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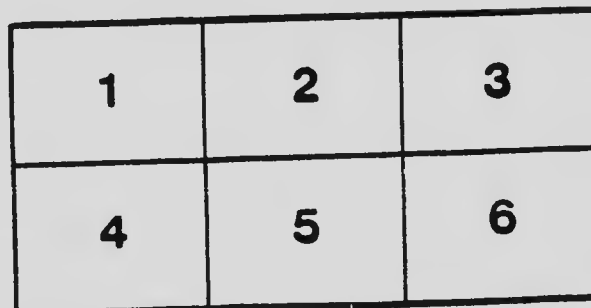
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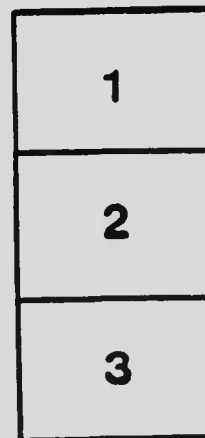
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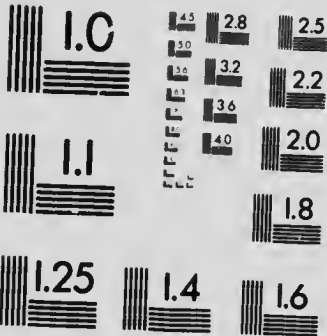
