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THE HISTORICAL PHONOLOGY OF MIAMI-ILLINOIS CONSONANTS

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1. Introduction. Miami-Illinois is the name used for convenience for the now-extinct Algonquian language spoken in early contact times in Indiana and Illinois. These tribes mainly consisted of the Miami, Wea, and Piankashaw in Indiana, and the Illinois and Kaskaskia in Illinois. In the mid-nineteenth century, the Illinois and Kaskaskia were moved out of Illinois, eventually ending up in their present location in Ottawa County, Oklahoma, where they are now known as the Peoria. Many of the Miami, Wea, and Piankashaw were similarly moved out of Indiana to Ottawa County, though many Miamis stayed behind in Indiana. To this day, they are mostly located around the north central part of that state, along the Wabash River. When exactly the Miami-Illinois language died out is difficult to ascertain; fluent speakers of Miami definitely existed in Indiana as recently as the early 1960s, and another speaker of unknown fluency died in Oklahoma early in 1989, before any linguist could speak with him. A few people in Oklahoma and apparently Indiana still remember a few words of the language, but there remains no one who can be called a real speaker.

Though the divisions among the various Miami-Illinois tribes existed by the earliest contact period, the various dialects of the language are all extremely similar. Based on my examination of materials gathered around the turn of the century in both Indiana and Oklahoma, any discernible phonological differences between Miami and Peoria seem to be sub-phonemic, though there are several lexical differences. The differences between Miami and Wea appear to be lexical only, and there are lexical differences between Indiana Miami and Oklahoma Miami. It is entirely possible that some of this similarity is due to dialect leveling from the Peoria and Miami living together in Oklahoma. Also, there has apparently been fairly extensive contact between Miamis and Weas in Oklahoma and Indiana, according to the discussions about the main consultants used by Jacob Dunn (Dunn 1937). There is no way of telling what dialect differences existed in the precontact period, though they probably

have never been substantial; modern Miami and Peoria are probably no more different from each other than Fox and Sauk.¹

There exists a very large body of data on Miami-Illinois; however, relatively little of this was recorded by anyone trained in Algonquian, and much of it is of rather poor quality phonetically. This presents a problem for the purposes of this paper: since many of the consonant clusters of Proto-Algonquian are realized in Miami-Illinois as simple preaspirates (i.e., as /hC/), in order to prove the Miami-Illinois reflexes of these clusters it is necessary to find data which indicate preaspiration. However, most transcribers of Miami-Illinois do not write preaspiration consistently, and many sources almost never indicate it. Costa (1991a) contains an extensive survey of sources for modern Miami-Illinois, though for convenience I briefly discuss here the main sources used in this paper, especially with regard to their basic phonetic reliability.

The most extensive data on the modern Miami-Illinois language were recorded by Albert Gatschet. Gatschet worked in the mid-1890s with speakers in both Oklahoma and Indiana (though mostly Oklahoma), recording Peoria, Miami, and Wea. He was the only real linguist who worked on the language to any real extent, recording several invaluable texts and thousands of words. His file-card dictionaries (Gatschet 1895b; 1895c) are especially valuable since they contain a huge amount of carefully transcribed data, including his recording of preaspiration, which Gatschet heard more often than not. His data have proved invaluable.

The most recent source of Miami-Illinois data is the word list in Hockett (1985), which was recorded in 1938 in Oklahoma from two speakers, one Peoria and the other Miami. Though Hockett's list is rather small, the data are generally high quality, especially in terms of recording preaspiration, which he too appears almost always to have heard. I therefore draw quite heavily on his data in this paper.

The last person before Hockett to work on Miami-Illinois was Truman Michelson, who during the summer of 1916 did a moderate amount of fieldwork on Peoria with two speakers. Since Michelson was the most experienced Algonquianist ever to work on Miami-Illinois, his notes are especially valuable and more accurate than anyone else's. In Costa (1991a), however, I demonstrate that in certain respects, his materials suffer from an assumption that Peoria was more similar to Fox (which Michelson had worked on extensively) than it actually is. In his transcrip-

¹ By "modern Miami and Peoria" I mean all records from Volney's transcriptions on, since by Volney's time (1795) most of the sound changes that differentiate the language of the French missionaries from that of twentieth-century records were complete, for instance, the shift of sibilants to /h/ before stops and the shift of /r/ to /l/ word-internally and to /n/ word-initially.

tion of consonants, this led Michelson almost always to write sibilants as preaspirated. In fact, in Miami-Illinois, plain and preaspirated sibilants do contrast, though to prove this it has been necessary to depend on the notes of other transcribers (such as Hockett and Gatschet) who actually heard the distinction.

Jacob Dunn was not a linguist but a lawyer and statesman from Indianapolis who wanted to see the native language of Indiana documented for posterity. Beginning around 1905 and continuing off and on until his death in 1924, he worked extensively on Miami, focusing mainly on gathering lexical materials but also reeliciting texts obtained by Albert Gatschet and collecting several new ones (see Dunn 1919:44, for example). He gathered a huge amount of valuable data, but his transcription leaves much to be desired; specifically, vowel length is not indicated, and preaspiration is only rarely marked. Thus, his materials are of limited use in confirming Miami-Illinois reflexes of Proto-Algonquian consonant clusters, though they are perfectly adequate for demonstrating simple consonants. As explained in Costa (1991*a*), Voegelin's (1938–40) redaction of Dunn's materials, which is the only substantial published source on the language, is very incomplete and poorly done. Because of this, forms from Dunn cited here are all taken directly from his original file cards and texts (Dunn, n.d. *a*; n.d. *b*).

The earliest source of data on Miami proper is the word list collected by Constantin Volney (Volney 1968). This was recorded in 1795 at Vincennes, Indiana, from the Miami chief Little Turtle through his interpreter William Wells. Volney's transcription is of a surprisingly high quality, considering the period in which it was written; he heard preaspiration almost as often as Gatschet, though his transcription of vowel qualities is often confusing. His word list, though short, is quite useful, though it has been almost completely overlooked.²

The most important early sources on Miami-Illinois are the manuscript dictionaries of the French missionaries Gravier and Le Boulenger. The larger, and apparently earlier, document is the Illinois–French dictionary credited to Reverend James Gravier (1700). This work consists of 586 pages, with an average of 38 lines per page, giving a total of approximately 22,000 Illinois words (Pilling 1891:211). The other major source is the French–Illinois dictionary credited to Reverend Joseph Le Boulenger (1725). This work is considerably smaller, with translations for only about 3,000 French words (Pilling 1891:302). Both of these works are invaluable, since they preserve an enormous amount of vocabulary not attested

² The English translation of Volney's work also contains an English-based transcription of the data, but it is basically worthless.

elsewhere. For the purposes of this paper, however, they have been useful mostly for corroborating forms found elsewhere and demonstrating simple consonant reflexes, rather than for proving preaspiration, which is in fact only rarely marked in either source.

2. Disclaimer. In this paper, I intend to show how the Proto-Algonquian consonants are realized in Miami-Illinois and to give a picture of their synchronic phonology. In citing most of the Miami-Illinois examples, I first give an inferred phonemic form in italics, followed by the actual attested transcriptions of the word in angled brackets. But it must be kept in mind that these phonemicizations are reconstructions and, in a sense, abstractions. The main uncertainty with the Miami-Illinois transcriptions here is that of vowel length; there is a great deal of internal evidence to support the existence of phonemic vowel length in Miami-Illinois (see Rhodes 1989*a*, for instance), enough to indicate that long vowels generally occur in Miami-Illinois where one would expect them based on comparative evidence. However, vowel length is marked even less consistently than preaspiration by all recorders of the language; thus the proposed vowel lengths for many words in this paper are supported solely by comparative evidence. So one should consider the vowel transcriptions here as provisional, pending a full explanation of Miami-Illinois vowel length and stress in Costa (forthcoming *a*). Let me explain here what is considered to be proof of preaspiration for a given word. In Gatschet's records, a preceding *x*, *h*, or reversed apostrophe (') indicates preaspiration. In Hockett (1985), gemination of a consonant or a consonant preceded by [h], [x], or a voiceless vowel (with no preceding glottal stop) is evidence of a preaspirate. Michelson consistently uses the reversed apostrophe to indicate aspiration of any kind. Occasionally Dunn uses a preceding *q* or *k* to indicate consonant preaspiration. In Volney's record, a preceding *h*, *x*, or *H* is considered evidence of a preaspirate.

3. Proto-Algonquian single-consonant reflexes. The consonants of Miami-Illinois are by and large those expected of a "Central Algonquian" language. They are as follows: voiceless stops and affricate *p*, *t*, *k*, *č*; voiceless fricatives *s*, *š*, *h*; nasals and liquid *m*, *n*, *l*; and the semivowels *w*, *y*.

3.1. The original Proto-Algonquian consonants **p*, **t*, **k*, **č*, **s*, **š*, **h*, **m*, **n*, **w*, and **y* remain largely unchanged:³ (1) *papikwa* 'flea'

³ In this paper, the original citation forms are coded to their origins as follows: Mi/D = Miami/Dunn; P/D = Peoria/Dunn; Mi/H = Miami/Hockett; P/H = Peoria/Hockett; Mi/G = Miami/Gatschet; P/G = Peoria/Gatschet; W/G = Wea/Gatschet; Mich. = Michelson

(Mi/D ⟨papikwa⟩, Gr ⟨papic8a⟩;⁴ < PA **papikwa* [Goddard 1982:43]). (2) *teekwaakiki* 'it is autumn' (Mich. ⟨tekwākikⁱ⟩, P/H ⟨tekwakikj⟩; cf. PA stem **takwa-k-*).⁵ (3) (*a*)*kaawia* 'thorn, briar' (Mi/D ⟨kāvīa⟩, LB ⟨aca8ia⟩; < PA **ka-wiya* 'porcupine quill' [Hockett 1957:255]). (4) *čiipaya* 'ghost, spirit' (Mich. ⟨tcī'paiya'⟩, Gr ⟨tchipaia⟩; < PA **či-paya* [Michelson 1935:136]). (5) *sakimia* 'mosquito' (G & Mi/D ⟨sakimia⟩; < PA **sakime-wa* [Goddard 1982:20]). (6) *šikaakwa* 'skunk' (Mich. ⟨cikā'kwa'⟩, Mi/H ⟨šikákwaḡ⟩; < PA **šeka-kwa* [Siebert 1967b:21]). (7) *ateehi* '(his) heart' (Gr ⟨atehi⟩, Mi/D ⟨atāhi⟩; < PA **wete-hi* [Goddard 1971:145]). (8) *mahweewa* 'wolf' (P/H ⟨mahwe'εwḡ⟩,⁶ Mich. ⟨mā'wā'wa'⟩; < PA **mahwe-wa*).⁷ (9) *niiwi* 'four' (Mi/H ⟨nī'wiḡ⟩, Mich. ⟨nī'wī⟩; PA **nye-wi*). (10) *waawi* 'egg' (Mi/D ⟨wāvī⟩, P/G ⟨wāwi⟩; cf. PA **wa-wal(w)i* [Goddard 1965:219]). (11) *mayaawi* 'immediately, directly' (G ⟨mayā'wi⟩, Mi/D ⟨maiawī⟩, Gr ⟨maia8i⟩; < PA **maya-wi*).⁸ (12) *ayaapia* 'buck' (Gr ⟨aiaπia⟩, Mich. ⟨ai-yāpya⟩; < PA **aya-pe-wa* [Goddard 1974:108]).

3.1.1. In Gatschet's notes (and occasionally Volney's) there is attested an alternate pronunciation of /s/ as [θ]. This pronunciation is found regardless of the historical origin of the /s/, and whether or not it is preaspirated. Some typical examples are (13) *i(i)šinaakosiani* 'you have something the matter with you, are thus' (G ⟨ishinakuthiáni⟩; cf. PA **ešina-kwesiwa*).⁹ (14) *wiilhsa* 'his hair (pl.)' (G ⟨wī'ltha⟩; < PA **wi-θe'θali*

son's notes on Peoria; V = Volney; LB = Le Boulenger; and Gr = Gravier. G by itself indicates the form was found in Gatschet's notes on Miami-Illinois with no indication of dialect. The Dunn forms are obtained primarily from Dunn's original file cards at the Indiana Historical Society Library in Indianapolis (Dunn, n.d. *a*), though some are also obtained from his texts (Dunn, n.d. *b*). Gatschet forms are from Gatschet (1895*a*; 1895*b*; 1895*c*). The other relevant sources are Michelson (1916; 1917; 1939), Hockett (1985), Volney (1968), Le Boulenger (1725), and Gravier (1700). Additionally, a few Miami forms from Morgan (1871) are cited.

