

# UC Berkeley

## UC Berkeley Previously Published Works

### Title

The Michif Dictionary and Language Change in Métchif.

### Permalink

<https://escholarship.org/uc/item/8fz0n99r>

### Author

Rhodes, Richard Alan

### Publication Date

2013

Peer reviewed

Papers of the Algonquian Conference  
Actes du Congrès des Algonquinistes

William Cowan  
Rédacteur-fondateur

Comité de rédaction

Anne-Marie Baraby  
Marie-Pierre Bousquet  
Clare Cook  
David Costa  
Stephanie Fielding  
Monica Macaulay  
Jeff Muehlbauer  
Arden Ogg  
Krystyna Sieciechowicz

ACTES DU  
QUARANTE ET UNIÈME  
CONGRÈS DES ALGONQUINISTES

Rédacteurs  
Karl S. Hele et J. Randolph Valentine

**SUNY**  
PRESS

## The Michif Dictionary and Language Change in Métchif

RICHARD A. RHODES  
University of California, Berkeley

When Métchif first came to the attention of the outside world in 1972, the late John Crawford, a linguist in the English Department at the University of North Dakota, began working on it intensively, concentrating mostly on the speech community on the Turtle Mountain Reservation. In 1974 the Summer Institute of Linguistics/North Dakota program began using Turtle Mountain Métchif as the field language for students. This continued until 1986. During that time a large repository of basic Métchif data was accumulated, most of it of excellent quality, collected not only by students but also by instructors, all experienced fieldworkers. In the same time frame, Crawford set up a dictionary project in which he identified two of the better speakers from Turtle Mountain and tasked them with creating the dictionary with only minimal outside help. The result was Laverdure and Allard (1983) *The Michif Dictionary: Turtle Mountain Chippewa Cree*, the most widely available piece of documentation on Métchif. (A full discussion of the process can be found in Crawford's introduction.) While Laverdure and Allard (1983) is very valuable, there are a number of crucial weaknesses in it that are not discernable in the absence of independent elicitation.

These weaknesses arose because Crawford wanted the dictionary project to be community based. He gave the native speakers an operational framework and worked out an orthography with them, based on his understanding of the Métchif sound system and using mostly English spelling conventions. Then he let them work out how to spell words rather than eliciting himself, assuming that native speakers' intuitions would lead them to mark all the distinctions that needed to be marked and to do so consistently. He edited the final work with only a light touch, in particular he allowed alternate spellings to remain, presumably in the belief that all the alternants were not contrastive.

Both of the authors of the dictionary differ at some points in their writing. It has been our decision, that rather than make an arbitrary decision

in favor of one or the other, to allow the differences to show in the way each has provided materials (Laverdure and Allard 1983:xii).<sup>1</sup>

Thus we find alternate spellings like those in (1) that are mostly non-problematic.

- (1) a. *feuille* F /faj/ [fa:j] 'leaf'<sup>2</sup>  
*fawy* (**rake**) vs. *fiy* (**tablet**)  
 b. *muraille* F /myraj/ [myra:j] ~ *mouraille* F /muraj/ [mura:j] 'wall'  
*meurawy* (**seal**) vs. *mouruy* (**adhere**) vs. *meury* (**paneling**)  
 c. *kékway* C /ke:kwaj/ [ke:kwaj] 'something'<sup>3</sup>  
*kaykwawy* (**debris**) vs. *kaykwuy* (**anything**) vs. *kaykwy* (**cease**) vs. *kaykway* (**all out**)

But in setting up the project to lean so heavily on the intuitions of relatively untrained native speakers, Crawford missed four key points. First, he did not understand that the kind of Métchif he was looking at had two distinct sound systems, one in the French component and one in the Cree component. Second, he did not know that explicit native intuitions would be inadequate for designing an orthography. Third, he did not understand the linguistic implications of a deep sociological division in the Belcourt community, and fourth, he did not recognize that Métchif was in the middle of a massive restructuring of its vowel system. I will take up these points, one by one.