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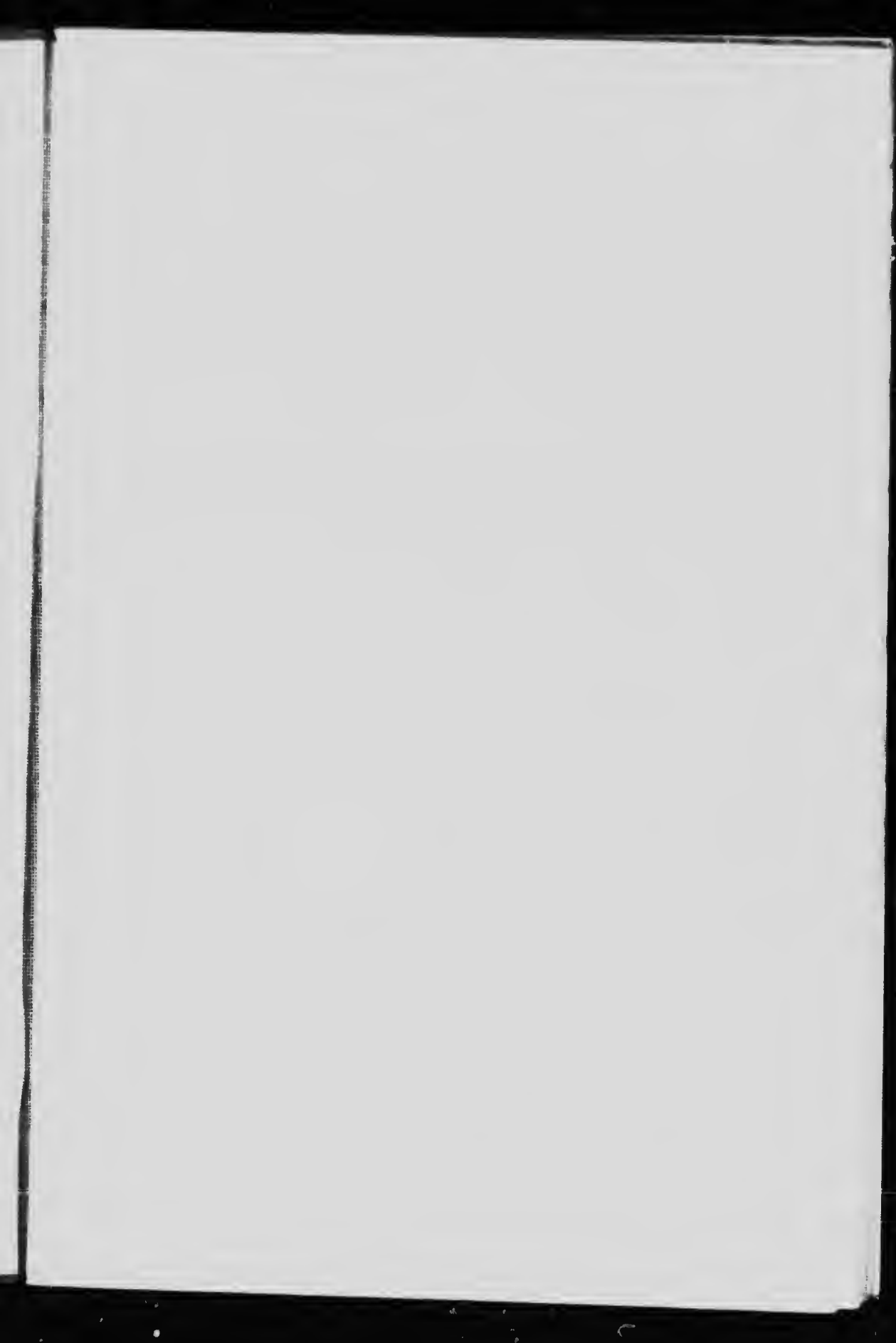
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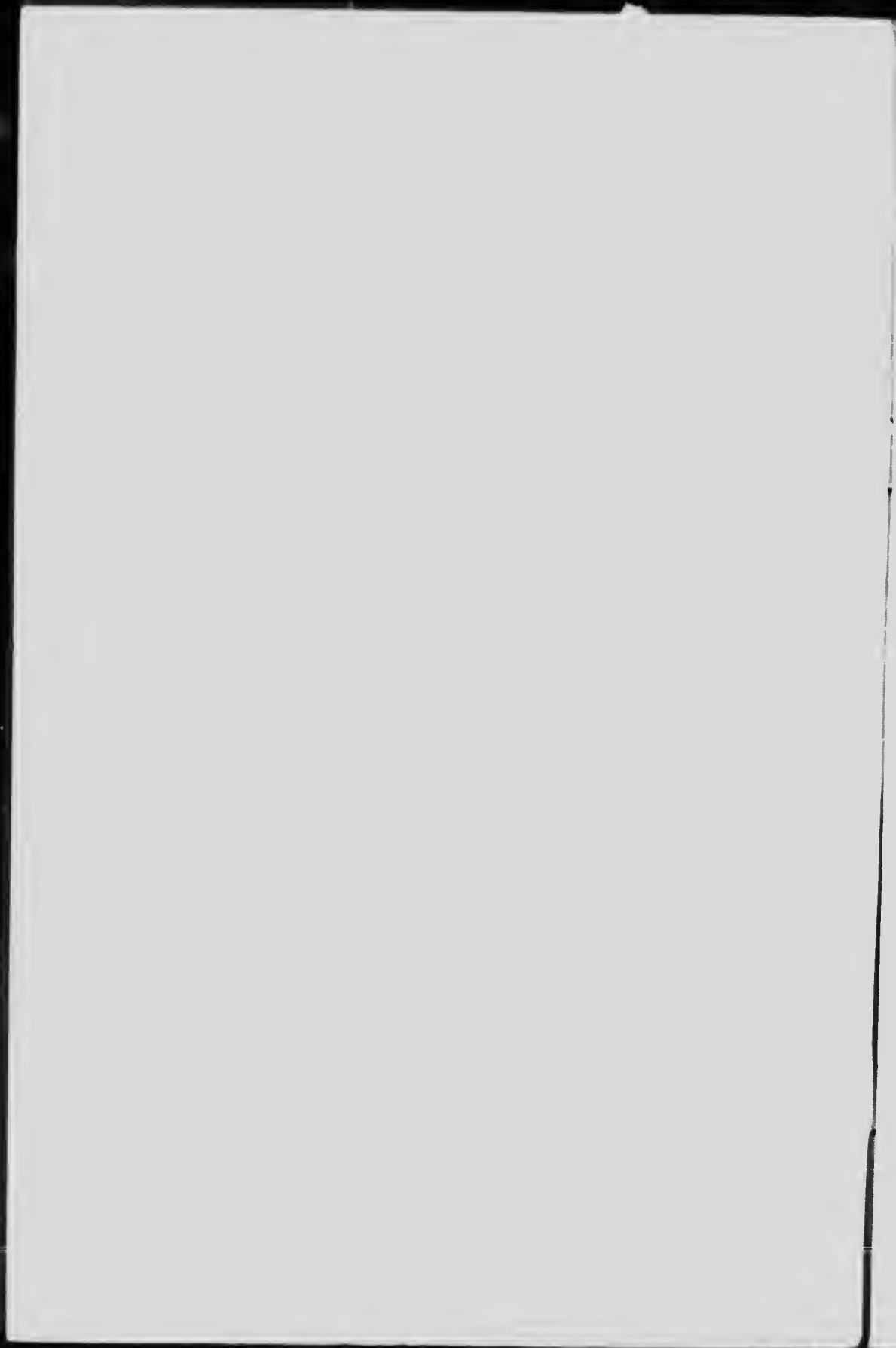
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Classification of Iroquoian
Radicals with Subjective
Pronominal Prefixes

