Nineteenth International Linguistics Olympiad

Castletown (Isle of Man), 25–29 July 2022

Individual Contest Solutions

Problem 1. Sb — $\boxed{\text{Ob}_{\text{dir}}}$ → Ob_{obl}:

	Ob_{dir}	Ob_{obl}	Sb
1st person sg		*s-*	
1st person pl		*š'-*	
2nd person sg		*w-*	
2nd person pl		*ŝʷ-*	
3rd person sg	*a-*	*∅-*	*n-*
3rd person pl	*a-*		*na-*

$$+\ \boldsymbol{t^w} + \left\{ \begin{bmatrix} \text{Ob}_{\text{dir}} = \text{pl} \\ \text{2nd person pl} \in \{\text{Ob}_{\text{dir}},\ \text{Ob}_{\text{obl}},\ \text{Sb}\} \end{bmatrix} : \begin{array}{l} \boldsymbol{a} \\ \\ \text{otherwise} \quad \boldsymbol{\partial} \end{array} \right\} + \boldsymbol{n}$$

$\mathsf{C}_1\mathsf{C}_2 \to \mathsf{C}_1\boldsymbol{\partial}\,\mathsf{C}_2$ (C_1 and C_2 are consonants)

(a) *aŝʷəstʷan* — *I give them to you$_{pl}$.*

(b)
1. *aš'əntʷən* — *he gives him to us*
2. *səŝʷtʷan* — *you$_{pl}$ give me to him*
3. *š'əwənatʷan* — *they give us to you$_{sg}$*

(c)
4. *they give you$_{pl}$ to me* — *ŝʷəsənatʷan*
5. *you$_{pl}$ give him to me* — *asəŝʷtʷan*
6. *you$_{sg}$ give us to him* — *š'əwtʷan*
7. *we give you$_{sg}$ to them* — *waš'tʷən*
8. *he gives them to us* — *aš'əntʷan*

Problem 2.

-
	1	many
state	**xéxx‹ex|èe›-ka**	**xèex-ka**
action	**x<u>ex</u>‹ex|èe›-li**	**x<u>ex</u>-li**

- **l → C | C __ (C ∈ {b, f, ł, n})**

- **b → m | __ C (C denotes any consonant)**

(a)
1. **achánnàaka** — G. *it leans against something*
2. **achanni** — N. *he leans them against something*
3. **ahamatli** — R. *he scatters it, he scatters them*
4. **ahámmatka** — M. *it is scattered, they are scattered*
5. **apòotka** — S. *they are next to something*
6. **apotòoli** — D. *he puts it next to something*
7. **apóttòoka** — I. *it is next to something*
8. **atanayli** — Z. *he wraps it*
9. **atánnayka** — K. *it is wrapped*
10. **atanni** — C. *he wraps them*
11. **bàalka** — L. *they lie, are lying down*
12. **balàali** — V. *he lays it down*
13. **balli** — B. *he lays them down*
14. **incháffàaka** — U. *he has one*
15. **kawałłi** — A. *he breaks it in two*
16. **łìilka** — F. *it is torn in several places, they are torn*
17. **łìipka** — H. *they are turned upside down*
18. **łilaffi** — T. *he tears it in two*
19. **łipli** — E. *he turns them upside down*
20. **łíppìika** — Q. *it is turned upside down*
21. **łobaffi** — P. *he makes a hole*
22. **łómbafka** — W. *it has a hole*
23. **łombi** — O. *he makes holes*
24. **łòomka** — J. *it has holes, they have holes*
25. **sibapli** — Y. *he peels a strip off*
26. **simbi** — X. *he peels the bark off*

(b)
27. **bállàaka** — *he/it lies, is lying down*
28. **inchafàali** — *he gets one*
29. **kawwi** — *he breaks it in several places, he breaks them*

(c)
30. *he tears it in several places* — **łilli**
31. *it is torn in two* — **łíllafka**
32. *he turns it upside down* — **łipìili**
33. *he leans it against something* — **achanàali**

(d) **łilli** — *he tears them.*

Problem 3.