I would like to thank Richard Rhodes and two anonymous reviewers for comments on early drafts of this paper, and the Survey of California and Other Indian Languages for financing much of my research.

⁴ The 8 in Le Boulenger's and Gravier's transcriptions indicates /w/ before vowels and /o(o)/ before consonants. Word-finally it indicates /o(o)/ in Gravier but either /o(o)/ or /wa(a)/ in Le Boulenger. Occasionally it represents /wa(a)/ before consonants in Le Boulenger.

⁵ Cf. Ojibwa *dagwaagig*, Fox *takwaakiwi*, and W. Abenaki *dag5'gowiwi* 'in autumn'.

⁶ The glottal stop in this form is from an optional subphonemic rule in the speech of a few Peoria speakers which inserts glottal stops, usually in penultimate syllables. This feature is explained in more detail in Costa (1991*a*).

⁷ Cf. Fox *mahwe-wa* and Potawatomi *m'we*.

⁸ Cf. Fox *mayaawi-* and W. Abenaki *mā5wī* 'exact, correct'.

⁹ Cf. Fox *išinaakosiwa* 'he appears thus' and Menominee *ese-na-kosew* 'he looks like that'.

[Goddard 1982:29]) and (15) *koohsina* 'our (incl.) father' (G <kuxthína); < PA stem *-o·hθ- 'father' [Bloomfield 1946:96]; see also 170–71 below).

3.1.2. The Proto-Algonquian alternation of *t and *č, whereby *č appears before *i(·) or *y and *t elsewhere (Goddard 1977:241), is leveled out in Miami-Illinois noun inflection, apparently always to /t/. Thus, (16) *nihkaati* 'my foot' (Mi/H <nixkâ·tj̄>), (17) *ahkaati* 'foot' (Mi/D <akátj̄>), and the two possible plurals (18) *ahkaata* (Mi/D <akáta>) and (19) *ahkaatima* (Mi/D <akatima>).¹⁰ Compare PA **nexka·či* ~ **nexka·tali* 'my leg(s)' (Siebert 1975:353) and Kickapoo *nehkaachi* 'my foot', but Ojibwa *nikaad* 'my leg'. (20) *awiipiti* '(his) tooth' (Mi/D <awipítj̄>, LB *ašipite*; cf. PA sg. & pl. **wi·piči* ~ **wi·pitali* [Siebert 1975:396]). Also, possibly, (21) *ači(i)ti* 'anus' (Mi/D <atcítj̄>, Gr <atchiti>; < PA *-čj̄(-)t-).¹¹

I have found one isolated example of PA *t appearing as Miami-Illinois /č/ in a nonpalatalizing environment, presumably by diminutive consonant symbolism: (22) *ničaankwa* 'my (woman's) sister-in-law' (Mich. <nitcáʔAñgwaⁿ>, LB <nitchang8a>, Morgan [Miami] <n'jängwá>; < PA **nata·nkwa* 'my sibling-in-law of opposite sex' [Goddard 1973a:49–50]).

3.1.3. There also exist in Miami-Illinois several words showing /š/ for expected /s/. Most examples of this occur before /i/, especially /iV/. Conversely, there are a few words showing /s/ for expected /š/, also usually before /i/, perhaps by hypercorrection.

3.1.3.1. Some examples of words showing /š/ for /s/ are: (23) *apeehsia* ~ *apeehšia* 'fawn' (LB/Gr <apessia>, Mi/D <apá'sšia>, and LB <apechia>; < PA stem **ape·hs-*).¹² (24) *teekweešita* 'he is ashamed' (Mi/D <täkwäcíta>), and (25) *teekweešiaani* 'I am ashamed' (Mi/D <täkwäcianī>; cf. PA **tekwe·siwa* [Goddard 1988:348]). (26) *meenhšiaani* 'I gather wood' (Mi/D <māncianī>);¹³ cf. PA **manehθe·wa* [Siebert 1975:407]). (27) *misihkwa* ~ *mišihkwa* 'hail' (Mi/H <mizihkwa>, P/G <misixkwa>, LB <missic8o>, and Mi/D <mīnjī'kwa>);¹⁴ < PA **mesiHkw-* 'hail, ice'.¹⁵ (28) *neehsiaani* ~ *neehšiaani* 'I breathe' (G <nässiāni> and Mi/D <näcianī>;

¹⁰ The form <akáta>, which Dunn gives as a 'dual', actually means 'his feet'; <akatima>, given as the plural equivalent, is an unpossessed form '(one's) feet'.

¹¹ Cf. Ojibwa *ninjīid* 'my anus', Fox *očiti* 'bird's rump, tail' (Goddard 1991), and Arapaho *béθit* 'anus'.

¹² Cf. Kickapoo *apeθiia* 'a kind of deer' and Menominee *ape·hsos* 'deer'.

¹³ Also note Dunn's Miami <nimānsa katī missa> 'I will gather wood' and Gravier's <nimanesse> 'je vas faire chercher du bois pour brusler'.

¹⁴ Dunn's *j* = [ž]. For a discussion of the *n* in the Dunn form, see 4.2.2.3.

¹⁵ Compare Kickapoo *meθihkwa* 'ice, hail', Potawatomi *mzəknan* 'it is hailing' (from my field notes from Kansas), and Micmac *msi·kw* 'hailstone, sleet'. Note also Menominee *mese·kahnan* 'it hails', which does not agree with the Miami-Illinois, Kickapoo, and Potawatomi forms in whether PA **Hk* or **k* is called for.

< PA stem **le·hle·-* [Bloomfield 1946:90]; see also 53–54, 66–67, and 179–80). (29) *sikinaahkwa* ~ *šikinaahkwa* ‘blackbird’ (P/H ⟨sikinàʔaxkwǝ⟩, Gr ⟨sekinac8a⟩, LB ⟨chikinac8o⟩, and Mi/G ⟨shikenákwa⟩).¹⁶ (30) *poošiaani* ‘I go aboard a boat, embark’ (Mi/D ⟨pociāni⟩; cf. PA **po·siwa* [Bloomfield 1925:132] ‘he embarks’). Compare the corresponding independent: (31) *nimpoosi* (Mi/D ⟨nimbosi⟩).

3.1.3.2. Some Miami-Illinois words showing /s/ for expected /š/ are: (32) *ahšikana* ~ *ahsikana* ‘bass’ (P/G ⟨shíkana⟩, Gr ⟨achigan⟩, Mi/G ⟨síkana⟩, and Gr ⟨assignana⟩; < PA **aʔšikan(w)a* [Siebert 1967b:31]). (33) *meehtikoošia* ~ *meehtikoosia* ‘Frenchman’ (G ⟨mäʔhtikushá⟩, V ⟨mêhtikôcha⟩, but Mi/D ⟨mäʔtikósia⟩; cf. PA **meʔteko·ši* ‘dugout canoe’ [Bloomfield 1925:140]). (34) *mihšihkinaahkwa* ~ *mihsihkinaahkwa* ‘terrapin’ (G ⟨mishixkinákwa⟩ and ⟨mshikinákwa⟩, Mi/D ⟨micikinakkwa⟩, LB ⟨michikinac8o⟩, and also LB ⟨missikinac8o⟩; < PA **meʔšixkena·hkwa*).¹⁷ (35) *šaaški(iw)a* ~ *šaaškia* ‘crawfish’ (Gr ⟨chaki8a⟩ and ⟨chakia⟩, LB ⟨chaki8o⟩ and ⟨châkie⟩, but modern P/G ⟨saxkiá⟩, Mich. [pl.] ⟨sáʔkyakⁱ⟩, and Mi/D ⟨sákkia⟩; < PA **ahθa·ke·wa* [Pentland 1983:388]). (36) *swaah-teetswi* ‘seven’ (Mi/G ⟨swaxtáʔtswi⟩, V ⟨souaxtetsoúé⟩, LB ⟨sotats8e⟩), but also P/H ⟨šwaʔaxteʔǝ(h)swǝ⟩¹⁸ (cf. PA **neʔšwa·šika* ‘eight’¹⁹ [Bloomfield 1946:117], cf. Potawatomi *šwatso*). (37) (*a*)*hšiiimina* ‘papaws’ (pl.) (Mi/D ⟨asimíʔna⟩, ⟨simíʔna⟩; < PA **aHšii·mini* [Siebert 1975:365]).²⁰

Also, note (38) *sakiwa* ~ *sakia* ‘heron, crane’ (Mi/D ⟨sákia⟩, LB ⟨saki8a⟩ and ⟨sackia⟩); < PA **asakiwa*; cf. Shawnee *haθaki*. Siebert (1975:350) posits PA **šaʔšakiwa*, using Menominee *saʔsakew*, Swampy

¹⁶ Though the exact reconstruction of this word is problematic, compare Ojibwa *asiginaak*, Shawnee *haθikinaʔkwa*, and Fox *sakenaahkwa*.

¹⁷ Compare Fox *mešihkenaahkwa* ‘snapping turtle’ and, with unexpected second-syllable vowel length, Ottawa *mšiiiknaakoons* ‘baby snapping turtle’. See Michelson (1933:39) and cf. PA **mexkena·hkwa* (Siebert 1941:301).

¹⁸ The missing second /t/ in the P/H form is probably a mishearing.

¹⁹ All sources agree in having this as the word for ‘seven’; early on, Miami-Illinois borrowed a new word for ‘eight’ from Siouan (probably from Tutelo or Ofo; see Rankin 1985), made the previous word for ‘eight’ mean ‘seven’, and discarded the Proto-Algonquian word for ‘seven’. The comparative recentness of the borrowing of the word for ‘eight’ is reflected in its varying attested forms: *palaanwi* (P/H ⟨pálaʔnṅwǝ⟩, Mi/H ⟨palá·nwi⟩), *palaani* (Mi/D ⟨paláni⟩, Mich. ⟨paláni⟩, G ⟨paláni⟩, V ⟨polláné⟩), and older *paraari* (Gr & LB ⟨parare⟩). Since only Hockett attests *palaanwi*, it is likely that *palaani* is the older of the modern forms, and that *palaanwi* is created by analogy to other Miami-Illinois numerals such as *yaalanwi* ‘five’ (Mich. ⟨yālānwi⟩, Mi/H ⟨yá·là·nṅwǝ⟩). There is also an alternate form for ‘eight’ attested by Le Boullenger, ⟨ninč8meneki⟩, which can be compared to the general Miami-Illinois term for ‘nine’, *nkotimenehki* ~ *nkotimenehki* (LB ⟨nic8timeneki⟩, Mi/H ⟨ngotimínèkǝ⟩, P/H ⟨ngotimeneckǝ⟩, Mich. ⟨gōtūmináʔkī⟩).

²⁰ Cf. Shawnee *haʔšiiimi*. In Kintetz (1940:385), Raudot gives a Miami form ⟨assemina⟩.

Cree *sasakiw*, and Ojibwa *žašagi*. His reconstruction fits these forms well, though the Shawnee and Miami-Illinois forms are not explained by it, nor is Atikamekw *šakiw*. The Miami-Illinois and Shawnee are probably more conservative forms which have not undergone reduplication (and concomitant preglottalization of the second sibilant) nor diminutive sound symbolism, as has the Ojibwa form. Additionally, the Menominee, Atikamekw, and Swampy Cree forms could quite possibly be Ojibwa loans.

3.2. Proto-Algonquian **θ* and **l* fall together in all circumstances; in the earliest records (i.e., Le Boulenger 1725 and Gravier 1700), these always appear as /r/.