BY
C. M. Barbeau



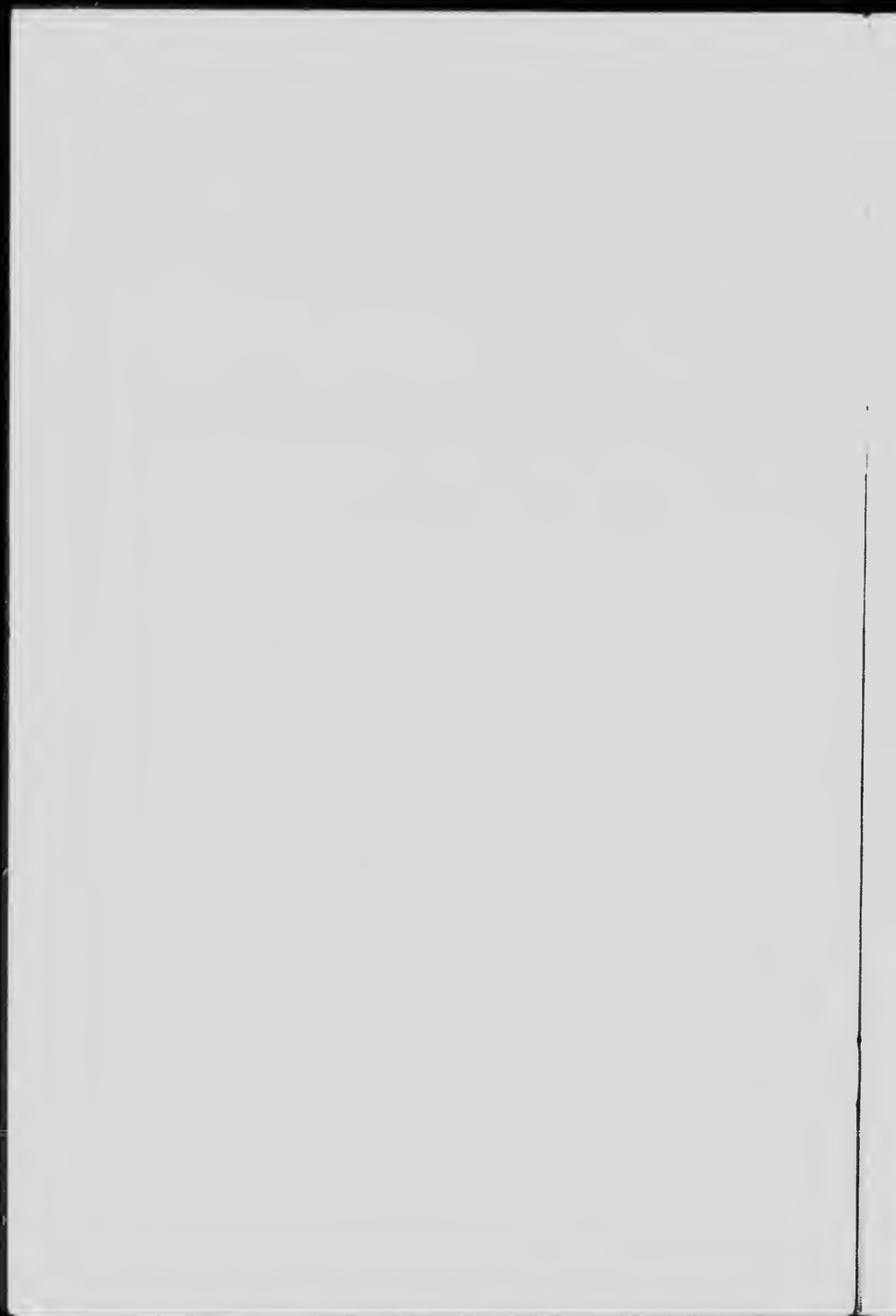
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CONTENTS.

