

<1> Miwoc in California

12 points

In general, the endings of each of these Miwoc words indicate information about who or what is doing something to whom or what, i.e., a combination of *subject* and *object* features — to use linguist speak. Before attempting the tasks assigned below, it may help you to fill out the following grid. Some cells are filled in as a guide, e.g., *nixmaš* on the end of a verb indicates that 'we' do something to 'you', while *put* indicates that 'they' do something to 'me', and *š* means that 'you' do something. HINT: In some cells you will have alternating endings, while the same ending may appear in more than one cell.

		A		B		C	
	Subject → Object ↓	I	we	you	you all	he	they
1	me			(k)mu	(k)muč	t	put
	us			(k)mušme	(k)mušmeč	m	pum
2	you	(k)muš	(k)nixmaš			n	pun
	you all	(k)mutoš	toknixmaš			ton	puton
3	him	m/k	(k)maš	š	toš	∅	p
	them	m/k	(k)maš	š	toš	∅	p
4	(none)	m/k	(k)maš	š	toš	∅	p

Task 1: 2.5 points [0.5 for each correct]

Write the five verb stems (i.e., minimal part of word expressing verb meaning without the Tense or Subject and Object endings) corresponding to *bite*, *speak (to)*, *catch*, *come (to)* and *watch*. (Write the Miwoc verb stem below the corresponding English verb.)

<i>bite</i>	<i>speak (to)</i>	<i>catch</i>	<i>come (to)</i>	<i>watch</i>
yil	kač	lot	xin	šiyič

Task 2: 1.5 points [0.5 for each correct]

a. How is tense marked on Miwoc verbs? Answer by specifying the sound which marks *present* and *past* respectively. (Answer by completing each of the sentences below.)

Present tense is marked by _____

Past tense is marked by _____

b. Indicate where in the verb these sounds occur by marking the spot with 'X':

___ stem X subject-object ending ___

Task 3: 4 points [1 pt for each correct; 0.5 for correct VERB+TENSE & 0.5 for correct SUBJ/OBJ ending]

Translate the following into Miwoc:

a.	<i>We spoke to you all.</i>	<i>kačatoknixmaš</i>
b.	<i>He came to them.</i>	<i>xina</i>
c.	<i>You bit us.</i>	<i>yilakmušme</i>
d.	<i>They speak to us.</i>	<i>kačipum</i>

Task 4: 4 points [1pt for each correct - give 0.5 point for correct subject and verb+tense; 0.5 point for correct object pronoun]

Translate the following into English:

a.	<i>šiyičaton</i>	<i>He watched you all</i>
b.	<i>lotimu</i>	<i>You catch me</i>
c.	<i>yilaknixmaš</i>	<i>We bit you</i>
d.	<i>kačan</i>	<i>He spoke to you</i>

<2> Come to Istanbul

20 points

Task 1: (3 points)

An English word like *rebuilding* can be analysed as having a maximum of 3 meaningful parts, e.g., *re - build -ing*. We can roughly indicate the meaning of each part by using other words with same or similar meanings, e.g., *again - construct - action (of)*.

Now break up these Turkish words into their maximum number of meaningful parts, using spaces and hyphens; indicate the meaning associated with each by writing a one word (if possible) indication of the meaning of each of these parts in English in the third column.

Turkish word	Meaningful parts of word	Meaning of each part
arkadaşlarım	arkadaş - lar - ım	friend - plural/s - my
evimde	ev - im - de	house - my - in
pencerelerden	pencere - ler - den	window - plural/s - from

0.5 for each correct morpheme analysis (must have all 3 morphemes correct in each word to get full marks[1.5]); 0.5 for each correct gloss (all 3 morphemes in each word must be correctly glossed to get the 0.5 [1.5]). Students may express 'plural' in various forms, e.g., using English pl morpheme 's' or they may have something like 'more than one' OR 'some' OR 'many'. Accept any expression that shows they see *lar/ler* is marking plural.

