* passes but *every* does not. Write down two sentences or phrases, one showing that *each* passes the test and one showing that *every* does not pass it.

2 Van Valin Exercise 2, German

The data for this exercise is on Blackboard under Course Documents/Fall 2010 Readings/Van Valin, Intro to Syntax, pp. 21-85. It is exercise number 2 at the end of the chapter. This exercise is mostly about coding properties of grammatical relations: word order, case marking, and agreement. The last example is about the behavior of subject and object: the ability to be an antecedent of a reflexive pronoun.

Answer the following questions about **Example 1**:

1. What is the person and number of the subject?
2. What is the person and number of the object?
3. Looking at this example only, can you tell what the verb agrees with?
4. What is the case marking of the subject?
5. What is the case marking of the object?
6. What is the position of the subject?
7. What is the position of the object?

Answer the following questions about **Examples 2a and 2a'**. (Note that some words in the examples are not glossed if they have appeared in previous examples.)

8. What is the number of the object in 2a?
9. What is the number of the object in 2a'?
10. Does the verb agree in number with the object?
11. Why is 2a' ungrammatical?

Answer the following questions about **Example 2b**:

12. What is the position of the subject?
13. What is the position of the object?

Answer the following questions about **Example 2b'** with respect to the following two hypotheses:

Hypothesis 1: The verb agrees in number with the subject.

Hypothesis 2: The verb agrees in number with the first noun phrase.

14. Which hypothesis is supported by example 2b'?

Answer the following questions with about **Examples 3a and 3b**:

15. Which noun phrase does the verb agree with in examples 3a and 3b?
16. How do you know?

Answer the following questions about **Example 4**:

17. What is the position of the noun phrase with the recipient role?
18. What is the case marking of the noun phrase with the recipient role?

Answer the following questions about **Example 5**. Example 5a illustrates the passive construction for a two-argument verb (a verb with an agent and a patient) in German.

19. Examples 5b and 5c are (attempted) passives of a previous sentence in this exercise. Which sentence are they (attempted) passives of?
20. For a verb with patient and recipient arguments, which argument can become the subject of the passive?

Answer the following question about **Example 6a**. You need to look at the subscripts i and j . *Sich $i/*j$* means that *sich* can refer to the noun indexed i , but not to the noun indexed j . The asterisk indicates that the reference is ungrammatical.

21. What does the reflexive pronoun refer to, subject or object?

Answer the following question about **Example 6b**:

22. What does the non-reflexive pronoun refer to, subject or object?

Answer the following question about **Example 6c**.

22. Why do you think *sich* refers to *den Schüler* (the student) and not to *der Lehrer* (the teacher)?

3 Van Valin, Chapter 2, Tongan Exercise

The data for this problem is the exercise on Tongan at the end of Van Valin, Chapter 2, which is posted on Blackboard under Course Documents/Fall 2010 Readings.

1. Is sentence 1 syntactically transitive or intransitive?
2. Which morpheme is the case marker in sentence 1? Just give the form of the morpheme, not it's meaning or grammatical role.
3. Is sentence 2 transitive or intransitive?
4. Which morpheme is the case marker in sentence 2?
5. Is sentence 3 transitive or intransitive?
6. Which morpheme is the case marker of the agent in sentence 3?
7. Which morpheme is the case marker of the patient in sentence 3?
8. Which morpheme is the case marker of the location in sentence 5?
9. Which morpheme is the case marker of the experiencer in sentence 6?
10. Which morpheme is the case marker of "girl" in sentence 6?
11. Is sentence 6 transitive or intransitive? Hint: Don't be fooled by the English translation.
12. Which morpheme is the case marker of "island" in sentence 7?
13. Which morpheme is the case marker of "bird" in sentence 8?
14. Is sentence 8 transitive or intransitive?
15. Is the case marking ergative-absolutive or nominative-accusative?
16. (optional) Do you have questions about anything that is still not clear in examples 1-9?

For sentences 10-15, we will use the abbreviations:

A most agentlike argument of a transitive verb.
S subject of an intransitive verb
P most patientlike argument of a transitive verb

Some new terminology (found in Van Valin, Chapter 2, if you want to read about it in more detail): Sentences like *John saw Bill and coughed* are instances of *conjunction reduction*. They are assumed to be reduced versions of sentences like *John saw Bill and John coughed*. A conjunction reduction sentence has two verbs, in this case, *saw* and *coughed*. The first verb has overt subject

and object *John* and *Bill*. The second verb does not have a subject to its immediate left, but the subject is understood to be the same as the subject of the first verb, *John* in this case. We say that John is the controller of conjunction reduction and the subject of *cough* is the controllee of conjunction reduction. The controller is an overt noun phrase, and the controllee is a missing noun phrase that is understood to be the same as the overt noun phrase. This is just a complicated way of saying that the subject of *cough* is understood to be John.

We saw in class, that there are languages in which *John saw Bill and coughed* means that Bill coughed. In this case, Bill is the controller and the controllee is the S of *cough*. In other words, the S of *cough* is understood to be Bill.

16. Choose one: The controller of conjunction reduction 10 is:
A S P
17. Choose one: The controller of conjunction reduction in sentence 11 is:
A S P
18. Choose one: The controller of conjunction reduction in sentence 12 is:
A S P
19. Choose one: The controller of conjunction reduction in sentence 13 is:
A S P

Sentences 14' and 15' do not have any conjunction reduction. In both cases, the second clause has pronouns for all participants, not invisible NPs.

20. Which two roles can control conjunction reduction (A, S, or P)?
21. Choose one: The *controllee* of conjunction reduction in sentence 10 is:
A S P
22. Choose one: The controllee of conjunction reduction in sentence 11 is:
A S P
23. Choose one: The controllee of conjunction reduction in sentence 12 is:
A S P
24. Choose one: The attempted, but ungrammatical, controllee of conjunction reduction in sentence 14 is: A S P
25. Choose one: The attempted, but ungrammatical, controllee of conjunction reduction in sentence 15 is: A S P other
26. Which two roles (A, S, or P) can be controllees of conjunction reduction?
27. (optional) Do you have any questions?