	PAGE
Introduction	1
Wyandot paradigms A and B	2, 3
Determining factor in the classification of Iroquoian noun and verb stems into several conjugations	4
Structure of the subjective pronominal prefixes in Wyandot, Mohawk, and Oneida	17
List of general Iroquoian phonetic laws	23
Phonetic rules special to Oneida	24
Phonetic rules special to Wyandot	24
Hypothetical original Iroquoian sounds and their derived Mohawk, Oneida, and Wyandot equivalents	25
APPENDIX	
List of Wyandot phonetic SILENCES	26
Oneida paradigms (Boase)	28, 29
Mohawk paradigms (Cuoq)	30



Classification of Iroquoian Radicals with Subjective Pronominal Prefixes.

INTRODUCTION.

Philologists have long been aware of the characteristic classification of Iroquoian noun and verb stems into several conjugations, as a result of their combination with pronominal prefixes. Fairly complete tables, now available on a few of the Iroquoian dialects, uniformly include two classes of paradigms, each of which has five sets of pronominal prefixes, distinctive of as many conjugations. While several other tables may, presumably, be found in manuscripts, the only ones here referred to are that of Father J. A. Cuoq¹ on the Mohawk dialect, and that of Dr. Franz Boas² on the Oneida dialect. It may be stated, moreover, that Cuoq and Boas have, in this matter, followed the footsteps of Rev. Joseph Marcoux, the pioneer grammarian of the Iroquoian dialects proper, and missionary among the Mohawks of Caughnawaga (1819-1855), Cuoq having rehandled and published sketches and a vocabulary based upon Marcoux' material, and Boas having prepared a brief study on the Oneida dialect along the lines suggested by Cuoq's works.³

¹ "Études Philologiques sur Quelques Langues Sauvages de l'Amérique," par N. O., 1866, p. 99.

² "Notes on the Iroquoian Language," Putnam Anniversary Volume, 1909, pp. 442, 443.

³ "Jugement erroné de M. Boas sur les Langues Sauvages," Montreal Dawson Bros., 1869; "Lexique de la Langue Iroquoise," Montreal, 1882.

WYANDOT PARADIGM 4

Conj. ¹	SINGULAR			DUAL			PLURAL				INDEF
	1	2	3 m	1 incl	1 excl	2	3 m	2	3 m	3 m	
I	y(a)- ² c(e)- c(e)-	h(a)- ³ h(a)- h(a)-	u(a)- y(a)- u(a)-	k(a)- t(a)- t(a)-	h(a)- t(a)- t(a)-	h(a)- t(a)- t(a)-	h(a)- t(a)- t(a)-	h(a)- t(a)- t(a)-	h(a)- t(a)- t(a)-	h(a)- t(a)- t(a)-	h(a)- t(a)- t(a)-
II	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-
III	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-
IV	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-
V	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-	h(a)- h(a)- h(a)-