Task 2: 5 points [1 point for each correct translation. 0.5 may be given if mostly correct, but some minor error]

Translate the following Turkish sentences into English?

a.	Baban mutlu mu?	Is your father happy? OR Your father is happy?
b.	"Şehirimize gel" diyoruz.	We say/said "come to our city". [or: "Come to our city" we say/said.]
c.	Arkadaşım doktor olmak istiyor.	My friend wants to be/become a doctor.
d.	Fakir evimi seviyorlar mı?	Do they like my poor house? [or: They like my poor house? or: Do the poor like my house?]
e.	İstanbul'dan mı geliyorsun?	Are you coming [or: Do you come] from Istanbul? [or: You come/are coming from Istanbul?]

Task 3: 12 points [2 points for each correct translation. As well as the answers given in the table below, also allow more literal translations as in explanations below. Take off 0.5 point for each error (up to 4 errors) in each translation.]

The following examples introduce a new pattern. What do these examples mean?

a.	Geldiğimde "merhaba" diyorlar.	When I come/came they say/said "hello". [or: ... "hello" they say/said.]
b.	Baban geldiğimizden mutlu mu?	Is/was your father happy that we came/come/are coming? [or: Does/did your father like us to come?]
c.	Fakir olduğumu diyorlar.	They say/said (that) you are poor.
d.	Aldığın ev büyük mü?	Is the house that/which you bought/are buying big?
e.	En mutlu olduğum şehir, Van.	The/a city where I am/ was happiest is/was Van. [or: Van is/was the/a city where I am/was happiest]
f.	Fakir olduğumuz halde mutluyuz.	Although we are/were poor, we are/were happy. [or: In spite of our being poor, we are/were happy]

The examples in part 1 provide vocabulary and show some basic sentence patterns for Turkish, e.g. the verb usually comes at the end of the sentence, and nouns take endings which show possession (e.g. -im/-um means “my”) and case (e.g. -den/-dan means “from”, -u/i shows a definite object). The sentences in part 2 are similar to those in part 1, requiring the pupil to analyse new forms using the same rules as in part 1. The sentences in part 3 use a gerund-type affix (-diğ/-duğ-, similar to English “-ing”) so that verbs can take the same suffixes used in parts 1 and 2, but with a metaphorical meaning. The sentences in Task 3 translate literally as:

- a. At/in my coming they say “hello”.
- b. Is your father happy from our coming?
- c. They state your being poor.
- d. Is your buying house big?
- e. My happiest-being city is Van.
- f. uses a linking word (*halde*) which isn't in the preceding parts; solving this one requires one to guess from the preceding examples and from the context of the sentence that the meaning is something like "In spite of our being poor, we're happy".

<3> Hungarian Whereabouts

20 points

Task 1: 12 +4 points [3 points for each correct placement on the grid]

Find each person's place in the field and the direction (N, S, E or W) they're facing.

		1	X			
		X	X	X		
X	3		X			X
2		X		X		4
			X			

Complete this task by writing the number corresponding to each person (1-4) in the appropriate cell of the table above, and complete these sentences with the appropriate compass term:

[1 point for each correct answer below]

Person 1 is facing westPerson 2 is facing westPerson 3 is facing northPerson 4 is facing south**Task 2: 4 points** [1 point for each correct answer]

Give the Hungarian equivalents of the English compass points:

north	<u>északra</u>
south	<u>délre</u>
east	<u>keletre</u>
west	<u>nyugatra</u>

<4> Lontara

15 points

Buginese is a language of the southern region of Sulawesi, the third largest island of Indonesia. It is written using a script called *Lontara*. The script's name comes from the Malay word for palm, *lontar*. The long, thin leaves of the palm were once used to create scroll-like manuscripts.



Here is a passage from the epic Indonesian creation myth *Sureq Galigo*, written in Buginese using the Lontara script. Text is thus usually written as one long line.

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<4> Lontara

Sureq Galigo: English translation

There is no one to call the gods Lord, or to offer praise to the underworld. Why Lord don't you have one of your children descend, and incarnate him on the earth; do not leave the world empty and the earth uninhabited. You are not a god, Lord, if there are no humans under the heavens, above the underworld, to call the gods Lord.

Sureq Galigo: Buginese written in the Latin alphabet

The Buginese text of Sureq Galigo has been chopped up into several pieces and scrambled up. These lines are the same pieces of the same creation myth in Buginese, but written in the Latin alphabet instead of the Lontara script.

Notes about spelling: e is a vowel (/ə/) pronounced like 'e' in betray. é is a vowel (/e/) pronounced like 'e' in bed. q is the glottal stop (/ʔ/) which is the sound in the middle of uh-oh.

