



AILO

All Ireland Linguistics Olympiad
The Problem Solvers' Challenge

ROUND TWO

24 March 2015

2 Hours

TEAM COMPETITION PROBLEM BOOK

Write your team's answers in the answer book provided

Questions and credits

A. Zoink!	Dragomir Radev, Christiane Fellbaum, Jonathan May	20 pts
B. Malagasy crossnumber	Tom McCoy	25 pts
C. Maxakali word building	Alex Wade, Pat Littell	25 pts
D. Do this do that	David Mortensen	30 pts

A. Zoink!

[20 pts]

As everyone who needs to buy widgets online knows, the crowd-sourced website Zoink! is the place to go to get real evaluations from real users of real widgets. You might have the most optaxic widget out there, but unless it's getting reviewed on Zoink! nobody's going to hear about it.

To ensure quality, the administrators of Zoink! must continuously delete reviews written by bots, small software programs that pretend to be human reviewers. The admins can't read every review personally so they first need to pre-filter obvious rubbish. Thankfully, one common mistake bots make is in using multiple adjectives that describe different degrees of a quality in an improper way. (You can think of the adjectives on a scale of intensity, with different scales for different qualities from low intensity to high intensity.) There are correct and incorrect ways of using such 'scalar' adjectives when describing widgets. For example, the phrase:

good but not great (CORRECT)

is perfectly acceptable and should be marked as such. But this phrase:

furios but not angry (WRONG)

makes no sense since *furios* is stronger than *angry* and therefore strictly subsumes *angry* – you can be angry, but not so much as to be furios, but you cannot be furios without being angry. Any review containing this phrase should be thrown away immediately since it definitely came from a bot rather than a human.

There are also some unclear cases. This phrase:

furios but not good (POSSIBLE)

seems odd since it compares two adjectives from different scales (anger and goodness). Such a review should raise a red flag but be inspected more closely before being thrown out.

Now, the sprocket marketplace is incredibly hip and so everyone writes using the latest slang. In order to write filtering software, the Zoink! admins (who are not so hip) first looked at a bunch of snippets from reviews written by real people. Here they are:

- | | |
|---------------------------------------|---------------------------------------|
| 1. cromulent but not melaxious | 10. not optaxic, just fligranish |
| 2. not only efrimious but quaromic | 11. not only cromulent but shtingly |
| 3. not only hyxilious but fligranish | 12. not nistrotic, but just efrimious |
| 4. not only daxic but fligranish | 13. not nistrotic, just tamacious |
| 5. not laxaraptic, but just hyxilious | 14. wilky but not daxic |
| 6. not just melaxious but efrimious | 15. not daxic, just jaronic |
| 7. not only quaromic, but nistrotic | 16. jaronic but not hyxilious |
| 8. shtingly, though not efrimious | 17. laxaraptic but not optaxic |
| 9. not tamacious, just efrimious | |

Based on these snippets, the admins were able to understand how the different properties are connected so they were ready to decide whether further snippets were

- correct, i.e. they might easily have been written by humans
- wrong, i.e. they must have been written by bots
- possible, i.e. they might have been written by humans or by bots because they combine points on different scales.

On the next page is a selection of the further snippets:

- (a) not only hyxilious but quarmic
- (b) jaronic but not laxaraptic
- (c) cromulent but not nistrotic
- (d) not only tamacious, but melaxious
- (e) not only shtingly but quarmic
- (f) not fligranish, just wilky
- (g) optaxic but not hyxilious
- (h) cromulent but not jaronic
- (i) not just optaxic but nistrotic

A1. Classify each of these snippets (a)-(i) as ‘correct’, ‘wrong’ or ‘possible’ by ticking the appropriate box in the answer book. (9 pts)

A2. Explain your answer. Include diagrams if that is helpful. (8 pts)

A3. Find a series of ordinary English adjectives that define more than three degrees of intensity on a single scale. (3 pts)

B. Malagasy crossnumber

[25 pts]

Below is an example of a crossnumber puzzle. This type of puzzle is much like a crossword, except that each square in the grid is meant to hold a single digit rather than a single letter. Also note that the clues are not given in the order that the answers appear in the grid. (Note: solving this puzzle is not part of this problem ... read on!)

Clues

ACROSS

Clue number Answer

- Eight Sixty-seven thousand eight hundred and ninety-three
- Eleven Forty-one
- Five Thirty-eight thousand nine hundred and one
- One Seventy-four
- Seven Two hundred and forty-five
- Ten Fifty-five
- Three Twenty-six

DOWN

Clue number Answer

- Eight Sixty-five
- Four Sixty-one
- Nine Thirty-one
- One Seventy-three
- Six Nine hundred and forty-eight
- Three Twenty thousand five hundred and ninety-four
- Two Forty-eight thousand two hundred and seventy-five

1	2		3	4
5		6		
	7			
8				9
10			11	

Here is another crossnumber puzzle; this time, all of the numbers are written in

Malagasy, an Austronesian language and one of the official languages of Madagascar. Your task is to complete this puzzle and answer the questions that follow it. Remember, the clues are **not** given in the same order as the answers in the grid. Also, note that no answer has zero as its first digit.