¹ The Roman figures in the first column indicate the conjugation, the letters the sub-conjugation

² () denote that the enclosed vowel belongs to the stem

³ h- indicate contracted vowels or consonants, consisting originally of two elements

⁴ The brace includes two forms found in different sets of verbs

⁵ y means 'unrealized vowel'

WYANDOT PARADIGM B

Conj	SINGULAR			DUAL		PLURAL			ISOL
	1	2	3 m.	1	2	1	2	3 m.	
I									
A	$\{ \begin{smallmatrix} \text{aag(u)}- \\ \text{aag(a)}- \\ \text{ag(u)}- \end{smallmatrix} \}$	s[a]-	[a]-	pa(p)-	ts(a)-	pa(p)-	ska[ɔ]-	ad(a)-	ap[a]-
B	$\{ \begin{smallmatrix} \text{aap(u)}- \\ \text{aap(a)}- \\ \text{ap(u)}- \end{smallmatrix} \}$	s[a]-	[a]-	pa(p)-	ts(a)-	pa(p)-	ska[ɔ]-	ad(a)-	ap[a]-
II									
A	$\{ \begin{smallmatrix} \text{adp(u)}- \\ \text{adp(a)}- \\ \text{ap(u)}- \end{smallmatrix} \}$	sa-	u-	pa-	tsa-	pa-	ska[ɔ]-	ad(a)-	ap[a]-
B	$\{ \begin{smallmatrix} \text{adp(u)}- \\ \text{adp(a)}- \\ \text{ap(u)}- \end{smallmatrix} \}$	sa-	u-	pa-	tsa-	pa-	ska[ɔ]-	ad(a)-	ap[a]-
III									
A	$\{ \begin{smallmatrix} \text{adp(u)}- \\ \text{adp(a)}- \\ \text{ap(u)}- \end{smallmatrix} \}$	sa-	u-	pa-	tsa-	pa-	ska[ɔ]-	ad(a)-	ap[a]-
B	$\{ \begin{smallmatrix} \text{adp(u)}- \\ \text{adp(a)}- \\ \text{ap(u)}- \end{smallmatrix} \}$	sa-	u-	pa-	tsa-	pa-	ska[ɔ]-	ad(a)-	ap[a]-
IV									
A	$\{ \begin{smallmatrix} \text{adp(u)}- \\ \text{adp(a)}- \\ \text{ap(u)}- \end{smallmatrix} \}$	sa-	u-	pa-	tsa-	pa-	ska[ɔ]-	ad(a)-	ap[a]-
B	$\{ \begin{smallmatrix} \text{adp(u)}- \\ \text{adp(a)}- \\ \text{ap(u)}- \end{smallmatrix} \}$	sa-	u-	pa-	tsa-	pa-	ska[ɔ]-	ad(a)-	ap[a]-
V									
A	$\{ \begin{smallmatrix} \text{adp(u)}- \\ \text{adp(a)}- \\ \text{ap(u)}- \end{smallmatrix} \}$	sa-	u-	pa-	tsa-	pa-	ska[ɔ]-	ad(a)-	ap[a]-
B	$\{ \begin{smallmatrix} \text{adp(u)}- \\ \text{adp(a)}- \\ \text{ap(u)}- \end{smallmatrix} \}$	sa-	u-	pa-	tsa-	pa-	ska[ɔ]-	ad(a)-	ap[a]-

⁶ v with a hook under it indicates 'unsalized vowel'.

⁷ The prefixes in heavy type indicate that the form is an exceptional one.

⁸ Only the verbs of this subconjugation have, so far, been recorded.

⁹ While in some verbs of this subconjugation only the u-ual form may be used, in others the exceptional one may either be used as well, or even exclusively.

¹⁰ r is an absolute prefix, appearing before the pronoun.