The variety of Métchif recorded in the dictionary has two distinct allophonic systems, one in the French segment lexicon, which incidentally includes most English borrowings, and one in the Cree segment lexicon of the lexicon. We will call these co-phonologies. This state of affairs is

- 
1. The pronunciation guide from the dictionary is supplied as an appendix.
  2. As we will discuss below, there are two co-phonologies in the variety of Métchif documented in the dictionary. Where relevant the examples will be cited in an orthography based on a combination of Plains Cree Roman orthography and on modified Standard French orthography, following Rhodes (1986), as well as in the specific spellings in Laverdure and Allard (1983) that are at issue. As necessary the analytic forms will be included providing both the co-phonology labelled phonemicization and a phonetic version, with F standing for the French co-phonology and C standing for the Cree co-phonology.
  3. In the spelling key, the authors failed to recognize that *kékway* glossed 'something' is the same word as *kékway* glossed 'what.' See the appendix.

documented in Rhodes (1986), Papen (2006), and reported in Bakker and Papen (1997). This means that the Crawford orthography is, in principle, inadequate. In particular, the French co-phonology has the vowel inventory and respective phonetic ranges shown in (2a). The Cree co-phonology has the vowel inventory and respective phonetic ranges shown in (2b).

- (2) a. i [i] ~ [ɪ]      y [y] ~ [ɨ]      u [u] ~ [ʊ]  
                                 ! [ɨ]  
                                 ε [e] ~ [ɛ]      œ [ø] ~ [œ]      o [o] ~ [ɔ]      ẽ [ẽ] ~ [ẽ̃]      õ [õ] ~ [õ̃]  
                                 a [a] ~ [æ]      ɑ [ɑ:] ~ [ɑ]    ã [ã̃]  
       b. i: [i:] ~ [i]                                  o: [u:] ~ [u] ~ [o:] ~ [o]  
           i            [ɨ] ~ [i]                                  o                                  [ʊ] ~ [o]  
           e:        [e:] ~ [e] ~ [ɛ:] ~ [ɛ]        a: [ɑ:] ~ [ɑ]  
                                 a [ɑ] ~ [ʌ]

As shown in Rhodes (1986) the differences between these co-systems was largely a matter of differences in allophonic range. What was not discussed in Rhodes (1986) was that emphatically long vowels in the Cree co-phonology do not have to be pronounced long. What makes them different from short vowels is that they *can* be pronounced long and that they affect the stress system in the same way whether they are actually pronounced long or short in any given token.

More recent work by Rosen (2006) has shown that the situation was even more complicated because Métchif in the 1980s was in the beginning stages of a sound change that would ultimately merge the two phonologies. Ironically, Laverdure and Allard are orthographically sensitive to the distinction between the two co-phonologies. They regularly use the same sequences of letters to mean different things in the respective components. They spell Cree sequences of vowel + *n* with the same spelling as French nasal vowels as in the representative examples in (3).

- (3) a. *oun*: C /on/, F /õ/ (prescriptive L&A spelling: *oon*)  
           i. F *bon* 'good' L&A: *boun* (**appeal**); *maison* 'house' L&A: *maezoun* (**air**);  
               *garçon* 'boy' L&A: *garsoun* (**anxiety**),<sup>4</sup> etc.

4. All the words listed here also have "correct" spellings in *oon* attested: *boon* (**kind**), *maezoon* (**attach**), *garsoon* (**best man**). Almost all words with word-final /õ/ appear with both spellings.

- ii. C *gi-mitshon* 'I ate' L&A: *geemeetshoun* (**cafe**); *dashpêyimou* 'I rely on it/him' L&A *dashpaymou* (**faith**); *gi-nakamon* 'I sang' L&A: *geenakamou* (**glee club**), etc.  
       b. *aen*: C /e:n/, F /ẽ/  
           i. F *chien* 'dog' L&A: *shyaen* (**glossy**); *main* 'hand' L&A: *maen* (**gnarled**); *un* 'a m sg' (M /ẽ/) L&A: *aen*, etc.  
           ii. C *gi-wâpahtên* 'I saw it' L&A: *geewawpahtaen* (**glimmer**); *ka-mishkên* 'you (sg.) will find it' L&A *kawmishkaen* (**gold**); *bakâtên* 'I dislike it' L&A: *bakwawtaen* (**green tea**), etc.  
       c. *awn*: C /a:n/, F /ã/  
           i. F *les z'enfant* 'the children' L&A: *lee zawnfawn* (**guidance**); *dent* 'tooth' L&A: *dawn* (**gum**); *temps* 'time' L&A: *tawn* (**halftime**), etc.  
           ii. C *ganawâpinân* 'we excl watch' L&A *ganawawpinawn* (**gymnasium**); *gi-atâwân* 'I bought it/him' L&A: *gee-atawwawn* (**half-length**); *gashkitân* 'I can [do it]' L&A *gashkihtawn* (**heat**), etc.  
           iii. in the same sentence: *Ça prend le manger chi-atâwêyân*. 'I have to buy some grub.' L&A: *Saprawn li mawzhee chiatawayyawn*. (**grub**) (*ça prend* 'necessarily,' *manger* 'food' *chi-atâwêyân* '(that) I will buy it/him')