3.2.1. Intervocalic PA **θ* and **l* give /l/ in all modern dialects of Miami-Illinois. From PA **θ*: (39) *alemwa* 'dog' (Mi/D ⟨alä'mwa⟩, Gr ⟨arem8a⟩; < PA **aθemwa* [Bloomfield 1946:86]). (40) *eelikwa* 'ant' (Gr ⟨eric8a⟩, G ⟨ä'likwa⟩, Mi/H ⟨ʔelikwɔ̃⟩; < PA **e'likwa* [Siebert 1975:312]). (41) *aloon(i)hsi* 'bullet, lead' (Mi/D ⟨alóntsĩ⟩, Mi/G ⟨(a)lúnthi⟩, V [pl.ʔ] ⟨lontsàh⟩, Gr ⟨ar8nissi⟩; cf. PA **aθwi* [Siebert 1941:302]).²¹ From PA **θ*: (42) *-ali* 'obviative singular'²² ⟨ali⟩ in all modern sources, ⟨ari⟩ in Gravier and Le Boulenger; < PA **-ali*). (43) *nĩila* 'I' (Mi/H ⟨nĩla⟩, Mich. ⟨nĩ'la⟩, V ⟨nêlah⟩, LB ⟨nira⟩; < PA **ni-la* [Bloomfield 1946:116]). (44) *(a)lenia* 'man' (Mi/D ⟨alä'nya⟩, Mi/H ⟨lê'nyã⟩, Mich. ⟨lányáⁿ⟩; cf. Gr ⟨ireni8a⟩; < PA **elenyiwa* [Bloomfield 1946:87]). (45) *alakayi* 'fish scale, eggshell' (G ⟨alakáyi⟩, LB [pl.] ⟨aracaiaki⟩; cf. PA **walahakaya* [Siebert 1975:375] and Cree *wayakay*).

3.2.2. In modern Miami, PA **θ* and **l* give /n/ word-initially; from PA **θ*: (46) *naapi* 'also' (Mi/D ⟨napi⟩ and Gr ⟨rapi⟩;²³ < PA **θa-pi-* [Silver 1960:115]). (47) *nalakwe* 'among, between' (Mi/D ⟨nalákwã⟩ and also Gr ⟨rarag8i⟩ 'au milieu'; < PA **θaθakw-*).²⁴

From PA **l*: (48) *naankičiwi*, 'it is light in weight' (Mi/D ⟨nangĩ'tciwĩ⟩, V ⟨nanguétchéoué⟩; cf. PA **la-nkanwi* 'it is light' [Goddard 1982:27]).²⁵ (49) *noohkanwi* 'it is soft' (Mi/D ⟨nokánwĩ⟩; < PA stem **lo-xk-*; see also

²¹ The Miami-Illinois form is most similar to Kickapoo *anooni* 'bullet'; the *-(i)hsi-* suffix is a diminutive, and thus the modern Miami-Illinois forms are not of the same origin as Unami *aló-ns* and Atikamekw *ato-ss* 'arrowhead', which apparently show reflexes of a PA diminutive **-e-ns*.

²² Miami-Illinois consistently distinguishes the inanimate plural and the obviative singular markers on nouns, which are identical in all other Algonquian languages. The inanimate plural in Miami-Illinois is marked with *-a*, which is identical to the marker of the animate singular.

²³ The Gravier form is glossed as 'egalement, de mesme'.

²⁴ Compare Shawnee *lalakwi*, Menominee *nana-k*, Fox *nanakwi* (Ives Goddard, personal communication), and Arapaho *θo-θóuyó-ku-no* 'I stand between them (inan.)'.

²⁵ Note also Le Boulenger's ⟨niranghirechi⟩ 'I am light'.

64–65).²⁶ (50) *neekawi* ‘sand’ (Mi/D ⟨nākáwī⟩ and also Gr ⟨rega8i⟩; < PA **le·kawi* [Goddard 1982:21]).²⁷ (51) *nipwaahkaalo* ‘take care (imp.)’ (Mi/D ⟨nīpwákaló⟩) and (52) *neepwaahkaata* ‘he revived, came to’ (Mi/D ⟨nāpwakat⟩; < PA **lepwa·hka·wa* ‘he is wise’).²⁸

3.2.3. The rule taking PA **θ* and **l* to /n/ word-initially and /l/ elsewhere appears to work quite regularly for Miami, producing a few doublets like (53) *neehseeta* ‘he breathes’ (Mi/H ⟨nés·εtə⟩, G ⟨néssāta⟩; < PA **le·hle·-* [Bloomfield 1946:90]; see 28, 66–67, and 179–80) and (54) *poonilehseeta* ‘he stops breathing’ (Mi/D ⟨pónilā‘ssāta⟩; cf. LB ⟨niresse⟩ ‘I breathe’). Modern Miami does have initial /l/, but it almost always derives from words with original short vowels that have been deleted, such as (55) *lakiihkwi* ‘tree bark’ (Mi/H ⟨lakixkwḡ⟩, Mi/D ⟨lakí‘kwī⟩; cf. Gr ⟨aracic8i⟩; < PA **walake·θkwi* [Siebert 1941:299]). (56) *lamooni* ~ *lemooni* ‘paint, vermilion’ (G ⟨lamúni⟩, Mi/D ⟨lāmónī⟩, LB ⟨aramoni⟩, and Gr ⟨aram8ni⟩; < PA **welama·na* ~ **welamo·na* [?] ‘red ochre’).²⁹ (57) *lenkwaki* ‘armpits’ (Mi/D ⟨längwakī⟩) and (58) (*a*)*lenkwana* ‘wing’ (Mi/D ⟨alänggwána⟩, G ⟨längwána⟩; < PA stem **-θenkwi-* ‘armpit’).³⁰ (59) *lenanswa* ‘cow’ (Mi/D ⟨länánzwa⟩, G ⟨länanswa⟩, Mich. [pl.] ⟨lenaⁿzó^okⁱ⟩, V ⟨alanantsoua⟩, and Gr ⟨irenans8a⟩ ‘un boeuf’; < PA **elenoswa* [Goddard 1979a:109]).³¹

3.2.4. The records of modern Peoria seem to indicate that some speakers retained PA **θ* and **l* as /l/ word-initially. Thus, in Hockett’s Peoria notes, one finds (60) *lipanwi* ‘it is cold (of weather)’ (P/H ⟨lipa·nwi⟩; cf. also Gravier’s ⟨ripan8i⟩ and Fox *nepačiwa* ‘he is cold’), for which Miami has initial /n/: (61) *nipanwi* (Mi/G ⟨nīpánwi⟩) and (62) *neepanki* (Mi/H ⟨népaŋgī⟩). Similarly, Gatschet’s records seem to indicate that Sarah Wadsworth, a Wea from Indiana then living in Oklahoma, considered (62) *neepanki* ‘it is cold’ (W/G ⟨nā‘paŋgī⟩) to be Wea, but (63) *leepanki* (P/G ⟨lā‘paŋgī⟩) to be Peoria. Also, this same speaker gave as Peoria (64) *loohkahkiiki* ‘it is soft ground’ (P/G ⟨lukgíki⟩), and a corresponding Wea and Miami form (65) *noohkahkiiki* (W/G & Mi/G ⟨nukgíki⟩; cf. Mi/D ⟨nókkīki⟩; see 49).

²⁶ Compare Cree *yo·ska·w* and Massachusetts *nóhkésu* ‘it is soft’. For proof of the /hk/ in Miami-Illinois, note Gatschet’s ⟨núxkanwi⟩.

²⁷ Gatschet collected ⟨lekáwi⟩, but no dialect is given for it.

²⁸ Cf. Shawnee *lepwa^oka* ‘he is sober, conscious’ and Cree *yipwa·hka·w*, Ojibwa *nibwaaka*, Fox *nepwaahkaawa*, and Menominee *nepuahkaw* ‘he is wise’.

²⁹ The correct PA vowel in the penultimate syllable of this word is quite uncertain, but note Fox *anemoona* (/e/ for expected /a/ in the second syllable, as in Dunn’s Miami form), Cree *oyama·n*, Menominee *ona·mon*, Unami *óláman*, and Arapaho *hinów*.

³⁰ Compare Kickapoo *nenekwi* ‘my wing, armpit’, W. Abenaki *wolagwán* ‘his wing’, and Arapaho *hihé^o* ‘wing’.

³¹ Compare Kickapoo *onenoθwa* ‘cow, ox’.

3.2.5. Some Peoria speakers have /n/ instead of /l/ for at least some words with initial PA *θ or *l: (66) *neehseenki* ‘breath’ (P/G ⟨néssängi⟩) or (67) *neeneehseeči* ‘he breathes repeatedly, pants’ (Mich. ⟨nänäsetcí⟩; see 28, 53–54, and 179–80). Also, Michelson attests (62) *neepanki* ‘it is cold’ (Mich. ⟨nepāngiⁱⁿ⟩). Conversely, Jacob Dunn, who worked almost entirely with Indiana Miami and Wea speakers, collected (68) *linkiteeki* ‘it melts’ (Mi/D ⟨līngītā’ki⟩; cf. PA *θenkete·wi; see 154), though this appears to be the only example in his notes of /l/ from word-initial *θ or *l.

3.2.6. A peculiar example of Miami-Illinois /l/ from PA *n is found in (69) *pileelikwa* ‘flying squirrel’ (G ⟨pilālikwa⟩, Mi/D ⟨pilālī’kwa⟩, Gr ⟨pirerig8a⟩; < PA *pele·nyikwa [see Siebert 1967b:21]).³²

The following word appears to have modern /n/ corresponding to older /r/: modern (70) *wahoonaha* (?) ‘Potawatomi’ (Mi/D ⟨wahónaha⟩, Mi/G ⟨wahunaha⟩, Mich. [pl.] ⟨wa’ō’na’āki⟩) versus Gravier’s and Le Boulenger’s older Illinois form ⟨8a8rahe⟩.³³ This unexpected variation between word-internal /r/ and /l/ is possibly due to different dialects borrowing this word at different times or from different sources. It is also possible that the /n/-form was borrowed from some Algonquian language showing /n/ for earlier */r/.

3.2.7. The Proto-Algonquian *θ ~ *š alternation is also leveled out in noun inflection, usually to /l: (71) *mihsooli* ‘boat’ (Mi/D ⟨mīssóli⟩, Mi/G ⟨msóle⟩, LB ⟨miss8ri⟩; < PA *mehθo·ši [Goddard 1982:22]).³⁴ (72) *waali* ‘cave, hole in the ground’ (Mi/D ⟨wālī⟩; < PA *wa·ši, from stem *wa·θ- [Goddard 1977:241]).³⁵ This has been generalized to /š/ in (73) *wiiwaši* ~ *wiiwaša* (sg./pl.) ‘saddle’ (G ⟨wiwashí⟩, ⟨wiwashá⟩; < PA *wiiwaši, *wiiwaθali ‘his pack(s)’ [Goddard 1982:22]). PA *nθ is attested as /nš/ in (74) *ahkinši* ‘forehead’ (G ⟨akíⁿzhi⟩, LB ⟨akinche⟩; < PA stem *-xkenθ- [Goddard 1973b:4]).

3.3. In modern Miami-Illinois, sequences of /m/ + short vowel can optionally be deleted word-initially before preaspirates or sibilants. Thus, one finds forms such as (75) *mihtehkoopa* ~ *mihtehkwaapa* ‘bow’ (Mi/D ⟨mitā’kopa⟩, V ⟨mêtèhkouapa⟩), but also (76) *tehkoopa* (G ⟨tā’kupa⟩; < PA *me[?]tekwa·pyi ‘bow’ [Goddard 1974:106]).³⁶ Similarly, note (77) *mihtekwapinti* ~ *mihtekoopinti* ‘bowstring’ (Gr ⟨mitec8abinti⟩, LB

³² Siebert’s PA *pele·nikwa is ruled out by Menominee *penε·nik*.

³³ This word, which in Algonquian is only attested in Miami-Illinois, appears to be a loan from an undetermined Siouan language (see Clifton 1978:741). Compare Omaha *wáhiúḏaxá*, Kansa *wáhiúyaha*, Iowa-Oto *woraxa*, and Winnebago *wo·ráxe*.

³⁴ Compare Kickapoo *meθooni*, which has developed analogously to the Miami-Illinois form.