For the preparation of the present paper, Cuoq's and Boas' Mohawk and Oneida studies have been utilized comparatively with the Wyandot linguistic data collected by myself, in the course of a season's field work among the Wyandots of Oklahoma, in 1912. To Dr. Edward Sapir I am indebted for his kind advice on the method followed while recording the linguistic data in the field, and especially for his collaboration in the study of the comparative phonetics and grammar of the Mohawk, Oneida, and Wyandot dialects.

For further reference, the two original tables of Wyandot paradigms (the first with five series of fifteen, and the second with five series of eleven, pronominal forms) are given here (pages 2, 3)¹.

DETERMINING FACTOR IN THE CLASSIFICATION OF IROQUOIAN NOUN AND VERB STEMS INTO SEVERAL CONJUGATIONS.

A few *preliminary remarks* may not be out of place here. In the composition of Iroquoian pronouns with noun and verb stems, the fundamental rule as to the order in which these elements are combined is either to prefix the pronoun to the verb directly, or to introduce the noun stem between the pronominal prefix and the verb stem. In other words, we may have: pronominal prefix + verb radical (for instance, I + give), or, pronominal prefix + noun stem + verb stem (for instance, I + apple + give, for "I give (an) apple").

The noun or verb stems fall into several sets when combined with their appropriate pronominal prefixes. A specified verb stem can be conjugated with the pronominal elements of one series only; that is, it may require either one of the series (described as Ist, IInd, IIId, IVth, and Vth conjugations) of *paradigm A*, or one of the corresponding sets of forms included in *paradigm B*. A verb is likely, moreover, to pass from one conjugation of *paradigm A* into the corresponding conjugation of *paradigm B*, in certain specific circumstances. When the

¹ Cuoq's and Boas' paradigms are given in the Appendix of this paper.

noun stem is placed between the pronoun and the verb, the noun stem determines the conjugation of the preceding pronominal prefix, and is followed by the verb stem stripped of its prefixes.

The aim of the present paper is to indicate the determining factor in this classification of radicals into several conjugations.¹

Although no explicit reason has yet apparently been advanced accounting for this rigid sorting of the stems into several conjugations, Marcoux, Cuoq, and Boas indicate by their treatment of the pronominal prefixes that they must have found it impossible to lay down the principle, whether pertaining to the history or to the phonetic requirements of the language, which is at the basis of this classification of stems. The pronominal elements, as tabulated in the paradigms published by these authors, are always immediately followed by one of several vowels standing between the pronoun and the stem.

What is the nature of these vowels? Are they part of the pronominal prefixes, or of the verb or noun radicals; or, are they independent intrusive elements? The following are utterances of Cuoq, Boas, and of Father J. Gras, on this topic. Cuoq simply describes these vowels as follows:² "A, lettre caractéristique de la 1ère conjugaison" (A, characteristic letter of the 1st conjugation), . . . "E bref est le signe de la 2nde conjugaison" (short E is the sign of the 2nd conjugation), . . . "E long est le signe de la 3e conjugaison" (long E is the sign of the 3rd conjugation), . . . "Le plus souvent une N nasale accompagne le signe de cette conjugaison et se confond avec lui" (the nasal N generally follows, and is blended with, the sign of this conjugation), and . . . "O long est le signe invariable de la 5e conjugaison. Assez souvent il est suivi de N soit simple soit double, et alors il forme syllabe avec cette consonne, laquelle fait aussi partie du signe de cette conjugaison" (long O is the invariable sign of the 5th conjugation. Fairly often it is followed by a single or a double N, and then it blends in a syllable with this consonant, which thus becomes part of the sign of the conjugation). Mr. Boas seems to have assumed a similar point of view, and he terms these vowels "vocalic characteristics of verbs and nouns" or "vocalic character."

¹ The independent question as to why some stems belong exclusively to *paradigm B* while others are found to pass, in certain circumstances, from one conjugation of *paradigm A* into the corresponding one of *paradigm B*, is not discussed here.

² "Études Philologiques", pp. 95, 96, and 97.

