

Sixteenth International Linguistics Olympiad

Prague (Czechia), 26–30 July 2018

Team Contest Problem

Mēbêngôkre, Xavante and Kríkatí are languages of the Jê branch of the Macro-Jê family spoken in Brazil. Although the three of them are related to each other, they are not mutually understandable, and many words are completely different between them. For example:

	Mēbêngôkre	Xavante	Kríkatí
<i>medicine</i>	pidjì	wede	hemet, hremet (\leftarrow Portuguese <i>remédio</i>)

(a) Here are some words in Xavante and their Mēbêngôkre translations in a different order:

Xavante		BB.	te	leg
A. a	<i>cough</i>	CC.	té	<i>raw</i>
B. a hã	<i>you_{sg}</i>	DD.	tebe	<i>fish</i>
C. bâ	<i>achiote</i>	EE.	to	<i>eye</i>
D. bâdâ	<i>sun</i>	FF.	u	<i>water</i>
E. budu	<i>neck</i>	GG.	ubu	<i>fly (insect); to wrap</i>
F. buru	<i>field</i>	HH.	uhâdâ	<i>tapir</i>
G. du (sg), 'wapé (du), 'wasa (pl)	<i>to carry</i>	II.	upi	<i>to touch</i>
H. du ~ di	<i>belly</i>	JJ.	uzâ	<i>fire</i>
I. ẽne	<i>stone</i>	KK.	uzé	<i>stench</i>
J. hâ	<i>angry; men's house; cold; skin/bark/female breast</i>	MM.	wa hã	<i>I</i>
K. hâdâ	<i>piece of metal</i>	NN.	wabu	<i>trunk of moriche palm tree</i>
L. ma	<i>greater rhea / to(wards), for</i>	OO.	wada	<i>beak</i>
M. me (sg), wabzu (du), sâmra (pl)	<i>to throw</i>	PP.	wano	<i>to explode, to burst</i>
N. mi	<i>wood (material)</i>	QQ.	wapru	<i>blood</i>
O. mo (sg), ne (du), ai'aba'rê (pl)	<i>to go/to come</i>	RR.	wasi	<i>star</i>
P. mra	<i>hungry</i>	SS.	wa'õ	<i>coati</i>
Q. mro	<i>wife</i>	TT.	wa'ro	<i>warm/hot</i>
R. na	<i>mother</i>	UU.	wa'u	<i>liquid</i>
S. nhi	<i>meat</i>	VV.	wĩ (sg), pã (du), simro (pl)	<i>to kill</i>
T. nhorõwa	<i>home</i>	WW.	zasi	<i>nest</i>
U. nho'udu	<i>chest (of a man)</i>	XX.	zé	<i>pain/to hurt; bitter</i>
V. no	<i>brother</i>	YY.	zu	<i>powder/flour</i>
W. pa	<i>liver</i>	ZZ.	'ra	<i>son/daughter</i>
X. para	<i>foot</i>	AAA.	'rã	<i>head</i>
Y. po	<i>flat and wide</i>	BBB.	're	<i>to plant; egg</i>
Z. ré	<i>resin</i>	CCC.	'ré	<i>dry</i>
AA. ta (sg), rĩ (du), sina (pl)	<i>to harvest, to cut off</i>	DDD.	'rẽ	<i>parakeet</i>
		EEE.	'rẽ (sg), si (du), hu (pl)	<i>to eat</i>
		FFF.	'ro	<i>rotten</i>

Mēbēngôkre		22. kro	43. nhĩ
1. ba		23. krwŷdy, krwŷt- (in compounds)	44. nhôkôt
2. bî (sg), pa (pl)			45. nhûrkwâ
3. djà		24. kry	46. no
4. djôm		25. kryt	47. par
5. djy		26. kudjy	48. pî
6. ga		27. kukryt	49. po
7. jaê		28. kupê	50. prâm
8. kà		29. kupu	51. prõ
9. kak		30. kuwy	52. pur
10. kamrô		31. ma	53. py
11. kangô		32. mã	54. râm
12. kangro		33. mẽ (sg), rẽ (pl)	55. ta (sg), kà (pl)
13. kanhê		34. mut	56. tâm
14. katôk		35. myt	57. te
15. kén		36. nã	58. tẽ (sg), mõ (pl)
16. kôp		37. ngà	59. tep
17. kra		38. ngô	60. tõ
18. krã		39. ngrà	61. tu
19. kre		40. ngre	62. tu ~ tik
20. krẽ		41. ngrwa pu	63. twym
21. krẽ (sg), ku (pl)		42. ngryk	64. wakõ

Determine the correct correspondences.