- Word order:
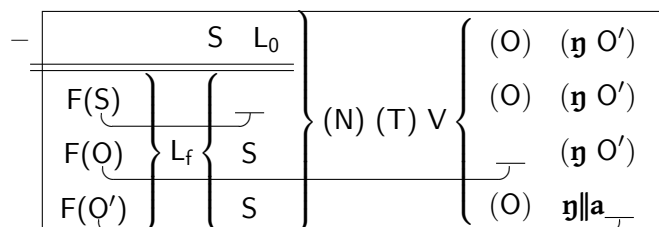
	L$_0$	L$_f$	
	ke	**kee**	declarative main clause
	∅	**xae**	interrogative sentence; subordinate clause

   * S = subject; V = verb; O = object; F = focus

   * N = ‖**u** (negation); T = **si** (future)
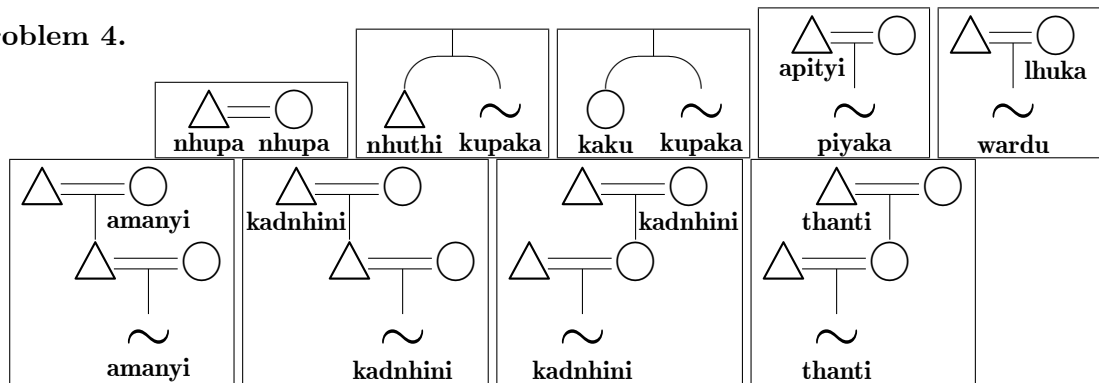
  – S **ke kacuuʔi ŋ** X   *S asks if X.*

  – | possessor | | possessed |

-

			at the beginning of a question; after the preposition **ŋ**
1st person sg	**ŋ***	**ŋǀŋ**	* **ŋ** + **ke** → **na**
2nd person sg	**a**	**gǀa**	
1st person pl	**i**	**gǀi**	
2nd person pl	**u**	**gǀu**	

(a)   17.   **na kacuuʔi ŋ gǀu xae ŋ !uu !ʔai** — *I ask if it is you$_{pl}$ whom my grandfather calls.*

      18.   **na ‖u si sĩisen ŋ gǃari** — *I will not work in Upington.*

      19.   **ǀeeki ke !aukea ŋ ŋǀŋ ǂhun** — *The woman is afraid of my dog.*

      20.   **ŋ kee si !ʔai a** — *It is I who will call you$_{sg}$.*

      21.   **cuu xae u ŋǀii** — *Whom do you$_{pl}$ see?*

      22.   **cuu xae ts'aaʔa ŋ** — *Who likes me?*

(b)   23.   *Our mother will not call your$_{sg}$ brother.*   — **i xaŋki ke ‖u si !ʔai a ‖ãu**

      24.   *It is you$_{sg}$ whom my dog is afraid of.*   — **a kee ŋ ǂhun !aukea ŋ‖a**

      25.   *Where will you$_{pl}$ sing?*   — **kiɟa xae u si ǂqheeke ŋ‖a**

      26.   *I ask if it is our grandfather whom you$_{sg}$ think*   — **na kacuuʔi ŋ gǀi !uu xae a ǂʔii ŋ‖a**
           about.