Task 1: 10 points [1 pt for each correct]

Unscramble the pieces: figure out the correct order for the fragments A through to J, and write them in order here, one letter per blank. (NOTE: no capital letters are used here, reflecting their absence in the Lontara writing conventions.)

A	ajaq naonro lobbang linoé	1	B
B	lé namasuaq mua na sia	2	E
C	makkatajangeng ri atawareng;	3	D
D	mappaleq wali ri pérétiwi.	4	I
E	mattampa puang lé ri batara,	5	H
F	mattampa puang lé ri batara.	6	A
G	ri awa langiq, lé ri ménéqna pérétiwié.	7	C
H	tabareq-bareq ri atawareng.	8	J
I	tammaga puang muloq séwa rijajiammu,	9	G
J	teddévata iq, puang, rékkua masuaq tau	10	F

Task 2: 3 points [1 point for each correct]

Translate these English words into Buginese, using the **Latin script** only. You don't need to write them using the Lontara script.

lord	<i>puang</i>
underworld	<i>pérétiwi/pérétiwié</i>
earth	<i>atawareng</i>

Task 3: 2 points [0.5pt for each correct location]

Returning to the original text in the Lontara script, circle the written form of *puang* each time it occurs. **SEE ANSWER ON FIRST PAGE**

Hints

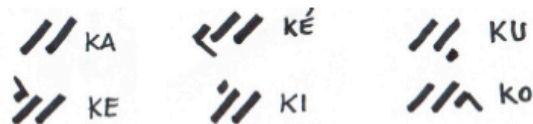
Hint 1: The phrase *mattampa puang lé ri batara* is repeated twice in the scrambled Latin-alphabet Buginese text. Can you find a series of characters that is repeated twice in the Lontara-script Buginese text? Use this as a foothold for discovering what some symbols mean, and learning more symbols.

Hint 2: Try thinking of the symbols as syllables instead of letters.

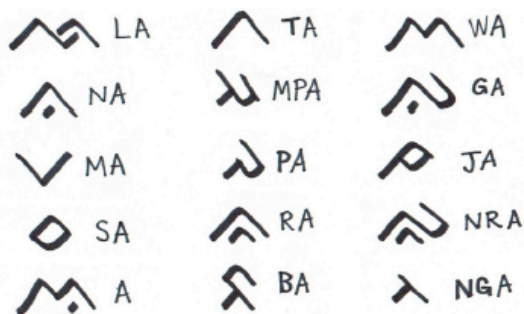
The Lontara script

Each symbol is a single syllable. Lontara is an abugida: the larger, core part of each symbol represents the initial consonant or consonants, while any smaller, accentuating mark represents the vowel.

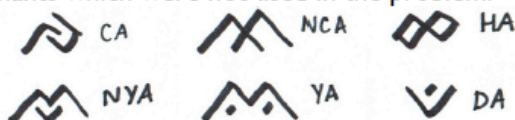
When there is no vowel mark, the syllable defaults to the vowel "A". When a vowel mark is present, the "A" changes to the corresponding vowel. This is similar to Devanagari, another abugida.



Here are more consonants of the Lontara script, in the order they appear in the Buginese text.



For fun, here are some consonants which were not used in the problem.



Although some of the Buginese syllables have final consonants, Lontara does not have a way to write down the final consonants. So the *-ng* and *-q* at the end of many of the Buginese words have no representation in the Lontara script: they are ignored. Doubled consonants, as in *mattampa*, are also ignored and just treated as single consonants (*matampa*). Lastly, spaces are ignored.

A single punctuation mark (at right) is used to represent both the comma and the period.



Reference for the Lontaran script: http://en.wikipedia.org/wiki/Lontara_alphabet

The unscrambled poem

Lé namasuaq mua na sia
mattampa Puang lé ri batara,
mappaleq wali ri Pérétiwi.
Tammaga Puang muloq séua rijajiammu,
tabareq-bareq ri atawareng,
ajaq naonro lobbang linoé
makkatajangeng ri atawareng.
Teddéwata iq, Puang, rékkua masuaq tau
ri awa langiq, lé ri ménéqna Pérétiwié,
mattampa Puang lé ri batara.