The second thing that Crawford missed was the inadequacy of native intuitions to the task at hand. I will concede that the fault here does not lie with Crawford. His assumption that explicit native intuitions could be relied on has long been a standard of language documentation practice and practical orthography design. However, there is now ample evidence to the contrary. In a very important but not very well-known paper, Labov (1996), summarizing twenty years of work in sociolinguistics, showed, among other things, that when sound changes are progress, especially at the point of near merger, speakers cannot hear distinctions that they consistently produce. The evidence from Métchif suggests that speakers are not able to hear the distinctions between phonetically overlapping phonemes in distinct co-phonologies, even though they produce the distinctions consistently.

For example, based both on data elicited by the present author and data in the SIL archive, it can be shown that there is only a single back round vowel in absolute word-final position in the French component, and it is /u/;<sup>5</sup> however, there are numerous examples of such words spelled two ways. A few are given in (4).

5. Papen (2003) reports words like *loup* have [o] in Belcourt, N. Dakota. In the data I have covering ten years of elicitation involving more than a dozen language consultants from Belcourt, there is not a single instance of sixteenth-century French /u/ as anything other than Métchif /u/.

- (4) a. i. M /u/ < F /u/ *ou*: *trou* 'hole,' *trou* vs. *trou* (both under **deepen**)  
 ii. M /u/ < F /o/ *au*: *au* 'at/to the,' *ou* (**all in**) vs. *oo* (**abed**)  
 b. i. M /u/ < F /o/ (*e*)*au*: *de l'eau* 'water,' *dilou* (**purplish**) vs. *diloo* (**bay**)  
 ii. M /u/ < F /o/ *au*: *au* 'at the,' *ou* (**all in**) vs. *oo* (**abed**)  
 iii. M /u/ < F /o/ *o*: *dos* 'back,' *doo* vs. *dou* (both under **humpback**)  
 iv. M /u/ < E /o/ *show* 'show,' *shou* (**comedy**) vs. *shoo* (**delay**)

Were this only a matter of the French co-phonology, this would be a mere inconvenience. The French co-phonology has a three-way distinction in back round vowels F /u/, F /o/, and F /ɔ/, spelled *oo/ou*, *o*, and *oon/oun*, respectively. But the Cree co-phonology has a distinction between C /o:/ and C /o/ represented by the difference between *oo* and *ou*, respectively. Examples of *sôhk-* 'hard, strong' and *nakamo-* 'sing,' morphemes that are common enough to have variants in meaningful numbers are given in (5).

- (5) a. C /o:/  
 Shôhkimâkwân le camphre. 'Camphor smells strong.' L&A: Shoohkimawkwun li kawnfr. (camphor)  
 Shôhki-pimostêw ayêshkostêw. 'He plods wearily.' L&A: Shoohkipimoustayw ayeshkoustayw. (**plod**)  
 b. C /o/  
 Kahkiyaw shi-kî-nakaochik. 'Everyone should sing.' L&A: Kahkiyuw shikee nakamouchik. (**sing**)  
 Gî-nakamon avec une bande de chanteur. 'I used to sing with the glee club.'  
 L&A: Geenakamoun avec en bawnd di shawnteur. (**glee club**)

C /o:/ is represented by *oo* more than 75 percent of the time. C /o/ is represented by *ou* almost 90 percent of the time. But there are particular morphemes that are less reliably recorded. For example, *pôyo-* 'stop' is *pooyou-* 14 times and *pouyou-* 11 times. This means that Cree words cited with *oo* or *ou* not independently attested are unreliable.