³⁵ Compare Ojibwa *waaž* and Cree *wa·ti* ‘animal’s den, cave’.

³⁶ For a discussion of the unexpected /hk/ in these forms, see 5.2, (220)–(221).

(mitteg8pinte)), which also appears as (78) *tekwaapinti* ~ *tekoopinti* (G ⟨tékwapindi⟩ and ⟨täkupíndi⟩, Mi/D ⟨täkopíndi⟩). For /mV/ deletion before preaspirated sibilants, note (79) *mihšiiimina* ~ *hšiiimina* ‘apple’ (Gr ⟨michimina⟩, Mi/D ⟨m’cí’mína⟩, Mi/H ⟨š’ímín⟩; < PA **meʔši·mina* [Goddard 1974:105]). (80) *mihsakahkwa* ~ *hsakahkwa*³⁷ ‘badger’ (Gr ⟨msacac8a⟩, G ⟨sákwa⟩, Mi/D ⟨sákkwa⟩, and G [pl.] ⟨sák’kuki⟩; < PA **meʔθakaxkwa* [Pentland 1983:391]; cf. also Shawnee *θaakkwa*). (81) *mihšipakwa* ~ *hšipakwa* ‘leaf’ (V ⟨mechipakoua⟩, Mi/H ⟨šipakwə⟩, Mi/G ⟨shípakwa⟩; < PA **meʔšipakwa* ‘big leaf’).³⁸

For /mV/ deletion before a nonpreaspirated sibilant, note (82) *mise-saahkwa* ‘horsefly’ (P/H ⟨mizæ’·zaxkwə⟩, Mi/G ⟨mizázakwa⟩, and LB ⟨misensac8o⟩), which also appears as Mi/H ⟨zē·zēhkwa⟩ and as Mi/D ⟨anzanzakwa⟩.³⁹ The reduction of /mVs/ to [anz] in this Dunn form is unusual but not unique; it is also attested for (83) *masaanaapiikwa* ‘rope’⁴⁰ (Mich. ⟨mAzánapīkwa’⟩, LB ⟨massanapic8a⟩), for which Michelson gives an obviate ⟨aⁿzánapīkwā’li⟩.

Finally, a notable example of a word that had apparently already deleted a preconsonantal PA **mVh* sequence by the early 1700s is (84) *kočiihsa* ‘bean’ (Mi/D ⟨kotcisa⟩, LB/Gr ⟨c8tchissa⟩, and P/H [pl.] ⟨kočis·aʔqki⟩; < PA **maškweči·hsa* [?]).⁴¹

4. Proto-Algonquian cluster reflexes. The modern Miami-Illinois reflexes of the Proto-Algonquian consonant clusters are given in table 1. The reflexes in parentheses are those found in the missionary sources, when different (see 4.5.1).

4.1. Where *C* is an obstruent, PA **HC* clusters (i.e., clusters with **h*, **ʔ*, **ç*, **š*, **x*, **θ*, or **č* as their first member) all fall together in modern Miami-Illinois as /hC/.

³⁷ I believe that the initial sibilants in the short forms of ‘badger’ and ‘leaf’ are probably preaspirated on the basis of words like ‘apple’ (79), ‘tobacco’ (176), and ‘stone’ (135). In these latter words, one finds word-initial geminated sibilants, retained after preceding syllables, have been deleted.

³⁸ A Gravier plural, ⟨michipac8ki⟩, is given as ‘grandes feuilles’.

³⁹ For a discussion of the vowel nasalization in this word, see 4.2.2.3. For cognates elsewhere in Algonquian, compare Potawatomi *mzəzak*, Ottawa *mzisaak*, Shawnee *maθaθa’kwa*, Fox *masasaahkwa*, Menominee *mesa·sa·h*, and Cree *misisa·hk*.

⁴⁰ Apparently formed off PA **masa·na* ‘nettle’ (Siebert 1975:362). In Miami-Illinois, the reflex of this basic form, *masaana* (G ⟨mazána⟩, P/H ⟨mazaʔəngə⟩, Gr ⟨masana⟩), has come to mean ‘thread’, though an inanimate form given by Le Boulenger, ⟨masane⟩, is given with the older meaning ‘ortie’.

⁴¹ Compare Menominee *masku·ce·hseh*, Fox *maškočiisa*, and Shawnee *mškoči’θa*. However, also note the aberrant Potawatomi *gojēs* (Hockett 1948:69), which also lacks the expected first syllable. See ‘bag’ (195).

TABLE I
MIAMI-ILLINOIS REFLEXES OF PROTO-ALGONQUIAN
CONSONANT CLUSTERS

	*p	*t	*k	*č	*s	*š	*θ	*l	*m
*ʔ		ht		hč	hs	hš	hs	hs	m
*h	hp	ht	hk	hč	hs	hš	hs	hs	
*n/m	mp	nt	nk	nč	ns	nš	nt	nt	
*x	hp		hk						
*θ	hp		hk						
*š	hp(sp)	— ¹	hk(sk)						
*č	— ¹		hk						
*ç			hk						

¹No examples attested

4.1.1. Thus, from Proto-Algonquian *hp and *xp: (85) *npaahpilo-taakwa* 'he makes fun of me' (G ⟨mbaxpilotakwa⟩; cf. PA *pa·hpiwa 'he laughs' [Siebert 1975:367]).⁴² (86) *eehpwaačiki* 'they smoke' (G ⟨ä'hpocat-chiki⟩, Mi/D ⟨äpwátciikī⟩; cf. PA *wexpwe·wa 'he smokes' [Goddard 1982:28]). (87) *toohpooni* 'table' (G ⟨túhpuni⟩, Mi/H ⟨tóΦpòni⟩; < PA *ato·xpoweni [?] [see Bloomfield 1946:91]).⁴³

From *šp and *θp: (88) *iihpisita* (AI) 'he is high, tall' (P/G ⟨ihpissitá⟩; cf. PA *ešpesiwa)⁴⁴ and (89) *iihpiiki* 'it is high, tall' (G ⟨i'hpiki⟩; cf. PA *ešpye·wi [?]).⁴⁵ (90) *kiihpilaka* 'I bind him'⁴⁶ (Mich. ⟨kī'piláka⟩, G ⟨ki'hpilaka⟩; cf. PA *keθpiθe·wa 'he ties him up' [Goddard 1982:28]).

4.1.2. From PA *ht and *ʔt: (91) *nihtawaki* 'my ear' (Mi/H ⟨nihtáwakī⟩, G ⟨ni'táwak⟩; < PA *nehtawaki 'my ear' [Goddard 1982:26]). (92) *atehtoleni* ~ *atehtolena* 'hat' (apparently different genders; Gr ⟨atet8reni⟩, P/G ⟨tä'htulá'ni⟩, P/H ⟨tæhtóle'ngə⟩; < PA *aʔtweθeni ~ *eʔtweθeni).⁴⁷ (93) *pahteeki* (Mi/H ⟨páhteki⟩) and (94) *pahteewi* (G ⟨páxtewi⟩) 'it is dry' (< PA *pa·ʔte·wi [Hockett 1981:70]). (95) *nihtaawa* 'my (man's) brother-in-law' (G ⟨ní'tawa⟩, Mich. ⟨ni'tá'waⁿ⟩; < PA *ni·ʔta·wa [Hockett 1964:251]).

⁴² Compare Ottawa *baabaapnodwaad* 'he makes fun of him, ridicules him'.

⁴³ Compare Ojibwa *adoopowin*, Kickapoo *ahtoohpooni* [sic], and Menominee *atu·hpwan*.

⁴⁴ Compare Ottawa *špizid* and Kickapoo *ihpeθia*.

⁴⁵ The initial vowels in these verbs are long due to initial change, which in Miami-Illinois changes initial Proto-Algonquian *e to /ii/. See Costa (forthcoming b) for a full explanation of initial change in Miami-Illinois.

⁴⁶ The first vowel in this form has undergone initial change; see Costa (forthcoming b).

⁴⁷ Compare Cree *astotin*. The Miami-Illinois appears to be from a form 'his hat' but seems to have become an unpossessed noun. Hockett also attests a metathesized Miami form ⟨tehtoneli⟩.

4.1.3. All of the original Proto-Algonquian nonnasal + *k clusters give /hk/ in the modern language.

4.1.3.1. From *hk: (96) *noohkoma* 'my grandmother' (Mich. ⟨nō- 'komáⁿ⟩, P/H ⟨noxkó'omə⟩; < PA *no·hkwema [Goddard 1982:27]). (97) *eemihkwaani* 'squash, pumpkin' (W/G ⟨äm̀xkwani⟩, P/H ⟨hæm̀ihkwa'gɲi⟩; < PA *e·mehkwa·na 'spoon' [Siebert 1975:388]).⁴⁸ (98) *čiiṗihki* 'root' (Mi/H ⟨čip̄iki⟩, P/G ⟨tch̄ipki⟩; < PA *wečye·ṗihki [Siebert 1975:373]). (99) (a)*tehkoni* 'knot (of a tree)' (G ⟨tä'xkuni⟩, Gr ⟨atec8ni⟩); < PA *we(h)tehkweni 'branch' [Goddard 1982:36]).

4.1.3.2. From *xk: (100) *ahki* 'field' (Mich. ⟨a'kī⟩, LB ⟨ahki⟩) and (101) *kitahki* 'your field, farm' (G ⟨kitáxki⟩; < PA *axkyi 'land' [Siebert 1941:301]). (102) *mahkisini* 'shoe' (P/G ⟨ma'hkisini⟩; < PA *maxkeseni [Siebert 1975:381]). (103) *nihkiwani* 'my nose' (Mi/H ⟨nihkiwani⟩, P/H ⟨ŋki·wa·ni⟩; < PA *nexkiwani [Siebert 1975:363]). Also, (16) *nihkaati* 'my foot' (Mi/H ⟨nixkâ·tj⟩; cf. PA *nexka·či 'my legs' [Goddard 1977:241]). (104) *pahkia* 'ruffed grouse, partridge' (P/G ⟨pá'kia⟩; < PA *(pax)paxkiwa [see Siebert 1967b:16]).⁴⁹ (105) *meeloohkamiki* 'it is spring/summer' (Mich. ⟨melō'kamiki⟩, P/H ⟨meloxkamik̄i⟩, Mi/D ⟨mälokámik̄i⟩; cf. PA *melo·xkamiwi).⁵⁰ (106) *wiikhweetioni* 'leggings' (Mi/H ⟨wixkwetyoni⟩; cf. PA *newi·xkwe·ṗiθa·wa 'I tie him up, wrap him with cords' [Siebert 1975:408]).⁵¹

4.1.3.3. From *θk: (107) *mahkwa* 'bear' (G ⟨maxkwá⟩, Mich. ⟨ma'kwá⟩; < PA *maθkwa [Siebert 1967b:21]). (108) *nihkani* 'my bone, leg' (Mi/H ⟨nixka·ni⟩; < PA *neθkani [Siebert 1975:319]). (109) *nihkona* 'my liver' (Mi/H ⟨nixkô·nə⟩; < PA *neθkweni [Goddard 1974:104]). (110) *ninehki* 'my hand' (Mi/H ⟨ninéxki⟩, G ⟨niná'ki⟩; < PA *neneθki [Siebert 1941:300]). (111) (a)*mehkwa* 'beaver' (Mich. ⟨'Amé'kwa⟩, G ⟨mähkwa⟩; < PA *ameθkwa [Siebert 1967b:25]). (112) *nihkweekani* 'my neck' (P/H ⟨nixkwæ'ækan̄i⟩ and G [loc.] ⟨ni'kwä'kaneng⟩; < PA *neθkwayikan(kan) [Pentland, in press]).⁵²

4.1.3.4. From PA *çk: (113) *mehkoma* 'vein, pulse' (G ⟨mä'hkúma⟩) and (114) *nimehkoma* 'my vein' (LB ⟨nimec8ma⟩; cf. PA *meçkwi 'blood'

⁴⁸ Though this PA reconstruction does not account for Menominee *ε·meskwan*, it is required by forms such as Munsee *e·mhwá·nas*, Mahican ⟨ā'm'an⟩ (probably *a·mhā·n*; from Michelson 1914), and Arapaho *he·biyo·*.