*There is no one
to call the gods Lord,
or to offer praise to the Underworld.
Why Lord don't you have one of your children descend,
and incarnate him on the earth,
do not leave the world empty and
the earth uninhabited.
You are not a god, Lord, if there are no humans
under the heavens, above the Underworld,
to call the gods Lord.*

The Buginese text and translation were taken from a paper by Sirtjo Koolhof about the epic poem:
<http://www.sabrizain.org/malaya/library/lagaligo.pdf>

<5> Navajo's Great Chain of Being**14 points****TASK 1: 3 points [1 for each of a, b & c]**

Study these Navajo sentences:

- a. Although the word order can vary in Navajo, one particular type of word always appears in the same location in Navajo. (1) What sort of word is this and (2) where does this word-type appear in the Navajo sentence?
1. **verb [0.5pt]**
 2. **last / sentence final / end of sentence [0.5 pt]**
- b. This particular word-type is subject to a small change, depending on "who" or "what" is doing the action of the sentence to "whom" or "what". Explain in your own words what this change is and how it works.

If the Subject word precedes the object word the verb starts with *yi*; if the Object word precedes the Subject word, then the verb starts with *bi* (in place of *yi*). [this can be expressed in different ways, e.g., verb has different prefix depending on relative order of Subject and Object word. Need to show (i) what the variation on the verb consists of, and (ii) what triggers it/ or what it signals in order to get the full 1 pt]

- c. You'll have noticed that Navajo's tendency to categorize nouns has had an effect on the sentences in the first table. The nouns are categorized according to a particular hierarchy. Based on the sentences in Table 1, explain the hierarchy at play here.

A human referring/denoting word/noun must precede (come before) an animal referring/denoting word/noun

Task 2: 5 points [need to have correct lists in each category for 5 points. Take off 0.5 for missing item or incorrectly categorized item (up to 5 points) This includes 'dog' which cannot be accurately classified on available evidence.]

Building on what you have learnt in Task 1 and by looking at the data below, work out the rules about noun hierarchy in Navajo in more detail.

Answer by placing the category at the upper end of the hierarchy in the leftmost position in a precedence chain where categories are separated by the symbol ">" (A > B > C > D...) where > means "precedes". List all the words (in English) that refer to a member of each of the categories found in sentences a to r. NOTE: There is not enough information in the data to confidently classify *one* of the nouns used.

A	>	B	>	C	>	D	>	E
man		child		cat		gopher		ant
boy		bear		sheep		mouse		spider
		bull		turkey				bee

Task 3: 6 points

a. Which noun were you unable to classify in one of the five sets above? dog / Léechaaʔí

1 point [can answer in English or Navajo]

b. What additional data would a linguist need in order to confidently classify this word?

Answer this question by giving an English sentence that the linguist might ask a Navajo speaker to translate into Navajo which would allow the linguist to decide the category that the word identified in your answer to a. belongs to.

2 points [for a sentence of type given in A or B]

Various answers are possible here, e.g.,:

(A) The dog VERBED the bull/bear/child. OR

(B) The cat/sheep/turkey VERBED the dog.

c. Explain how the translations of your English sentence will give you the information you need.

3 points [for answer which clearly explains what the sentence asked to translate would be probing for] Sentence c. shows that 'dog' is lower than 'boy' which is in the same category as 'man' (shown by a and b).

If 'dog' is in the same category as 'bull/bear/child' then 'The dog VERBED the bull/bear/child' will be grammatical in either order; if 'dog' is in a lower class (i.e. same category as 'cat/sheep/turkey') then only one order will be grammatical, i.e. bull/bear/child > dog [with prefix *bi-* form of verb].

OR

If 'dog' is in the same category as 'cat/sheep/turkey' then 'The cat/sheep/turkey VERBED the dog' can be translated by a sentence having either SUBJ > OBJ (with prefix *yi-*) or OBJ > SUBJ (with prefix *bi-* on verb); if dog is in a higher category/class, the same as bull/bear/child, then only one order is possible, i.e. dog > cat/sheep/turkey, and sentence B's translation must have prefix *bi-* on verb.