ACROSS

Clue number Answer

- Dimy Efatra amby enimpolo sy telonjato sy sivy alina
- Fito Dimy ambin'ny folo sy roanjato sy arivo sy fito alina
- Folo Iraika amby fitopolo
- Iray Fito amby fitopolo
- Sivy Folo
- Telo Fito ambin'ny folo
- Valo Valo amby enimpolo sy sivinjato sy dimy arivo sy alina

1	2		3	4
5		6		
7				
8				
9			10	

DOWN

Clue number Answer

- Efatra Iraika amby valopolo sy dimanjato sy efatra arivo sy fito alina
- Enina Sivy amby roapolo sy telonjato
- Iray Iraika ambin'ny folo sy fitonjato sy sivy arivo sy fito alina
- Roa Dimampolo sy zato sy fito alina
- Telo Fito amby enimpolo sy zato sy enina arivo sy alina

B1. Complete the Malagasy crossnumber puzzle in your answer book (10 pts)

B2. Write the following numbers in Malagasy (15 pts)

- (a) 7
- (b) 15,968
- (c) 99,573
- (d) 80,638
- (e) 817

C. Maxakalí word building

[25 pts]

Maxakalí is an Amazonian language spoken in the eastern Brazilian region of Minas Gerais by about as few as 1200 indigenous inhabitants of small villages. In this problem you will have to match the Maxakalí words and phrases to their meanings in English. Both lists are presented in alphabetical order.

Pronunciation notes: The symbol ~ above a vowel means that it is pronounced nasally. The letter *x* represents a sound like English 'sh' and the ' ' represents a glottal stop, the sound represented by the hyphen in 'uh-oh'.

Maxakalí

1	ka'ögāhā	10	mīptut mōg pata
2	ka'ok	11	mōg
3	kuxa	12	mōgāhā
4	kuxa ka'ok	13	pa
5	mīkax	14	pa ka'ok
6	mīkaxxax	15	pata
7	mīptut	16	pataxax
8	mīptut mōg	17	paxax
9	mīptut mōg kuxa	18	xax

English

A	cover	J	knife
B	eye	K	knife sheath
C	eyelid	L	lead
D	foot	M	motor
E	go	N	motor vehicle
F	hard	O	shoe
G	harden	P	stubborn
H	heart	Q	tire
I	house	R	wide awake

C1. Determine the correct correspondences. (9 pts)

C2. Describe how the Maxakalí language makes words and list any other parts of words which don't stand alone. If there are any words which may be ambiguous, please explain why and put forward a more likely guess. (16 pts)

D. Do this do that

[30 pts]

Hmong is a language of Southern China and Southeast Asia, especially the countries of Vietnam, Laos, and Thailand. One dialect of Hmong that is spoken in all of these countries is called Hmong Daw (or White Hmong). The sentences and phrases that you see below are from Hmong Daw. They are written in a writing system called RPA (Romanized Popular Alphabet). In this writing system, the initial consonant of a syllable is written first, followed by the vowel. If this vowel is doubled in writing, it is pronounced as nasalized or with a following *ng* sound. Last of all, a consonant symbol is used to represent the tone of the syllable (whether it is produced with high, mid, low, rising, or falling pitch or some combination). Hmong Daw has seven tones, one of which is indicated by the absence of any symbol. In this system, Hmong is written as *Hmoob*.

In the following section, you are given a set of Hmong Daw sentences and phrases. English translations are presented in no particular order. You should be aware that the order of words may differ significantly between the Hmong phrases/sentences and their translations into English. Also note that the same word in English may translate to more than one word in Hmong, and vice versa.

Abbreviations: sg = singular; pl = plural

- | | |
|----------------------------------|----------------------------|
| 1. Neeg them nyiaj rau koj. | 17. Hais lus Hmoob. |
| 2. Nej sib pom lawm. | 18. sib ntsib sib pom |
| 3. phem dab phem tuag | 19. tsis khib tsis chim |
| 4. Kuv lub tsev nqeeb phem heev. | 20. pe dab pe mlom |
| 5. ua ib pawg | 21. ib pab liab |
| 6. Wb sib ntsib. | 22. Koj muaj kub. |
| 7. Khib kuv heev. | 23. ntau pab ntau pawg |
| 8. Dab tsis ntshai. | 24. Nej muaj tej tsev loj. |
| 9. Nwg cog ib tsob tauj. | 25. Wb phem heev. |
| 10. Nej tsis tau pom kuv. | 26. Neeg ntshai dab. |
| 11. Ntuj no lawm. | 27. Nwg chim heev. |
| 12. Neeg Nplog pe mlom. | 28. ntsis tauj ntsis nqeeb |
| 13. tej plaub tej ntug | 29. Cuam zoo li neeg. |
| 14. Kuv tsis tau ntsib nwg. | 30. thov ntuj thov dab |
| 15. tsev hais plaub | 31. ib tsob ntoo siab heev |
| 16. neeg loj neeg siab | |

- | | |
|-------------------------------|------------------------------|
| (A) a very tall tree | (H) It offends me very much. |
| (B) behave as one group | (I) We both are very ugly. |
| (C) grass sprouts | (J) Speak Hmong language. |
| (D) He planted a grass plant. | (K) Heaven is cold now. |
| (E) People fear spirits. | (L) petition deities |
| (F) some legal proceedings | (M) a band of monkeys |
| (G) He is very upset. | (N) You (pl) did not see me. |

- (O) You (pl) see each other now.
- (P) ugly as spirits and death
- (Q) People pay silver to you.
- (R) Lao people worship images.
- (S) not angry or offended
- (T) My grass house is very ugly.
- (U) big and tall people
- (V) Apes are like people.
- (W) Spirits don't fear.

- (X) You (sg) have gold.
- (Y) many factions
- (Z) I did not meet him.
- (AA) revere images and spirits
- (BB) court (house of speaking legal proceedings)
- (CC) encounter one another
- (DD) You (pl) have some big houses.
- (EE) We both met each other.

D1. Match the Hmong phrases and sentences (1)-(31) with their translations (A)-(EE) (20 pts)

D2. Translate the following phrases into Hmong: (10 pts)

- (a) Lao and Hmong people
- (b) behave as primates
- (c) have precious metals

END OF PAPER