

# International Linguistics Challenge

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# 1 Clarifications and Definitions

- (a) In sentence structure: the subject, verb and object are abbreviated as S, V and O respectively. Nouns are also abbreviated as N.
- (b) S, V, O and N are all considered words.
- (c) S, O are both considered nouns.

Let X, Y be a word, then:

- (d)  $X_{\text{last}}$  signifies the last letter of that word.
- (e)  $N_{\text{sg.}}$  signifies a noun in its singular form.
- (f)  $N_{\text{pl.}}$  signifies a noun in its plural form.
- (g)  $X \rightarrow Y$  signifies an alteration of word X into word Y, whether it be an addition of a letter, a removal of a letter etc.

## 2 Problem A: Phonetic Transcription

Below are my own interpretations of the given words in IPA format, as given in the statements, with some additional notes included.

1. /ʃinu/

2. /nara/

Note: I heard it as /r/ but in later problems the /r/ sound is more clearly heard.

3. /blutʃon/

4. /fintʃ/

Note: The vowel was barely heard here, but it is voiced as /i/ in later problems.

5. /tili/

6. /gelun/

7. /bulak/

8. /ʃeso/

Note: The first consonant was more similar to the English *j*, but this was the closest thing.

9. /rafik/

Note: The second consonant was more similar to the English *v*, but this was the closest thing.

10. /lasao/

### 3 Problem B: Word Boundaries

Below are IPA transcriptions of the following sentences with clear word boundaries, according to the given IPA chart.

11. fintʃ nara mikə gelun tʃon blutʃon  
long river small cold stone carry  
'The long river carries the small cold stone.'
12. mikə lasao gosap ſinu  
small bright bird sings  
'The small bright bird songs.'
13. gop nimu tili lorai rafik  
tall child tree easily breaks  
'The tall child breaks the tree easily.'

### 4 Problem C: Word Order and Plural Morphology

#### 4.1 Sentence Morphology explanation

We consider the sentences in Language X given by the statement. The sentences can be divided into individual words as follows. (These are already divided into words and subunits, but the answers will not be referring to the below for addition information.)

14. kanabi ſelu  
woman<sub>pl.</sub> dance  
'The women dance.'
15. kanabi telum feru  
woman<sub>pl.</sub> boy<sub>sg.</sub> see  
'The women see the boy.'
16. lomu telum huni  
dog<sub>sg.</sub> boy<sub>sg.</sub> chase  
'The dog chases the boy.'

17. telumi lomu feru  
 boy<sub>pl.</sub> dog<sub>sg.</sub> see  
 'The boys see the dog.'

18. kanab kuran baraa  
 woman<sub>sg.</sub> star<sub>pl.</sub> study  
 'The woman studies the stars.'

19. panon ſelu  
 mountain<sub>pl.</sub> dance  
 'The mountains dance.'

20. lomun pano feru  
 dog<sub>pl.</sub> mountain<sub>sg.</sub> see  
 'The dogs see the mountain.'

21. lomun o telumi pano feru  
 dog<sub>pl.</sub> and boy<sub>pl.</sub> mountain<sub>sg.</sub> see  
 'The dogs and the boys see the mountain.'

## 4.2 Questions

(a) Consider 14. and 15. where both start with /kanabi/ correlating to 'The women', so the sentence structure starts with a subject.  
 Next, consider 15. and 16. where both has 'the boy' as the object, the word /telum/ appears second in both sentences, so the sentence structure has the object right after the first word, which is the subject. So with this information, it can be said that the sentence structure for Language X is **SOV**.

(b) Consider 14. and 18. which have 'The women' /kanabi/ and 'The woman' /kanab/ as their respective subjects. This pattern is also present in 'The boy' /telum/-/telumi/.  
 And consider 16. and 20. which have 'The dog' /lomu/ and 'The dogs' /lomun/ as their respective subjects. This pattern is also present in 'The mountains' /pano/-/panon/.  
 It can be said that to form plural nouns in Language X, there are two possible procedures.