⁴⁹ In addition to the forms given by Siebert, note also Shawnee *hapki* 'prairie chicken'.

⁵⁰ This word appears to mean 'spring' in Miami but is consistently given as 'summer' in Peoria. Compare Cree *miyo·skamiw*, Ottawa *mnookmig*, Cheyenne *matsé'omeva*, and Arapaho *bé(·)ni·'owú·ni?*

⁵¹ Compare also *wiikhweetiaakani* 'trousers' (G ⟨wixkwetiákani⟩) and *weehkweetita* 'he wears trousers' (G ⟨wé'hkwétita⟩).

⁵² Compare Shawnee *n'kweekaka*, Menominee *nehki·kan*, Arapaho *nésonon*, and Cheyenne *he'otse*.

⁵³ Compare Shawnee *nim'škoma* and Arapaho *nebe'ib* 'my vein'.

[Goddard 1982:29]).⁵³ Also from this stem, note (115) *meehkwaalaanteeki* 'it is brown'⁵⁴ (Mi/H ⟨mɛhkwalandeki⟩, G ⟨mä'kwalandeki⟩). (116) *ninoohkwaata* 'I lick it' (P/H ⟨ninoxkwata⟩; cf. PA *no·čkwa·tam- 'lick it' [Siebert 1967a:49]; see also 205 for an earlier form of this word).

4.1.3.5. From *čk: (117) (*alakahkwi* 'his palate' (Mi/D ⟨alakakwi⟩, G ⟨lágkwi⟩, Gr ⟨aragac8i⟩; < PA *welakačkwi [Bloomfield 1946:89]).⁵⁵

4.1.3.6. From *šk: (118) *šihkiwi* 'land, earth, dirt' (Mi/H ⟨šixkiwi⟩, P/G ⟨shixkiwi⟩; < PA *ašiškiwi 'mud' [Goddard 1982:21]). (119) *mahko-teewi* 'prairie' (G ⟨maxkotéwi⟩; < PA *maškwe·wi).⁵⁶ (120) *mahkiikwi* 'marsh, lake' (P/G ⟨maxíkwi⟩; < PA *maškye·kwi [Goddard 1982:23]). (121) *iikhitaminki* 'watermelon'⁵⁷ (P/G ⟨ixkitamíngi⟩, ⟨iktamíngi⟩; < PA *ašk- 'raw'). (122) *apeehkwa* 'nighthawk' (Gr ⟨apec8a⟩)⁵⁸ and its apparent diminutive (123) (*apeehkoohsia* 'turkey vulture'⁵⁹ (G ⟨páxkúthia⟩, Gr ⟨apec8sia⟩; < PA *pe·škwa⁶⁰ 'nighthawk').

4.1.4. From *hč and *ʔč: (124) *nihčiwa* 'my arm' (Mi/H ⟨nihčiwa⟩,⁶¹ P/H ⟨nšči'w⟩; < PA stem -hčiw- [Goddard 1982:39]). (125) *ničihčiikama*

⁵⁴ Other words given in the Gatschet file cards indicate that in the modern language, this stem was used to signify colors in the brown, violet, and purple area, though in Hockett (1985) it is glossed as 'it is gray'. Words for 'red' (and 'blood') in the modern language consistently use the stem found in, for example, *neehpikanki* 'it is red' (Mi/H ⟨nehpikanŋi⟩).

⁵⁵ Though no source explicitly marks the preaspiration on the second velar in this word, it is supported by the *g/c* distinction in the Gravier transcription and by the deletion of the preceding vowel in the Gatschet form; word-internal vowels are only deleted in Miami-Illinois when stressless (and thus short) and preceding a preaspirate.

⁵⁶ Compare Ojibwa *maškode* 'prairie' and W. Abenaki *mskodá* 'meadow'.

⁵⁷ Literally, 'that which is eaten raw'; for other similar formations, note Shawnee *šaʔški'tameki*, Kickapoo *eeskihtaahi*, and Unami (*e*)*ski·tamink*.

⁵⁸ Gravier glosses ⟨apec8a⟩ as 'oyseau mangeur maring8ins'. Dunn gives a form ⟨ápákwa⟩, in which he appears to have reversed the first and second vowels.

⁵⁹ Some kind of semantic relation appears to exist between the names of these two birds in Menominee as well: compare *pe·skiʔ* 'nighthawk' (given as 'mosquito-hawk') and *ape·skasíw* 'buzzard'.

⁶⁰ In Siebert (1967b:16–17), this is reconstructed as PA **pi·škwa* ~ **peškwa*, but these do not match forms such as Ottawa *beškwe* 'nighthawk' and Kickapoo *peeskweeha* 'whippoorwill', which seem to suggest PA **pe·škwa*. Siebert's **peškwa* seems to be mainly based on Fox *peškweeha* and Shawnee *peškwa*. The Fox form is possibly incorrect, given the Kickapoo. The Shawnee form is actually ambiguous, since there are other examples of Shawnee words showing vowel shortening before PA /šC/ clusters; for example, Shawnee *šoškwa* 'slip, slippery' (< PA *šo·škwa-; see 199–200) and Shawnee *mʔškyeekwi* 'lake' (< PA **maškye·kwi*; see 120).

⁶¹ Hockett (1985:30) claims that from his notes it is impossible to determine whether the symbol before the /č/ in the Miami form is /h/ or /n/, yet given the Peoria form and the Fox cognate *nehčiwa*, the correct symbol must be /h/. Hockett also gives a Miami form ⟨mihčiyongǵi⟩, which he glosses as 'elbow', yet which is probably an indefinitely possessed locative, 'on someone's arm'.

'my soul, shadow' (G <nintshixtchikáma>; cf. PA **nete*?čya·kwa [see Goddard 1974:106]). (126) *čiihčükama* 'wart' (G <tchixtchikáma>; < PA *či·?či(·)kw-).⁶² (127) (a)*čiihči* '(his) sinew' (P/G <tchi'htchi>, Mi/D <atci'stci>) and (128) *ničiihči* 'my sinew' (LB <nitchischi>, Gr <nitchitchi>; < PA **nečye*·?či [Goddard 1982:28]).⁶³ (129) *meehči* 'after' (G <má'htchi>, Mich. <mä'tci>; < PA **me*·?či 'to exhaustion' [Bloomfield 1946:93]).

4.1.5. Miami-Illinois merges Proto-Algonquian **h* and *ʔ before sibilants into /h/. The resultant /hs/ and /hš/ clusters are often realized phonetically as [s·] and [š·], especially after front vowels and word-initially.

4.1.5.1. From PA **hs*: (130) *nipihsi* 'lake' (Mi/H <nipis·j>, V <nipiHsi>; < PA **nepihsi*).⁶⁴ (131) *waapeehsa* 'mussel, shellfish' (G <wapä'sa>, Mi/D <wápäsa>, Gr <8abessa>; cf. PA **e·hsa* 'mollusk, shell').⁶⁵ (132) *wiiyoohsi* 'meat' (G <wí'uxsi>, P/H <wiyoxsə>, and V <ouioxsé>; < PA **wi·yawehsi* [Haas 1967:143]). (133) *šinkohsa* 'mink' (G <shinguxsá>, Mi/H <šingohsá>, Mi/D <cingósa>; < PA **šenkwehsa* 'weasel' [Siebert 1967b:25]).⁶⁶ (134) *eehsipana* 'raccoon' (Mi/H <?es·ipanā>; < PA **e·hsepana* [Siebert 1967b:21]).

4.1.5.2. From PA *ʔs: (135) *hseni* 'stone' (P/H <s·e'ęni>; < PA **aʔsenya* [Bloomfield 1946:93]). (136) *nimpaahsa* 'I dry it' (G <nimbáxsa>; < PA stem **pa·ʔs-*).⁶⁷ (137) *ninkwihsa* 'my son' (P/H <ningwi'įhsá>; < PA **nekwiʔsa* [Bloomfield 1946:89]).⁶⁸

4.1.5.3. From PA **hš*: (138) *nimehšooma* 'my grandfather' (P/H <nimæš·o'omā>, Mich. <nimā'cōmáⁿ>) and (139) (a)*mehšoomali* 'his grandfather' (W/G <mā'shomali>, Gr <amech8mari>; < PA **wemehšo·m(ehs)ali* [see Bloomfield 1946:90]).

4.1.5.4. From PA *ʔš: (140) *šaahšiwí* 'it is slimy' (G <ca'ciwi>) and (141) *ašaahšikopa* 'slippery elm' (G <ashaxshíkopa>; < PA **weša·ʔš-* 'slippery')

⁶² Compare Ojibwa *jiičiigom*, Cheyenne *-šeʔeškema*, Atikamekw *očiččikoma*, Menominee *neči·?čekwam*, Micmac *ničkikm*, and Arapaho *nefi·θi·b* 'my'.

⁶³ The Le Boulenger and Gravier forms are given as 'mon nerf'. Dunn also gives <atci'stawáli> (probably *ačihtawali*) 'his muscle'. I am assuming that the *st* of Dunn and the *sch* of Le Boulenger are attempts to render preaspiration.

⁶⁴ Volney (1968:429) states that his symbol H "has strong aspiration." Compare Ottawa *nbiš* and Menominee *nepe·hseh*.

⁶⁵ Gravier and Le Boulenger also attest a more conservative form *eehsa* 'coquillage' (<essa>). Compare Ojibwa *es*, Ottawa *esī*, and Unami *é·həs ~ éhsak* (sg./pl.) 'mussel'. Though I am at a loss to explain Baraga's *ens*, the Miami-Illinois and Unami forms would seem to preclude the **e·nsa* reconstruction of Hewson (1973:154), as PA **ns* is retained as such in both languages.

⁶⁶ The Hockett form is given as 'beaver'; this is probably incorrect, as all other sources agree on the meaning 'mink'.

⁶⁷ Compare Ojibwa *baasang* and Menominee *pa·ʔsam* 'he dries it'.

⁶⁸ Note also Gatschet's oddly transcribed Wea form <k8i'hsa> 'son' (unpossessed?).

[Goddard 1982:26]).⁶⁹ (142) *lehšia* ‘testicle’ (G ⟨lā’hsha⟩;⁷⁰ < PA stem **-θeʔšiw-* [Goddard 1982:38]). (143) *mihšaawi* and (144) *meehšaaki* ‘it is big’ (P/H ⟨mjš·a·wé⟩ and Mi/H ⟨méš·akj⟩; cf. PA **meʔšye·wi-* ‘it is big’ [Bloomfield 1946:110]). (145) *šihšüipa* ‘duck’ (P/H ⟨šiš·ipg⟩, Mi/H ⟨šiš·ipa⟩), and Mich. ⟨cī·cī’pa’⟩; < PA **ši·ʔši·pa* [Bloomfield 1946:105]).

4.2. Miami-Illinois preserves original Proto-Algonquian nasal + obstruent sequences. Additionally, as in Ojibwa and Delaware, consonants are voiced after nasals.

4.2.1. Sequences of nasal + stop/affricate are preserved unchanged: (146) *ampihsaalo* ~ *ampihseelo* ‘jump (imp.)’ (Gr ⟨ampissaro⟩, Mi/D ⟨ambisäló⟩; < PA **wemp-* ‘up’ [Bloomfield 1946:120]). (147) *wiimpi* ‘marrow’ (Gr ⟨8imbi⟩ ‘moëslé’; < PA **wi·mp-* ‘hollow’ [Goddard 1982:30]). (148) *eekintamaani* ‘I count, keep tally’ (Mi/D ⟨äki’ndamáni⟩; < PA **akintam-* ‘count it’ [Bloomfield 1946:12]). (149) *kwaanteemi* ‘door’ (Mich. ⟨kwändemi’⟩, P/H ⟨kwá·ndè·ʔm⟩; < PA **eškwa·nte·mi* [see Goddard 1982:30]; cf. Ojibwa *iškwaandem*). (150) *aanteekwa* ‘crow’ (Mi/H ⟨ʔa·ndε·kwā⟩, Gr ⟨antec8a⟩; < PA **a·nte·kwa*).⁷¹ (151) *aalinta* ‘some, part’ (Gr ⟨arinta⟩, Mich. ⟨‘älinda’⟩; < PA **a·θenta* [Hockett 1981:86]). (152) *pinkwi* ‘ashes’ (Mi/D ⟨pīngwi⟩; < PA **penkwi* [Siebert 1975:333]). (153) *nahaankana* ‘son-in-law’ (Mich. ⟨nA‘A’ñgAna’⟩, Gr ⟨nahangana⟩, and Morgan’s Miami form ⟨nahángänä⟩; < PA **naha·nkana* [Hockett 1964:254]). (154) *ninkisiwa* ‘he melts’ (W/G ⟨ningísiwa⟩; < PA **θenkesowa* [Goddard 1982:21; see 68]). (155) *-onči* ‘from’ (Mi/D ⟨ondjī⟩, Mich. ⟨oⁿdji⟩; < PA **wenči* [Goddard 1982:27]).

