

Sixteenth International Linguistics Olympiad

Prague (Czechia), 26–30 July 2018

Team Contest Problem

Mëbêngôkre, Xavante and Krikatí 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:

	Mëbêngôkre	Xavante	Krikatí
<i>medicine</i>	pidjÿ	wede	hemet, hremet (← Portuguese <i>remédio</i>)

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

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

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

A.	Jãm ne ga tễ?	1.	Kati. Ikĩnh.
B.	Djãm ngô 'yr ne ga tễ?	2.	Ãã, ngà 'yr ne ba tễ.
C.	Djãm ngà 'yr ne ga tễ?	3.	Ãã, imã tep kĩnh.
D.	Djãm amã tep kĩnh?	4.	Kati. Ije tep krẽn kêt rã'ã.
E.	Djãm amã prãm?	5.	Para kam ne ba bôx.
F.	Djãm angyk?	6.	Kati. Inhũrkwã 'yr ne ba tễ.
G.	Djãm amex?	7.	Kubẽ ne bôx.
H.	Mỳj ne akra krẽn o nhỹ?	8.	Ãã, imã prãm.
I.	Djãm kẽn ne ja?	9.	Ngôkôn ne ja.
J.	Nhãr anã?	10.	Kwỳr kadjy ne ba pur mã tễ.
K.	Nhỹm ne bôx?	11.	Ikra kanê kam ne ba ikaprĩre.
L.	Djãm arỳm ne ga tep krẽ?	12.	Tep ne ikra krẽn o nhỹ. Djãm amã tep kĩnh?
M.	Mỳj kadjy ne ga pur mã tễ?	13.	Pur mã ne ba tễ.
N.	Mỳj myt kam ne ga bôx?	14.	Inã ne pur mã tễ.
O.	Nhỹm nhõ kax ne wa?	15.	Ikra kadjy ne ba pidjỳ 'yr tễ nhỹm arỳm kàjbê mex.
P.	Mỳj ne ja?	16.	Kati. Ikanê.
Q.	Djãm akaprĩre?	17.	Kangro kam mẽ kak kam kanê.
R.	Mỳkam akaprĩre?	18.	Ãã, ikaprĩre.
S.	Mỳj kanê?	19.	Inhõ kax ne ja.
T.	Djãm arỳm ne ga akra nhõ pidjỳ 'yr tễ?	20.	Kati. Pĩ 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 Křĩkatĩ (**c = qu = k**):

Křĩkatĩ		ẽhmpa	<i>liver</i>
caj	<i>kind of basket</i>	ẽhmpej	<i>good</i>
caprẽehre	<i>sad</i>	ẽhmpoht	<i>neck</i>
caxiire	<i>little star</i>	ẽhnto	<i>eye</i>
caxỳt jẽeh	<i>cotton</i>	ẽh'quẽhn	<i>to like</i>
cohcuuj	<i>monkey</i>	jaahi	<i>nest</i>
cohpẽ	<i>barbarian, non-indigenous person</i>	para' cỳm	<i>at dusk</i>
cryht	<i>piece of hardwood</i>	puj	<i>to arrive</i>
cu'cõn	<i>gourd</i>	pyht	<i>sun, day</i>
cwyr	<i>manioc</i>	ry'my	<i>already</i>
cỳjpi	<i>quiet, gentle</i>	xỳ	<i>to hurt</i>

(c) Translate into English:

Mëbêngôkre

1. **Nhỹm ne kukôj pa?**
2. **Nhỹm ne ngôkôn rě?**
3. **Aje kukôj bĩn kêt rã'ã.**
4. **Djãm arỹm ne aprõ kadjàt kre?**
5. **Wakõ ne krwỳdy kêt, krě ne krwỳdy.**

Krĩkatĩ

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

(d) Translate into Xavante:

Krĩkatĩ

10. **ẽh'tyhç** *dead*
11. **ẽhncuu** *louse*

⚠ Mëbêngôkre 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.

Krĩkatĩ, 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 **ỳ** are vowels. **'** is a consonant (known as the glottal stop), **dj** \approx *j* in *judge*, **j** = *y* in *yum*, **ng** = *ng* in *hang*, **nh** \approx *ni* in *onion*, **x** \approx *ch* in *rich*. The mark \sim 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!