A	B	C	D	E	F	G	H	I	J						K	L	M
N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	CC		
DD	EE	FF	GG		HH	II	JJ	KK	LL	MM	NN	OO	PP	QQ	RR		
SS	TT	UU	VV	WW	XX		YY	ZZ	AAA	BBB		CCC	DDD	EEE	FFF		

- (b) Given are some questions and answers in Mēbēngōkre, adapted from dialogues from a pedagogic book. Note that the questions Q–T and their answers form a single dialogue:

A.	Jām ne ga tē?	1.	Kati. Ikīnh.
B.	Djām ngô 'yr ne ga tē?	2.	Āā, ngà 'yr ne ba tē.
C.	Djām ngà 'yr ne ga tē?	3.	Āā, imā tep kīnh.
D.	Djām amā tep kīnh?	4.	Kati. Ije tep krēn kēt rā'ā.
E.	Djām amā prām?	5.	Para kam ne ba bōx.
F.	Djām angryk?	6.	Kati. Inhūrkwā 'yr ne ba tē.
G.	Djām amex?	7.	Kubē ne bōx.
H.	Mŷj ne akra krēn o nhŷ?	8.	Āā, imā prām.
I.	Djām kēn ne ja?	9.	Ngôkōn ne ja.
J.	Nhār anā?	10.	Kwŷr kadjy ne ba pur mā tē.
K.	Nhŷm ne bōx?	11.	Ikra kanē kam ne ba ikaprīre.
L.	Djām arȳm ne ga tep krē?	12.	Tep ne ikra krēn o nhŷ. Djām amā tep kīnh?
M.	Mŷj kadjy ne ga pur mā tē?	13.	Pur mā ne ba tē.
N.	Mŷj myt kam ne ga bōx?	14.	Inā ne pur mā tē.
O.	Nhŷm nhō kax ne wa?	15.	Ikra kadjy ne ba pidjy 'yr tē nhŷm arȳm kājbē mex.
P.	Mŷj ne ja?	16.	Kati. Ikanē.
Q.	Djām akaprīre?	17.	Kangro kam mē kak kam kanē.
R.	Mŷkam akaprīre?	18.	Āā, ikaprīre.
S.	Mŷj kanē?	19.	Inhō kax ne ja.
T.	Djām arȳm ne ga akra nhō pidjy 'yr tē?	20.	Kati. Pī ne wa.

1. Match the questions and the answers.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T

2. Translate as many sentences as you can into English.

In order to make your task easier, here are some words in Krīkatí (**c** = **qu** = *k*):

Krīkatí		ẽhmpa	liver
caj	kind of basket	ẽhmpej	good
caprēehre	sad	ẽhmpoht	neck
caxiire	little star	ẽhnto	eye
caxȳt jēeh	cotton	ẽh'quēhn	to like
cohcuj	monkey	jaahi	nest
cohpē	barbarian, non-indigenous person	para' cȳm	at dusk
cryht	piece of hardwood	puj	to arrive
cu'cōn	gourd	pyht	sun, day
cwyr	manioc	ry'my	already
cȳjpi	quiet, gentle	xȳ	to hurt

(c) Translate into English:

Mẽbêngôkre

1. Nhŷm ne kukŷj pa?
2. Nhŷm ne ngôkõn rẽ?
3. Aje kukŷj bĩn kêt rã'ã.
4. Djãm arŷm ne aprõ kadjât kre?
5. Wakõ ne krwŷdy kêt, krẽ ne krwŷdy.

Krîkatí

6. cohhyh
7. cupre
8. pohr
9. xy

(d) Translate into Xavante:

Krîkatí

10. ēh'tyhc *dead*
11. ēhncuu *louse*

▲ Mẽbêngôkre belongs to the Northern group of the Jê branch. It is spoken by approx. 10,000 people of the Kayapó and Xikrín ethnic groups in the states of Pará and Mato Grosso, Brazil.

Krîkatí, a variety of the Timbira macro-language, also belongs to the Northern group of the Jê branch. It is spoken by approx. 1,000 people in the state of Maranhão, Brazil.

Xavante belongs to the Central group of the Jê branch. It is spoken by approx. 15,000 people in the state of Mato Grosso, Brazil.

â, à, é, ê, ô, y and ÿ are vowels. ' is a consonant (known as the glottal stop), dj ≈ j in *judge*, j = y in *yum*, ng = ng in *hang*, nh ≈ ni in *onion*, x ≈ ch in *rich*. The mark ~ indicates the nasal pronunciation of the vowel.

- *achiote*: a plant whose seeds are used for making a red pigment (annatto).
- *greater rhea*: a bird similar to an ostrich.
- *coati*: a mammal related to the raccoon.

—André Nikulin

English text: André Nikulin.

Good luck!