4.2.2. Sequences of nasal + sibilant in the earliest records of Miami-Illinois are retained unchanged. However, in the modern records, there is often a tendency to delete nasal consonants before sibilants, though usually with concomitant vowel nasalization and voicing of the sibilant retained.

4.2.2.1. From **ns*: (156) *weensamaani* ‘I boil it’ (Mi/D ⟨wänzamani⟩), (157) *weensanka* (Mi/H ⟨wě’zangā⟩) ‘he boils it’, and (158) *winsiwa* ‘he boils’ (LB ⟨8insi8o⟩;⁷² < PA **wensam-* [TI] ‘boil it’ and **wensowa* [AI] ‘he boils’ [Bloomfield 1946:109]).

⁶⁹ Compare Ojibwa *ožašigob* and Menominee *osa·ʔsekop*.

⁷⁰ In modern records, /i/ is often not written between palatals and vowels. That this /i/ was still present in this word is shown by Gatschet’s obviative plural ⟨lāshiahi⟩. Another such word is *oočia* ‘fly (insect)’ (Mi/D ⟨ótcia⟩, but P/G ⟨ū’dsha⟩; < PA **o·čye·wa* [Michelson 1935:160]).

⁷¹ Compare Ojibwa *aandeg* and Shawnee *haateekwa*, but also Menominee *na·htek*, with nonoriginal initial /n/.

⁷² The Le Boulenger form is translated as ‘bouillir (nob.)’, the ‘nob(le)’ indicating the opposite of ‘ignoble’, i.e., animate vs. inanimate.

4.2.2.2. From *nš: (159) (a)*panšayi* ‘lodgpole, rafter’ (P/G ⟨paⁿzhái), LB ⟨apanchaye), and Gr [pl.] ⟨apanchaia; < PA **apanšwiyi* [Goddard 1982:25]). (160) *nihkiinšikwi* ‘my eye’ (LB ⟨nikingig8i),⁷³ Mi/H ⟨nḡhkiži-kwḡi) and pl. (161) *nihkiinšikwa* ‘my eyes’ (P/H ⟨nḡxki·žikwḡḡ); < PA **neški·nšekwi* [Bloomfield 1946:90]).

4.2.2.3. The bare [ž]’s in the Hockett transcriptions for forms such as (160) reflect a nasal effacement commonly seen before sibilants. The great majority of voiced obstruents in twentieth-century recordings of Miami-Illinois derive from adjacent nasal consonants. Additionally, sibilants are voiced after vowels that follow nasal consonants. Thus, one gets for (27) *misihkwa* ‘hail’ forms like Mi/H ⟨mizihkwa). For (162) *niišwi* ‘two’ there is Mi/H ⟨nī·žwḡi) and Mich. ⟨nīⁿjiwī‘) (< PA **nyī·šwi* [Siebert 1975:306]). There appears to be a rule in Miami-Illinois whereby nasalization from an /m/ or /n/ can progress through a word, crossing syllable boundaries, if the only intervening consonants are nonaspirated sibilants. These sibilants all become voiced. One word that shows this is ‘horsefly’, (82) *misesaahkwa*, attested as P/H ⟨mizǎé·zaxkwḡḡ), G ⟨mizǎⁿzakwa), Gr ⟨mensac8a), and LB ⟨misensac8o).

4.2.2.4. As in Ojibwa, nonetymological nasal consonants irregularly appear before plain (nonpreaspirated) stops that come after word-initial nasal + vowel sequences. Thus, one finds Miami-Illinois (163) *maankwa* ‘loon’ (Mi/D ⟨mángwa), Gr ⟨mang8a); < PA **mwa·kwa* [Siebert 1967b:16]; cf. Ojibwa *maang*).

This prenasalization is especially frequent after the *ni-* prefix of the first person: (164) *ninkya* ‘my mother’ (Gr ⟨ninghia), Mich. ⟨niḡngya‘), Mi/D ⟨nīⁿngia); < PA **nekya* [Hockett 1964:246]). (165) *nintaana* ‘my daughter’ (Mich. ⟨nindāⁿánⁿ), Mi/H ⟨ninda·nḡ); < PA **neta·n(ehs)a* [Hockett 1964:252]).

4.2.2.5. Inexplicable nasalization occasionally appears before plain sibilants without a nasal consonant in the preceding syllable: (166) *pinšiya* ‘cat’ (Mi/D ⟨pīⁿjiwa), Gr ⟨pinchi8a); < PA **pešiya* [Siebert 1967a:21]). (167) *oonsaaweeki* ‘it is yellow, brown’ (P/H & Mi/H ⟨ōzawekḡi), Mi/D ⟨oⁿzawākī); cf. PA *wesa·w-* [see Goddard 1965:220]).⁷⁴

Finally, note the highly unusual form (168) *oonseentia* ‘poplar’ (Mi/D ⟨ozǎⁿndia), G ⟨ozǎⁿndia); cf. PA **asa·twiya* [Goddard 1983:382]).⁷⁵

⁷³ The first *g* in this word represents [ž], as in French orthography.

⁷⁴ The long initial /oo/ in ‘yellow’ is confirmed by three facts: first, short /o/ cannot occur word-initially in Miami-Illinois (PA **we* word-initially becomes /a/); second, the initial vowels in these words are never deleted, as is frequent with word-initial short vowels; and third, this first vowel is occasionally even marked as stressed, such as in G ⟨úⁿsanikwa) ‘fox squirrel’ (presumably *oonsaanikwa*).

⁷⁵ The Miami-Illinois form of this word has probably been influenced by ‘yellow’. The nasality in its first syllable is explicitly attested in the personal name *oonseentiihkwe* ‘Poplar-

4.3. As in many other “Central Algonquian” languages, clusters with a “lateral” as their second member (i.e., PA **θ* or **l*) develop differently from the usual patterns of Miami-Illinois clusters.

4.3.1. In Miami-Illinois, the Proto-Algonquian clusters of glottal (**ʔ* or **h*) + lateral all appear as *hs*.

4.3.1.1. From **hθ*: (169) *moohsia* ‘worm’ (Mi/H ⟨*mos·ya*⟩, G ⟨*muxthia*⟩, and P/H [pl.] ⟨*moxseaki*⟩; PA **mo·hθe·wa* [Siebert 1975:407]). (170) *noohsa* ‘my father’ (P/H ⟨*no·xsə*⟩) and (171) *oohsima* ‘a father, Indian agent, president’ (G ⟨*u’hsima*⟩ and ⟨*u’ssima*⟩, V ⟨*oxsema*⟩; < PA stem **-o·hθ-* ‘father’ [Bloomfield 1946:96]; see also 15). (172) (*mih*)*tohseenia* ~ *meehtohseenia* ‘Indian, person’ (singular Mi/H ⟨*mehtosænyə*⟩, P/H ⟨*toxseʔenyə*⟩ and plural V ⟨*metoxthéniaké*⟩, G ⟨*mituhsániaki*⟩; < PA **-ohθe-* ‘walk’ final [Bloomfield 1946:111]).⁷⁶ (173) *ntahswi* ‘so many, how many’ (G ⟨*ndáxswi*⟩; cf. PA **tahθwi* [Goddard 1974:114]).⁷⁷

4.3.1.2. From **ʔθ*: (174) *kweehsimwa* ‘female animal’ (G ⟨*kwexsímwa*⟩; < PA **eθkwe·ʔθemwa* ‘bitch’ [Siebert 1975:317]).⁷⁸ (175) *nihswi* ‘three’ (P/H ⟨*ñihswi*⟩, Mi/H ⟨*ns·wî·*⟩, V ⟨*nexsoué*⟩; < PA **neʔθwi* [Bloomfield 1946:117]). (176) *hseema* ‘tobacco’ (P/H ⟨*s·æʔæmɔ*⟩, G ⟨*ssäma*⟩; also Gr ⟨*acemaða*⟩; < PA **aʔθe·ma·wa*).⁷⁹ (177) *waahseeki* ‘it is light, dawn’ (P/H ⟨*waxseʔεki*⟩, Mi/H ⟨*was·εki*⟩; < PA stem **wa·ʔθe-*).⁸⁰ (178) *paahpaahsia* ~ *paahpaahseewa* ‘red-headed woodpecker’ (G ⟨*papássia*⟩, LB ⟨*papas-seða*⟩; < PA **pa·hpa·ʔθe·wa*).⁸¹

4.3.1.3. From **hl*: (179) *neeneehsiaani* ‘I breathe repeatedly’ (G ⟨*nänä-siáni*⟩), (53) *neehseeta* ‘he breathes’ (Mi/H ⟨*nés·eta*⟩), and (180) *neehsioni* ‘breath’ (G ⟨*nänthiuni*⟩; < PA stem **le·hle-* [Bloomfield 1946:90]; see 28, 53–54, and 66–67).

4.3.1.4. From **ʔl*: (181) *ntahsa* ‘I have him’ (G ⟨*ndáxsa*⟩; cf. PA **aʔle·wa* ‘he places him’ [Bloomfield 1946:90]). (182) (*a*)*weehseens(w)a* ‘bird’ (P/G

Woman’ (G ⟨*uⁿzändikwä*⟩). The nasality in the second syllable is extended over from the nasalization of the preceding syllable (cf. 82, 4.2.2.3). Note also *meelooseentia* ~ *maalooseentia* ‘cottonwood’ (G ⟨*mäʔlusändiä*⟩, LB ⟨*mar8sentia*⟩).

⁷⁶ See 3.3 for the deletion of the /*mih-*/ in the P/H form. Compare Fox *mehtoseeniwa* ‘human being, Indian’ and Southwest Ojibwa *mitose* ‘he goes on foot’.

⁷⁷ The prenasalization here is probably generalized from the changed to the unchanged form; compare Ojibwa *daso* with changed *endaso*.

⁷⁸ Compare Shawnee *škweʔθemwa* ‘female of animals’. In both Shawnee and Miami-Illinois this word has been semantically broadened from its more etymologically expected meaning ‘bitch’; perhaps *-hsimwa* is no longer phonetically close enough to (*a*)*lemwa* ‘dog’ (see 39) to maintain a perceived semantic connection.

⁷⁹ Compare Ojibwa *asemaa* and Fox *aseemaawa*. The PA alternate **θeʔθe·ma·wa* (Pentland 1975:247) is more widely attested, though it does not appear to exist in Miami-Illinois.

⁸⁰ Compare Kickapoo *waabeeki* ‘day, daytime’ and Cree *wa·stew* ‘it is light’.

⁸¹ Compare Ottawa *baapaase* ‘red-headed woodpecker’, Menominee *pa·hpa·ʔnew*, and Cree *pa·hpa·stew*. Cree also has a form *pa·hpa·sew*, probably an Ojibwa loan.

⟨wäʰsǎ́nsá⟩, V ⟨ahouèhsensa⟩, and Mi/H ⟨wes·ēz̥wǎ⟩; < PA *awe·ʔle·wa ‘hawk’ [Siebert 1967b:19].