- (i) If the last letter of a word is a vowel then the plural form would have an ‘-n’ at the back or **if  $N_{last} = V$  then  $N \rightarrow N + -n$ .**
- (ii) If the last letter of a word is a consonant then the plural form would have an ‘-i’ at the back or **if  $N_{last} = C$  then  $N \rightarrow N + -i$ .**
- (c) With the information above, the sentence ‘The mountains study the women and the dogs.’ can be translated as:  
 mountain<sub>pl.</sub> woman<sub>pl.</sub> and dog<sub>pl.</sub> study  
 panon kanabi o lomun baraa  
 So the translated sentence is /panon kabani o lomun baraa/.

## 5 Problem D: Verbal Agreement

### 5.1 Sentence Morphology explanation

We consider the sentences in Language X given by the statement. The sentences can be divided into individual words as follows.

- 22. kanab      ſelu  
 woman<sub>sg.</sub>    dance  
 ‘The woman dances.’
- 23. telumi    lomun    ferua  
 boy<sub>pl.</sub>      dog<sub>pl.</sub>    see  
 ‘The boys see the dogs.’
- 24. kanab      kura      bara  
 woman<sub>sg.</sub>    star<sub>sg.</sub>    study  
 ‘The woman studies the star.’
- 25. lomu      kuran    hunia  
 dog<sub>sg.</sub>      star<sub>pl.</sub>    chase  
 ‘The dog chases the stars.’

### 5.2 Questions

- (a) Observe that some verbs now have an ending ‘-a’, and further observation reveals that verbs only have said ending letter when the object of

the sentence is in plural form. This can be seen in 23. /ferua/ gaining the ending letter compared to 17. /feru/ or the absence of one in 24. /bara/ compared to 18. /baraa/.

With this information, it can be said that verbal agreement only happens when the object of the sentence is in plural form. Or that if  $O = O_{pl}$ . then  $V \rightarrow V + -a$ .

(b) With the information above, we can translate the sentence 'The bird sees the river and trees.' in steps:

1. Divide the sentence into individual words.  
bird<sub>sg.</sub> river<sub>sg.</sub> and tree<sub>pl.</sub> see
2. Translate them directly into Language X, note that the word for tree /tili/ has to be turned into plural form.  
gosap nara o tilm feru
3. Lastly, adjust the verb according to the verbal agreement morphology.  
gosap nara o tilm ferua

Therefore, the translated sentence is **/gosap nara o tilm ferua/**.

## 6 Problem E: Dialectal Variation

### 6.1 Part (a)

We consider the sentences in Language X from Dialect II. The sentences can be divided into individual words as follows.

26. kanabi ferua  
woman<sub>pl.</sub> see  
'The women see.'
27. kanabi telum feru  
woman<sub>pl.</sub> boy<sub>sg.</sub> see  
'The women see the boy.'
28. panon ferua  
mountain<sub>pl.</sub> see  
'The mountains see.'

29. lomu panon ferua  
dog<sub>sg.</sub> mountain<sub>pl.</sub> see  
'The dog sees the mountains.'

Observe that the only sentence that has /feru/ instead of /ferua/ is 27., where the verb is following a noun that's in singular form.

So, it can be said that:

- (i) The agreement systems of both dialects are similar in the sense that **both of them involves an alteration of the verb.**
- (ii) The agreement systems of both dialects are different in the sense that **they have different conditions for when it is triggered.** (Dialect I's system focuses on the object only as to Dialect II's system which focuses on any noun that's before the verb.)

## 6.2 Part (b)

Observe that Dialect I only looks for the object of the sentence, so in 30. and 31., the agreement system defaults to "no change" as there is no object to be considered. So a prediction for what would happen in Dialect II is that, because there is no noun to be considered, there will be no change to the verb. Therefore, a good prediction of what Dialect II's equivalent of 31. is would be /selu/.