<6> Combinatorial Categorical Grammar

19 points

PART I: ENGLISH

TASK 1: 2.5 points

Using the above examples as evidence, figure out how CCG parses sentences, and describe it briefly here:

(i) CCG assigns a category to each word and (ii) constructs a parse by combining pairs of categories to form a category S . Not all pairs of categories can combine. (iii) A pair is allowed to combine if one category (e.g. A) is contained within the category next to it (e.g. B / A) and (iv) lies on the side indicated by the slash (\backslash for left, $/$ for right). (v) When two categories combine, the result is a new category, taken from the left of the slash (B in this example).

[Need to show they understand the basic procedure which has 5 parts to it, as noted above (i-v). Take off 0.5 if one of these is missing]

TASK 2: 1 point [Need to get *one* of the options below to get 1 pt]

In the sentence "I enjoy long books", what categories could we assign to "long"?

[While we only really expect the first answer, points should be available for those whose twisted minds can produce the others.]

1. NP / NP
2. $((S \backslash NP) \backslash ((S \backslash NP) / NP)) / NP$
3. $((S \backslash NP) / NP) \backslash ((S \backslash NP) / NP)$
4. $((S / NP) \backslash NP) \backslash ((S \backslash NP) / NP)$

TASK 3: 1point [Only need 1 ex to get 1pt]

Not every grammatical sentence of English will be declared "grammatical" by the process above. Using only the words "I", "books", "sleep", and "enjoy", form a grammatically correct English sentence that will fail to parse given the categories above.

Possible answers: "I enjoy sleep", or topicalized object sentence like "Books/sleep I enjoy."

PART 2: TOK PISIN**TASK 4: 4 points [0.5 for each correct]**

Below are sentences in Tok Pisin with a scrambled list of English translations. Match each sentence to its English equivalent. (Answer by writing letter (A-H) to left of Tok Pisin sentence.)

- | | | |
|----------|---|-------------------------------|
| E | 1. <i>Brata bilong em i stap rit.</i> | A. He has read a book. |
| H | 2. <i>Ol i stap dringim wara.</i> | B. My sister boils the water. |
| C | 3. <i>Ol i ken ritim buk bilong mi.</i> | C. They can read my book. |
| A | 4. <i>Em i ritim buk pinis.</i> | D. His sister can write. |
| G | 5. <i>Em i laik rit.</i> | E. His brother is reading. |
| D | 6. <i>Susa bilong em i ken rait.</i> | F. The water has boiled. |
| B | 7. <i>Susa bilong mi i boylim wara.</i> | G. He wants to read. |
| F | 8. <i>Wara i boil pinis.</i> | H. They are drinking water. |

TASK 5: 1.5 points [Dividing sentence into 3 parts as shown below, 0.5 pt for each correct part, NO pt unless ALL of a part is correct]

Translate the following Tok Pisin sentence into English:

"Brata bilong mi i stap ritim buk bilong susa bilong mi."

[My brother] [is reading] [my sister's book].

TASK 6: 1 point [Dividing into 2 halves, give 0.5 pt for each correct half; NO pt unless ALL of a part is correct.]

Translate the following English sentence into Tok Pisin:

"Their sister wants to write a book."

[Susa bilong ol] [i laik raitim buk]

TASK 7: 8 points [0.5 for each correct]

Describing these words in terms of their CCG categories highlights that these aren't English words combined according to English rules, but are Tok Pisin words combined according to Tok Pisin rules. One new category label, VP, is introduced here.

Match each Tok Pisin word below to its CCG category by writing a letter (A - G) corresponding to the category. Some categories will be used more than once. The categories of two words are already identified for you, by way of example.

B	1. <i>bilong</i>	G	10. <i>laik</i>	A. NP
A	2. <i>brata</i>	A	11. <i>mi</i>	B. (NP \ NP) / NP
D	3. <i>boil</i>	A	12. <i>ol</i>	C. (S \ NP) / VP
E	4. <i>boilim</i>	F	13. <i>pinis</i>	D. VP
A	5. <i>buk</i>	G	14. <i>stap</i>	E. VP / NP
E	6. <i>dringim</i>	E	15. <i>raitim</i>	F. VP \ VP
A	7. <i>em</i>	D	16. <i>rit</i>	G. VP / VP
C	8. <i>i</i>	E	17. <i>ritim</i>	
G	9. <i>ken</i>	A	18. <i>susa</i>	