4.3.2. Miami-Illinois realizes Proto-Algonquian clusters of nasal + lateral (*nθ and *nl) as *nt*. PA *nθ: (183) *nipanta* ‘I roast him’ (LB ⟨nipanta⟩; < PA *nepanθa·wa [see Goddard 1973b:5]). PA *nl: (184) *kintiwa* ‘golden eagle’ (Mi/D ⟨kǐndíwa⟩; < PA *kenliwa [see Goddard 1973b:3]). (185) *weentaka* ‘I call (name) him’ (Mi/D ⟨wǎndáka⟩; cf. PA *wi·nle·wa ‘he names him’ [Bloomfield 1946:90]). (186) *minto* ‘drink (imp.)’ (Mich. ⟨mindō⟩, Mi/D ⟨mindō⟩; < PA *menlwe, stem *men- [Bloomfield 1946:98, 100]). (187) *noontaka* ‘I nurse him’ (G ⟨núndaka⟩) and (188) *noonteewa* ‘she nurses him’ (LB ⟨n8nte8o⟩, G ⟨nundāwa⟩; < PA *no·nle·wa ‘she nurses him’ [Bloomfield 1946:115]).

4.4. Finally, Proto-Algonquian *Hm appears as *m* in Miami-Illinois: (189) *wiikiaami* ‘house’ (P/G ⟨wǐkiami⟩, Mi/D ⟨wǐkiāmǐ⟩; < PA *wi·kiwa·Hmi [Goddard 1982:26]).

4.5. At this point, it is necessary to address the issue of whether any of the consonant clusters of Miami-Illinois are attested differently in the earliest records of the language—the missionary dictionaries of Le Boulenger and Gravier. A preliminary examination of these works indicates that the sole difference is the retention of some of the expected Central Algonquian sibilant + stop sequences (all of which become simple pre-aspirates by the modern period), especially those from PA *šC.

4.5.1. The Proto-Algonquian cluster *šp is sometimes reflected differently from *hp in the earliest sources, as /sp/. Thus, one finds for modern (190) *peminki* ‘up above’ (Mich. ⟨pemíñgi⟩), Gravier forms such as ⟨spemenghi⟩ and ⟨spemenghi⟩ (< PA *ešpemenki [Bloomfield 1946:88]). Similarly, modern (89) *ihipiki* ‘it is high, tall’ (G ⟨iʰpiki⟩) is attested by Gravier as ⟨spiki⟩. Likewise, compare modern (88) *ihipisita* ‘he is high, tall’ (P/G ⟨ihpissita⟩) with Gravier’s ⟨ispesi8a⟩. However, Proto-Algonquian *šp does not always appear in these records as *sp*, but sometimes as *hp*; note Le Boulenger’s ⟨ēpisita⟩ ‘le grand’ and ⟨ipisc8e⟩ ‘tall woman’ (see 208).

4.5.2. Along with Proto-Algonquian *šp, it also appears that PA *šk was at least optionally realized as *sk* in the earliest period. Thus, in comparison with modern (120) *mahkiikwi* ‘marsh, lake’ (P/G ⟨maxkíkwi⟩), Gravier and Le Boulenger show ⟨maskig8i⟩. Likewise, for ‘land, dirt’ the modern sources agree on (118) *šihkiwi* (P/G ⟨šhíxkiwi⟩), though Le Boulenger has ⟨aciski8i⟩. (191) *askipakaapiikisita* ‘grand serpent’ (Gr ⟨askipacapikisita⟩) contrasts with modern (192) *ahkipakaapiikisita* ‘blue racer’ (Mi/D ⟨akípákapǐkǐ’ssita⟩; < PA *aškipak- ‘blue, green’).⁸² (119)

⁸² Compare Fox *aškipak*- ‘green’ and *eeškipakaapyekesita* ‘green-striped one’.

mahkoteewi 'prairie' (G ⟨maxkotéwi⟩), older (193) *maskoteewi* (LB ⟨masc8te8i⟩), and Gravier's ⟨masc8tea⟩ 'Illinois (the tribe)'.⁸³

Additionally, alongside (123) (a)*peehkoohsia* 'turkey vulture' (G ⟨pāx-kúthia⟩ and Gr ⟨apēc8sia⟩), there is (194) *apeeskoohsia* (Gr ⟨apesc8sia⟩). (195) *skimotayi* 'bag' (Gr *skim8tai*; < PA **maškimotayi* 'bag of grass' [Goddard 1983:371]).⁸⁴ (196) *iskoteewi* 'fire' (Gr & LB ⟨isc8te8i⟩; < PA **eškwete-wi* [Bloomfield 1946:105]); compare modern Miami-Illinois (197) *koteewi* (Mi/H ⟨kótewi⟩, G ⟨kotéwi⟩).

4.5.3. Various other Miami-Illinois words having Proto-Algonquian *šk appear in ALL sources with /hk/ (written either *c* or *k*). As shown above, 'turkey vulture' (see 123) is attested with both *sc* and *c* (*hk*), though its original nondiminutive is only attested with /hk/: (122) *appehkwa* 'nighthawk' (Gr ⟨apēc8a⟩). Some other words with probable PA *šk showing /hk/ in the missionary sources follow: (149) (a)*kwaanteemi* 'door' (Gr & LB ⟨ac8antemi⟩, Mich. ⟨kwāndemi⟩; < PA **eškwa-nte-mi*).⁸⁵ (198) *waawiihkaalo* 'hurry (imp.)' (LB ⟨8a8ippicaro⟩).⁸⁶ (199) *šoohkwapiwa* 'il glisse assis' (LB ⟨ch8oc8opi8o⟩); compare this with modern (200) *šoohkahamaani* 'I drag it' (literally, 'I make it slide by instrument'; Mi/D ⟨cokahamáni⟩; < PA *šo-škw-).⁸⁷ (201) (a)*hsahkwa* 'muskrat' (LB/Gr ⟨assac8a⟩, Mi/G ⟨sáxkwa⟩; cf. < PA **we?šaškw* [Goddard 1982:29]).⁸⁸ (202) *paahkihtamwa* 'Carolina parakeet' (LB ⟨pakitam8o⟩).⁸⁹ (203) (a)*wiihkwan* '(his) elbow' (LB ⟨8ic8ani⟩, ⟨a8ic8ane⟩, Mi/D ⟨wikwani⟩; cf. Kickapoo *newiiskwani* 'my elbow' [see Goddard 1974:113]). (204) *kiyaahkwa* 'gull' (Gr ⟨kiac8a⟩, Mi/D ⟨kiakwa⟩).⁹⁰

4.5.4. The evidence from the missionary dictionaries seems to indicate that the PA cluster *čk was almost always realized in Illinois as /hk/. Thus, there is (114) *nimehkoma* 'my vein' (Gr & LB ⟨nimec8ma⟩). Likewise, though many different examples of the verb 'lick' are given (cf. PA

⁸³ Compare Fox *meeskooteewa* 'Peoria'.

⁸⁴ Compare Potawatomi *škamot* 'bag' and Shawnee *škimota* 'basket'.

⁸⁵ The /sk/ in this word is preserved in two other forms attested by Gravier, ⟨esc8antemi⟩ and ⟨isc8antemi⟩.

⁸⁶ Compare Ottawa *wewiibškaad* 'hurry (in a boat)' and Menominee *wε-wε-peskaw* 'he goes fast'.

⁸⁷ Compare Ojibwa *žoškwa* 'it is smooth, slick', Kickapoo *soosk-* 'smooth', and Shawnee *šoškwa-* 'slip, slippery'.

⁸⁸ Though PA **we?šaškw* does not fit the Miami-Illinois form very well for the first syllable, note the similar Shawnee *hobaškw*.

⁸⁹ Compare Ojibwa *baaškandamoo*, Potawatomi *baškdám?we* (from my field notes from Kansas). A more common Miami-Illinois word for 'parakeet' is *pankihtamwa* (Gr ⟨panghittam8a⟩, P/G ⟨pangi'htámwa⟩, and Mi/D ⟨pongítámwa⟩).

⁹⁰ Though the actual cluster in the Proto-Algonquian form of this word is unclear (see Siebert 1967a:49), compare Ojibwa *gayaasik* and Fox *akayaasikwa*.

*no·çkwa·tam- ‘lick it’; see 116), it is never attested with anything other than /hk/; two examples are (205) *ninoohkwaatan* ‘I lick it’ (Gr ⟨nin8c8atan⟩ & LB ⟨nino8atan⟩) and (206) *ninoohkwaaci* ‘I lick’ (LB ⟨nino8atchi⟩). The only Miami-Illinois form I have been able to locate with apparent /sk/ from PA *çk is Le Boullenger’s ⟨misc8achiki kipicat8i⟩ ‘metail rouge’ (< PA *meçkw- ‘red’ [Bloomfield 1946:89]).⁹¹

4.5.5. Another issue to be considered in determining the early Miami-Illinois reflexes of the Proto-Algonquian clusters is words showing /sk/ (written *sc* or *sk*) where one would not expect it, that is, from clusters without initial *š or *ç. Some examples of this are (207) *mikihkwa* ~ *mikiskwa* ‘old woman’ (Mi/H ⟨mikihkwā⟩ but Gr ⟨mikisc8a⟩) and the similar (208) *ihpiskwe* ‘tall woman’ (LB ⟨ipisc8e⟩, with the final from PA *eθkwe·wa ‘woman [Goddard 1982:28]). (209) *ahkiskwa* ~ (ah)kikhwa ‘drum’ (LB ⟨akisc8o⟩, Gatschet ⟨kixkwa⟩; also note the LB obv. ⟨akic8ri⟩; < PA *axkehkwa ‘kettle’ [Bloomfield 1946:96]).⁹² (210) *mahkiskiwī* ~ *mahkikhkiwī* ‘medicine, herb’ (LB/Gr ⟨makiski8i⟩, Mi/D ⟨makī’kkīwī⟩; < PA *maškixkiwī [Goddard 1979a:80]).⁹³ Additionally, the dubitative marker in the verb paradigms in Le Boullenger (1725) is almost always given as (211) *iska* ⟨isca⟩ (cf. Fox *-hka*). However, note that all these words containing unexpected /sk/ all have preceding /i/; given this, I believe that these *sk* sequences probably just represent a mishearing of a heavily aspirated /ihk/ by the French-speaking recorders. This could also account for the single attestation of a word with PA *çk being transcribed as /sk/, LB ⟨misc8achiki kipicat8i⟩ ‘metail rouge’. If the *sc* in these words really just represents /hk/, then the likeliest description of the facts appears to be that in early Miami-Illinois, Proto-Algonquian *šp was optionally realized as both /sp/ and /hp/, *šk as /sk/ and /hk/, and *çk always as /hk/. By Volney’s time (1795), the sibilant + stop clusters are almost gone, and by Gatschet’s time (the 1890s), they are entirely gone, merged into simple preaspirates. I believe this requires a revision of the statement in Goddard (1978a:585) that Illinois and Miami differ in that where Illinois has /sk/, Miami has /hk/. In fact, since there are no records of Miami from the early eighteenth century, there is no evidence to indicate that the retention or loss of /sk/ in Miami-Illinois was ever dialectal. Moreover, if Peoria is in fact the direct descendant of Illinois,

⁹¹ Contains *kiip(i)hkatwi* ‘iron, metal’ (G ⟨kī’pkatwi⟩, V ⟨kepiātoué⟩, Gr ⟨kibicat8i⟩).

⁹² In Miami-Illinois the inanimate equivalent of this noun, (ah)kikhwi, signifies ‘kettle, bucket’ (P/H ⟨kixkwj⟩, G ⟨kī’hkwi⟩, Gr ⟨akic8i⟩). For similar semantic developments in this word in other Algonquian languages, note Arapaho *hó’ëii* ‘drum’ and Fox *ahkohkwa* ‘kettle, drum’.

⁹³ Note that neither of the French sources attests this word with /sk/ for the first (PA *šk) cluster. The Dunn form is given as ‘prairie plants’.

this presents a problem in that /sk/ is not attested in anyone's records of Peoria. Without evidence that would clear up these issues, I believe it is more accurate to say that the presence or absence of /sk/ in Miami-Illinois is simply a diachronic matter; that is, that the cluster is retained, though not consistently, in all records from the early 1700s, and that it is completely absent from all dialects by the late 1800s.