- (6) *pôyo-* 'stop'  
 a. *pooyou-* (14 times)  
 b. *pouyou-* (11 times)

There is a further problem with the spellings *oo* and *ou*. The allophones of F /u/ include allophones C /o:/ and C /o/, hence French words are spelled subphonemically, but not completely consistently. For example, non-low vowels are tensed, and in word-final syllables, lengthened, before

/j/, /t/, /v/, /z/, and /ʒ/, but otherwise lax in pre-final and closed-final syllables (see Rhodes [2009]). The examples in (7) show that one cannot infer anything about the allophonics from the spelling.

- (7) a. *rouge* 'red' F /ruʒ/ [ru-ʒ], L&A: *roozh* (112 times), *rouzh* (11 times)  
 b. i. *n'ouc* 'uncle' F /nuk/ [nuk], L&A: *nook* (10 times), *nouk* (3 times)  
 ii. *boute* 'end' F /but/ [bʊt], L&A: *bout* (66 times), never *boot*

The third problem in the dictionary revolves around sociolinguistic matters. As reported in Rhodes (1986) and discussed in detail in Rhodes (2009), there is a lectal continuum in Métchif, particularly in the French segment. Some percentage of the French forms are acrolectal and some basilectal. A few forms have alternants. In Rhodes (2009) I refer to the acrolectal forms as Sunday French, because French was the language of local Catholic churches which, for years imported French priests and nuns into areas where the Métis lived. This meant that Métis French and Métchif speakers were widely exposed to more standard varieties of French. The difference is obvious in distinct historical developments, detailed in Rhodes (2009). Some examples are given in (8).

- (8) a. acrolectal only: *musique* 'music,' *possible* 'possible'  
 b. basilectal only: *fisi* 'gun' (SF *fusil*), *saleil* 'sun' (SF *soleil*), *couardon* 'shoe lace' (SF *cordon*)  
 c. alternating: *sonnant* ~ *sannant* 'sleighbells,' *ouayage* ~ *voyage* 'trip,' *mouton* ~ *mouaton* 'sheep,' *ratchette* ~ *soulier de nige* 'snowshoe'

There are probably a lot of acrolectal/basilectal distinctions in usage that are not noted. It is clear, however, that variants of glosses and examples that contain more French are acrolectal.

- (9) a. 'Some people get seasick on water.' (under **seasick**)  
 i. Âtist les mo'de le mal de mer ayâwak déssus de l'eau kâ-ayâcik.  
 (L&A: Awtist lee mood li mal di mayr ayawwuk diseu diloo kaw-ayawchik.)  
 ii. Âtiht les mo'de mâyimahcihowak déssus de l'eau kâ-'yâcik.  
 (L&A: Awtiht li mood mawymahchihouwuk diseu loo kawyawtchik.)  
 b. 'I'm good and tired from work.' (under **good and tired**)  
 i. Mitoni dayêshkoshin l'ouvrage osci.  
 (L&A: Mitouni dayeshkoushin l'ouvraezh ouschi.)  
 ii. Mitoni dayêshkwatoshkân.  
 (L&A: Mitouni dayeshkwatoushkawn.)

One of the secrets of the dictionary is that Ms. Allard assimilated *h* before *t* and Ms. Laverdure did not, thus in (9a) you know that the first example, which is acrolectal, is Ms. Allard's and the second, which is basilectal, is Ms. Laverdure's. We are fortunate to have represented in the dictionary examples from representative members of the two factions of Métis society. One faction identifies as more French, more associated with the church, and more agricultural. The other identifies as more Indian, more open to traditional religion, and more dependent on hunting. This social divide plays a major role in the earlier writings of Louise Erdrich, who comes from this area. This linguistic significance of this sociological divide was lost on Crawford, in spite of the fact that he reported (personal communication) that Ms. Allard and Ms. Laverdure fought constantly about which is the right form to put in the dictionary, a matter ultimately resolved by putting both forms in.

The final missing piece in the dictionary is one for which we cannot blame Crawford. With thirty years of hindsight we now know that Métchif in the 1980s was on the cusp of a number of significant language changes. As a result of Rosen's work (2006) we know that the co-phonologies of mid-twentieth-century Métchif have collapsed into a single phonology in twenty-first-century Métchif. Some of the harbingers of that change were staring us in the face at the time. For example, as suggested by the phonetic ranges in (2), Cree long vowels were not always long in particular tokens. Given that there were quality differences in most environments this was not a problem. But as Rosen shows the length differences are gone now, so *C/o:/* has merged with *F/u/*. (The story is slightly more complex, but the details aren't important here.) The result is that twenty-first-century Métchif has only three back round vowels, *M /u/*, *M /o/*, and *M /õ/*, not five.