      27.   *Who will dance tomorrow?*   — **cuu xae si ǀqhõʕo ŋ !haeke**

      28.   *Do you$_{pl}$ see us?*   — **gǀu ŋǀii i**

Problem 4.

(a)
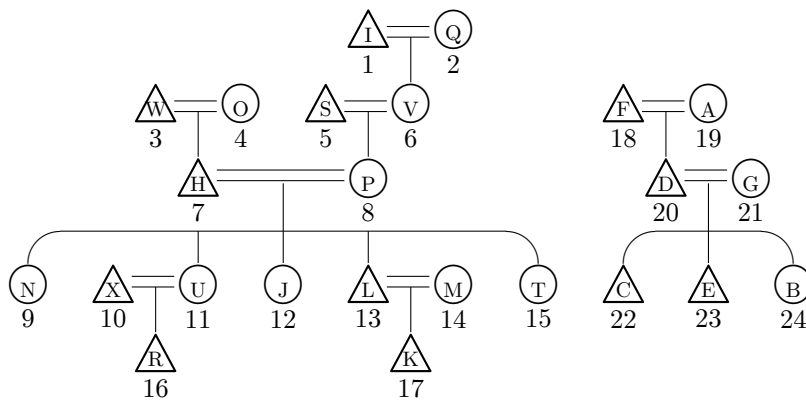
(b)

(i) **nhupa**

(ii) **piyaka**

(iii) **lhuka**

(iv) **apityi**

(v) **kupaka**

(vi) **amanyi**

(vii) **thanti**

(viii) **wardu**

(ix) **lhuka**

Problem 5.

Phan Rang Cham:

(...) D (V L)	V	(C)
	V̀	

- both syllables
  - {*b, *d, *g, *j} > {p, t, k, c}
  - NV > Nɨ
  - V: > V
- penultimate syllable
  - *ʔV > V
  - *lV > li
  - *bV(h)L > piL
  - otherwise CV(V) > Ca
  - -h > ∅
- final syllable
  - *s > th
  - {*p, *t, *k} > ʔ

Tsat:

... h		... ay		... aN
∅⁵⁵	;	a:iʔ⁴²	;	a:nʔ⁴²

Proto-Chamic	... T	...({N, w, y})
+D	ʔ⁴²	11
−D	ʔ²⁴	33

- {*b, *p, *g} (V) {*l, *r} > {ph, p, kh}i
- otherwise the penultimate syllable is lost
- final syllable
  - {*b, *d, *g}- > {ph, th, kh}-
  - *r- > z-
  - {*ow, *ey} > {ə, ai}

V is a vowel. C is a consonant. D is a voiced consonant (**b**, **d**, **j**). T is a voiceless consonant (**k**, **t**, **ʔ**). N is a nasal consonant (**m**, **n**, **ŋ**). L ∈ {**l**, **r**}.

(a) *phia¹¹.

(b)

Proto-Chamic	Phan Rang Cham	Tsat		meaning
*kulit	kaliʔ	(1)	liʔ²⁴	*skin*
*hitam	hatam	(2)	ta:nʔ⁴²	*black*
*bubah	papàh	(3)	pha⁵⁵	*mouth*
*ʔikat	(4) ikaʔ	(5)	kaʔ²⁴	*to tie*
*dəpa	(6) tapa	(7)	pa¹¹	*fathom*
*matay	(8) mɨtay	(9)	ta:iʔ⁴²	*to die*
*dalam	(10) talàm	(11)	la:nʔ⁴²	*inside*
*labuh	(12) lipùh	(13)	phu⁵⁵	*to fall down*
*bula:n	(14) pilàn	(15)	phia:n¹¹	*moon*
	pala	(16)	pia³³	*to plant*
	tapùh	(17)	phu⁵⁵	*to ransom*
	tatà	(18)	tha¹¹	*chest*