5. Problems.

5.1. Among the forms left unexplained by the above sound changes are a handful of words which in all dialects and attestations of Miami-Illinois show etymologically unexpected /l(i)hs/ (/r/ for /l/ in the earliest records). The most notable example of this is the word for 'sun' (see, for example, Haas 1967, Hamp 1973, and Pentland 1985). In the earliest records of Miami-Illinois, this word is (212) *kiilhswa* (Gr ⟨kiriss8a⟩, V ⟨kilixsoua⟩), becoming by the modern period (213) *kiilhswa* (Mich. ⟨kīl'swaⁿ⟩, Mi/D ⟨kīlswa⟩). Given PA **ki·šweʔθwa* (Goddard 1982:29), and forms such as Ojibwa *giizis* and Fox *kiišeswa*, this word would be expected to give Miami-Illinois **kiišihswa*, which does not occur.

There are a few other words in Miami-Illinois that look like this; for example, there is a Peoria word meaning 'catfish', (214) *waalihse(ew)a* in the earliest records (Gr ⟨8arissea⟩, pl. ⟨8arisse8aki⟩), later (215) *waalhsia* (P/G ⟨wal'hsia⟩, Mich. ⟨wal'siyá⟩, P/D ⟨wálsia⟩).⁹⁴ Siebert [1967b:36] proposes PA **wa·hs(ehs)iwa* for this, to account for modern forms such as Ojibwa *awaasii* 'burbot', Fox *waasesiha* 'bullhead', and Menominee *wa·sew* 'large catfish, bullhead'.

A third word falling into this category is the Miami-Illinois word for '(sacred) story', (216) *aalhsoohkaani* or (217) *aalhsoohkaakani* (Mi/D ⟨alsokáni⟩, G ⟨alsókakán⟩).⁹⁵ Given that the AI stem of this word reconstructs as PA **a·teʔlo·hke·-* [Michelson 1935:163]),⁹⁶ one would ordinarily expect Miami-Illinois **aat(i)hsoohkaa(kani)*, much like Ojibwa *aadisookaan*.

From comparing the above forms, a quasi-pattern appears, of /l(i)hs/ being derived in Miami-Illinois from at least three different sources; with 'sun', from earlier **-šwehs-*; with 'catfish', from earlier **-(h)sehs-*; and with

⁹⁴ This word is translated in Gatschet as 'catfish', as 'mud-cat' in Dunn's file cards, as 'bullhead' by Michelson, and as 'especie de barbue' by Gravier.

⁹⁵ Related forms of this word from the French period are *aalhsoohkioni* 'conte' (LB ⟨ars8ki8ni⟩) and *nitaalhsoohki* 'j'en conte' (LB ⟨nitars8ki⟩). For confirmation of the /hk/ in Miami-Illinois, note Gatschet's ⟨ndayalthū''ki⟩ (*ntaayaalhsoohki*) 'I tell stories repeatedly'.

⁹⁶ Compare Menominee *a·teʔno·hkakan*, Unami *a·thilo·há·k·an*, Plains Cree *a·tayo·-hkewin*, and Cheyenne *hohtaʔeheoʔo*.

'story', from **-tehs-*. All of these words seem to have shared something like the following rule:⁹⁷

$$\begin{array}{c} \text{C} \\ \left[\begin{array}{l} + \text{coronal} \\ - \text{sonorant} \end{array} \right] \end{array} \rightarrow [1] / \text{---} \begin{array}{c} \text{V} \\ \left[\begin{array}{l} - \text{low} \\ + \text{front} \\ - \text{long} \\ - \text{stress} \end{array} \right] \end{array} \quad \text{hs}$$

Of course, unless more such forms with discernible etymologies can be found, this set of words is not big enough to state any consistent rule with much confidence, but I do believe this evidence at least indicates that the unexpected Miami-Illinois word for 'sun' in fact reflects processes internal to that language, which affect other words as well, and that the Proto-Algonquian reconstruction for 'sun' should not be modified to account for the Miami-Illinois form, as suggested in Pentland (1985).

5.2. There remains a small handful of words in Miami-Illinois which still contradict the above rules, primarily words with frequently transcribed preaspiration where it is historically unexpected. One such word which has innovated preaspiration in Miami-Illinois is (218) *nihkitikwia* 'my knee' (G <ni'hkitikwia>; < PA **neketekwa* [Goddard 1988:348]).⁹⁸

The preaspiration on the /k/ in this word probably originated by analogy from other semantically related body-part terms also having initial /hk/, such as (108) *nihkani* 'my bone, leg', (16) *nihkaati* 'my foot', and (219) *nihkahkwani* 'my shin' (G <nikáxkwani>, Gr <nicac8ani>; < PA **naxkaθkwani*).⁹⁹

Another set of words with unexpected preaspiration is (220) *mihtehki* 'wood, timber' (Mi/D <mítäqki> and Mi/G <mtäkki>), its apparent plural (221) *mihtehkooki* (V <mteHkoke>), and (75) *mihtehkwaapa* 'bow' (V <mêtèhkouapa>; < PA **me?tekwa-* [Bloomfield 1946:91]).¹⁰⁰ However, that

⁹⁷ The specifications on the vowel here refer to the fact that in Miami-Illinois, PA **e* in odd-numbered short syllables becomes /i/. The vowels in question in all the above examples immediately follow syllables with long vowels, which restart the syllable count for the vowel-shortening rule. All such vowels are also unstressed. See Rhodes (1989a) or Costa (forthcoming a) for further explanation of this.

⁹⁸ This word had its ending reshaped in early Miami-Illinois to *-e.wa*, from which the modern *ia* derives. Compare Gr <nikitic8e8a> and LB <nikitig8e8a>, which are ambiguous as to whether this word had /hk/ or /k/ in the 1700s.

⁹⁹ Compare Munsee *nihkákwan* (Ives Goddard, personal communication) and Cree *naskaskwan*.

¹⁰⁰ In the modern language, the ending of *mihktehki* has been reshaped from the expected **-kwi*, though 'bow' and Volney's plural preserve the old /kw/.

the preaspirated /hk/'s in these forms are actually quite new is shown by the fact that they appear without it in the French records. Note Le Boullenger's <mitteg8i>¹⁰¹ and Gravier's <mitteg8aba>; the use of the letter *g* in these forms explicitly rules out **hk*, which in the French sources would be written as *c* or *k*. It is possible that the preaspiration on these forms arose by contamination from other semantically related words with /hk/, such as (99) (ah)tehkoni 'knot (in wood)' (G <tä'xkuni>, Gr <atec8ni>) or the 'wood/tree' final (222) -aahkw- (< PA *a·xkw- [Bloomfield 1946: 105]), found in forms such as (223) šinkwaahkwa 'cedar, evergreen' (G <šingwaxkwa>, Mi/D <cīngwákwa>, Gr <ching8ac8a>; < PA *šenkwa·xkwa [Bloomfield 1946:105]) or (224) kaawinšaaahkwa 'honey locust' (literally, 'thorn tree'; Mi/D <kawīnjakwa>; see 3).

5.3. Another troublesome word in Miami-Illinois, which presents problems in several Algonquian languages, is (225) *noohsema* 'my grandchild' (P/H <noxsé'εmą>, Mi/H <nós·εmą>, LB <nossema>, Gr <n8ssema>). Given the Proto-Algonquian reconstruction **no·hših(s)em)a* (Goddard 1973a:46),¹⁰² one would expect a Miami-Illinois form like **noohš(i)hsema*. The actual form found possibly has its origins in the deletion of the [i] (almost certainly devoiced) between the two preaspirates, giving a hypothetical intermediate stage with a */hšhs/ sequence, which ended up being resolved as /hs/. This is analogous to the origin of the Ottawa form *noošē*, which arose from Ojibwa *noožišē* by resolving */žš/ as [š·].

5.4. Another word showing unexpected preaspiration in modern Miami-Illinois is 'deer', (226) *moohswa* (PA **mo·swa* [Siebert 1967b:21]).¹⁰³ That the /hs/ in this word is genuine is definitely shown by P/H <mó·xswą> and G <mû'xswa>, plural (227) *moohsooki* (G <múxsōgi>, V <moHsoké>) and (228) *moohswaya* 'deerskin' (G <muxthwáya>). However, the /hs/ in this is actually quite recent, as shown by the older Gravier form <m8ns8a> and Le Boullenger's <m8ns8o>. These forms are analogous to Ojibwa *moonz* (Baraga <mons>) and are regular, given the tendency to prenasalize sibilants after syllables preceded by a nasal (see 4.2.2.4). Though it is not certain why the sibilant of *moohswa* has been preaspirated in the modern language, there are a few other phonetically similar words that have done this; one such word is (229) *mahsinaakani* 'paper, book' (Mi/H <mas·ina·kani>, P/H <mas·inaxka'ni>).¹⁰⁴

¹⁰¹ This form is explicitly given as Miami.

¹⁰² Note also the problematic Potawatomi *nosəs* 'my grandchild' and Atikamekw *o·ssima* 'his grandchild'.

¹⁰³ There is a surprisingly similar form in Menominee, the plural *mo·hsok* (sg. *mo·s*) 'moose', which I am at a loss to explain.

¹⁰⁴ The [xk] in the P/H form is unexplained. Compare Ojibwa *mazina'igan* and Menominee *mase·nahekan*.

A word that has preaspirated a sibilant which was originally prenasalized is (230) *nihkiihšikwi* ‘my eye’. As noted above (see 160), the LB form of this word, ⟨nikingig8i⟩, preserves the original **nš* cluster, and the voiced [ž] in Mi/H ⟨n̥hkižikw̥i⟩ preserves a trace of it. However, other attestations of ‘eye’ do not point to [(n)ž], but to /hš/, such as Mi/D ⟨akici’kw̥i⟩, V ⟨kéchékoué⟩, and, especially, the P/H plural ⟨kiš’ikw̥a⟩, all of which seem to indicate a form (231) *ahkiihšikwi* ~ *ahkiihšikwa* ‘eye(s)’.

6. Conclusion. In conclusion, I would like to discuss how the Miami-Illinois reflexes of the Proto-Algonquian consonant clusters reflect on its place in Algonquian. First and most important, Miami-Illinois shares with Ojibwa/Potawatomi, Sauk/Fox/Kickapoo, and Shawnee the merger of all the Proto-Algonquian glottal + lateral clusters (i.e., **hθ*, **ʔθ*, **hl*, and **ʔl*); in Miami-Illinois these all appear as /hs/. This is the most salient sound change of what has been called the “Eastern Great Lakes” group of Algonquian (Rhodes 1988). In addition, Miami-Illinois shares with this group the merger of all glottals (**h* and **ʔ*) before obstruents (**t*, **č*, **s*, and **š*). The evidence on where to place Miami-Illinois WITHIN the Eastern Great Lakes group, however, is ambiguous. The retention of *sp* in the earliest records, like the differentiation of *s* and *hs*, is shared by Ojibwa/Potawatomi and Shawnee, though not by Fox. The retention of nasal + obstruent clusters is shared by Ojibwa, but then again, this conservatism is also found in Delaware. Miami-Illinois shares with Fox and Shawnee the development of **čk* as /hk/, though this could be seen as part of a general process on the part of Miami-Illinois of gradually merging all sibilant + stop clusters into simple preaspirates. Additionally, note that in Miami-Illinois, PA **nl* appears as /nt/ (see 4.3.2); this is probably the reflex this cluster had in Fox before that language changed nasal + stop clusters to simple stops (Goddard 1973b:2). Finally, if my analysis is correct, early Miami-Illinois kept PA **šk* and **čk* separate—as /sk/ ~ /hk/ and /hk/, respectively. This is also true of Cree, Menominee, and Delaware, though within Eastern Great Lakes, it is only shared by Ojibwa/Potawatomi.

In summary, in my attempt to demonstrate the Miami-Illinois reflexes of the Proto-Algonquian consonant clusters, it has been possible, in the great majority of cases, to cite examples with preaspiration explicitly marked in some source. Even in those few cases where there is no such citation, I do not think the Miami-Illinois reflexes are in any doubt. The consonant reflexes of Miami-Illinois firmly place it in the same group as Ojibwa/Potawatomi, Sauk/Fox/Kickapoo, and Shawnee. Within that group, its place is not as clear, but the language does share several conservatisms with Ojibwa.

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