As Labov points out, in cases of near merger, native intuitions fail, hence the transcription problems in the dictionary. This also explains why forms that linguists, even student linguists, readily heard as different were given confused spellings by the native authors of the dictionary. Interestingly enough the native speakers' problems were less severe in those contexts where the differences are subtle enough to give the less trained ear of the linguist trouble, as with low vowels in closed syllables and vowels before glides and in unstressed syllables, as in (10).

- (10) Cree *akâwât* 'barely': *akawwawt* (30 times), *akawwat* (3 times)  
 Cree *nândaw* 'somewhat': *nawnduw* (120 times), *nawndow* (7 times)

Cree *kêkway* 'something' *kaykwuy* (316 times), *kaykwy* (92 times), *kaykway* (49 times), *kaykwawy* (18 times)  
 French *savon* 'soap': *savoun* (2 times) or *savoon* (18 times) not *sawvoun* (1 time)

As a final point connected with the erosion of vowel length, I want to address the question of the inclusive/exclusive distinction in conjunct. The literature contains conflicting reports as to whether there is (or was) an inclusive/exclusive distinction in conjunct. In Rhodes (1977), I said the distinction had been lost. Bakker and Papen (1997:316) claim that most speakers in Belcourt had the distinction, adding "it is true that some speakers do not use the inclusive/exclusive forms in all the cases where they would be required in Cree." The lack of a distinction was noted early and often in context of the North Dakota field methods class. None of the half dozen regular speakers who came to spend the summer in Grand Forks and included some of the best speakers in Belcourt had a consistent distinction. Turning to the dictionary, one easily finds cases in which the "wrong" form is used, as in (11).

- (11) a. *Achiyaw gî-nakinân ê-pêhtâyâhk*. 'There was a lapse because we [excl] had to wait.' L&A: *Achiyuw geenakeenawn epayhtawyuhk*. (**lapse**) (-yahk is etymologically inclusive, lit. "We *excl* paused because we *indeterminate* waited.")  
 b. *Ça prend les z'arvet rond shi-âpachistâyâhk le canot l'aut' bord shi-ishpishoyâhk*. 'We have to paddle the canoe to the other side.' *Saprawn lee zarvay roon shi-awpachistawyawhk li kanoo lout bor shiishpishouyahk*. (**paddle**) (-yâhk is etymologically exclusive, lit. "We *indeterminate* 1 used paddles so we *indeterminate* 2 could travel to the other side.")

A close look at the dictionary reveals that there are 65 instances of first-plural conjunct. Most are in contexts that are not probative, although many are suggestive of one or the other reading and most of the suggestive forms have the right etymological vowel length. However, with clear independent evidence that both of the dictionary authors were inconsistent in their use, both in the dictionary and in elicitation, I suspect we are looking a side effect of the incipient loss of vowel length. Suggestive of that is the example in (12). The etymological inclusive has a final *w*; the etymological exclusive does not. In (12) we see that the Métchif first-plural conjunct marked has properties of both the inclusive and exclusive.

- (12) *Gî-mishi-miywêyishênân ê-wâpamâyâhkok*. 'We were overjoyed to see them.'  
 L&A: *Geemishimeustaenawn aywawpamawyawhkok*. (**overjoyed**)

This suggests that the two allomorphs were in the process of merging, and as Labov argues, the native intuitions that we depended on for the claim that the distinction was lost were unreliable. It appears that the truth lay halfway between to two claims. Native speakers mostly used the etymologically correct form, but not always, because there was a merger in progress.

## APPENDIX

### Guide to Pronunciation

Since English is the standard language of education, of government, of the reservation, and the first language most residents, the spelling system is based on English norms wherever possible. In some cases French spellings are followed. The following table will provide a general guide.

Letter	Sound	Example
a	'about'	<i>geepakamahwow</i> 'I hit him'
	'cat'	<i>la fam</i> 'the woman'
aw	'dawn'	<i>tawnshi</i> 'how'
ay	'pay'	<i>paymeetshou</i> 'come eat'
ae	'man'	<i>maen</i> 'hand,' <i>li laek</i> 'lake'
e	'get'	<i>bet</i> 'stupid'
ee	'see'	<i>peetikway</i> 'enter'
eu	'deux' (French)	<i>seuk</i> 'sugar'
i	'bit'	<i>niya</i> 'I'
o	'no'	<i>for</i> 'strong'
ou	'tout' (French)	<i>mawshkout</i> 'maybe'
oo	'food'	<i>la broo</i> 'froth'
oe, ueu	'soeur' (French)	<i>boer, bueur</i> 'butter'
	'beurre' (French)	
ow	'cow'	<i>miyoukiishikow</i> 'It's nice weather'
u	'but'	<i>zhwul</i> 'horse'
uy	'guy'	<i>kawkwuy</i> 'something'
y, awy	'why'	<i>kawkwy</i> 'what' ( <i>kaykway</i> )

Consonantal sounds follow English quite closely and are generally easy to read. A few things merit attention:

- 1) "g" always represents a 'hard' plosive sound, as in English 'good.'
- 2) 'zh' represents the final sound of English 'garage' or 'loge,' and in *roozh* 'rouge.'
- 3) "h" following a vowel is always pronounced. This is difficult for speakers of English, since true "h" sounds do not occur in this position in English.

French nasalized vowels are represented in the dictionary by the symbol "n" following the vowel, thus '*a maen* 'hand,' *aen garson* 'a boy.' True "n's" in French words are marked "nn" as in *farinn* 'flour.'

In developing the writing system, an effort has been made to use the efforts of local people who have attempted to write as a basis from which to move toward a consistent, adequate, and minimally complicated writing system. We have thought it proper, in the process of developing a writing tradition, to allow writers considerable freedom in applying general guidelines. Both of the authors of the dictionary have played a part in the development of the writing system and they do differ at some point in their writing. It has been our decision, that rather than make an arbitrary decision in favor of one or the other, to allow the differences to show in the way each has provided materials. This accounts for the apparent contradiction in the pronunciation guide. Ida Rose Allard tends to use the letter "a" to represent the sound of English 'cat,' whereas Patline Laverdure uses "ae" for this sound. The letters "a" and "u" are both used to represent the sound of words like *zhwul* (*zhwal*) 'horse.' There is also some variability between "ae" and "ay," especially when next to a nasal consonant ("n" and "m"). For the sound of words like those meaning 'butter,' 'flower,' 'sister,' Ms. Allard uses "ueu": *bueuer, flueuer, sueu*; [sic] Ms. Laverdure writes "oe": *boer, floer, soer*.

## REFERENCES

- Laverdure, Patline, and Ida Rose Allard. 1983. *The Michif dictionary*. Ed. by John C. Crawford. Winnipeg: Pemmican Publications.
- Bakker, Peter, and Robert A. Papen 1997. Michif: A mixed language based on French and Cree. *Contact languages. A wider perspective*. Ed. by Sarah Thomason, pp. 295-363. Amsterdam: John Benjamins Publishing.

- Labov, William. 1996. When intuitions fail. *Proceedings of CLS* 32:77–106.
- Papen, Robert A. 1984. "Quelques remarques sur un parler méconnu de l'ouest canadien: le Métis." *Revue Québécoise de linguistique: Grammaires en contact* 14.1:113–137.
- . 2003. "Michif: One phonology or two?" *Proceedings of the Workshop on Structure and Constituency in Languages of the Americas* 8:47–58.
- Rhodes, Richard A. 1977. French Cree—a case of borrowing. *Actes du Huitième Congrès des Algonquinistes*. Ed. by William Cowan, pp. 6–25. Ottawa: Carleton University.
- . 1986. Métif—a second look. *Actes du Septième Congrès des Algonquinistes*. Ed. by William Cowan, pp. 287–296. Ottawa: Carleton University.
- . 1987. Les contes Metif—Metif myths. *Papers of the Eighteenth Algonquian Conference*. Ed. by William Cowan, pp. 297–301. Ottawa: Carleton University.
- . 2009. The phonological history of Metchif. *Le français d'un continent à l'autre. Mélanges offerts à Yves Charles Morin*. F. Martineau et L. Baronian, ed. Series: Les Voies du français, volume 1, pp. 423–442. Québec: Presses de l'Université Laval.
- Rosen, Nicole 2006. Domains in Michif phonology. PhD thesis, University of Toronto.