He adds:¹ "In many cases certain elements are suffixed to the nominal stem when it appears in incorporated form, that apparently give to it the character of a verbal noun expressing quality, instrumentality, and similar ideas. In this form the noun is inserted between the prefixed pronouns and the verbal stem. As soon as this composition is made, it appears that each stem, both nominal and verbal, has a certain *initial vocalic character* which in other forms does not necessarily appear." And further², "To walk, *i-(ē)* . . . Apparently the *stem and its vocalic character form a unit here*." Yet the following sentence seems to contradict the above view, "Verbs of the E class appear, *when the stem begins with a consonant, without vowel*" (apparently implying that some verbs may in the same conjugation begin with a vowel).³ Father J. Gras, S. J., a missionary among the Mohawks of Caughnawaga, who has a speaking knowledge of Mohawk, has lately written in reply to a query on this point, "Chez nous, les dites voyelles ont toujours été considérées comme préfixes personnels et indépendants du radical. Une preuve qu'elles sont des préfixes c'est qu'elles sont mobiles et s'élident au contact du radical devant une voyelle ou devant certaines consonnes, par euphonie. Le cas arrive assez souvent, à la 2e personne singulier, indicatif présent de la 2e conjugaison, et ailleurs." ("Among us, these vowels have always been considered as personal prefixes and independent of the radical. As a proof of their being prefixes may be pointed out the fact that they are movable and are elided for euphony before a vowel or certain consonants, when they are juxtaposed to a radical. This happens fairly often in the 2nd person singular, indicative present, of the 2nd conjugation, and elsewhere").

On a close examination of the available Wyandot, Oneida, and Mohawk material, it seems obvious that this standpoint needs revision; and I will now attempt to show concisely that while these so-called vocalic elements are, in the 1st, 3rd, 4th, and 5th conjugations of *paradigms A and B*, an integral part of the verb or noun stems, they prove to be, in the 2nd conjugation (made up of stems beginning with consonants and a semi-

¹ "Notes on the Iroquois Language," p. 437.

² Ibid., p. 454.

³ Ibid., p. 451.

vowel), part of the pronominal prefixes, with the exception of the first and second persons singular, in which they seem to be accidental or intrusive elements. It will be necessary for our purpose to analyse the structure of the pronominal elements, and to explain the rules governing certain Iroquoian phonetic changes or contractions.

Let us first confine our attention to the Wyandot *paradigm A*, Boas' table of Oneida '*subjective prefixes*', and Cuoq's *paradigm K* for Mohawk personal pronouns, each of which consists of five analogous conjugations of fifteen pronouns¹. In these dialects the vowels of the IInd conjugation accompanying the consonant or consonants of the pronominal prefixes, are several in number, namely, *e-* in the first and second persons singular, and the indefinite; *a-* in the third persons masculine and non-masculine, the first persons plural inclusive, exclusive, and the second person plural; and *i-* in the five persons dual and the third persons masculine and non-masculine plural. That these *e-*, *a-*, and *i-* vowels cannot be considered as an integral part of the stems is granted by the above-mentioned writers and is clearly borne out by the facts. Besides their being irreducible to a single vowel by means of an analysis² based upon the rules of Iroquoian phonetic changes, one of these vowels is systematically dropped in certain circumstances, which could hardly happen in the case of an integral stem element. It may safely be stated, moreover—although somewhat prematurely—that whenever a verb stem of the IInd conjugation is compounded with either an immediately preceding noun stem, the reflexive prefix *-at-* (or *-ad-*), or a suffix of the incorporated noun, none of these *a-*, *e-*, and *i-* vowels is retained before the verb radical. A few Wyandot and Mohawk instances are here given in support of this statement³.

Wyandot verbs belonging to the IInd conjugation incorporated with noun stems or other elements:—

<i>a'²-ye-h̄mā-dīn'²</i>	I-boat-hang,
<i>a'-yē-gyārū'²-ta²-dī-nō't</i>	I-canoe-hang,
<i>de-kyu¹-nō'rē²n-dīnō't</i>	that-there it-scalp-hangs,

¹ The order of the Wyandot conjugations corresponds exactly to that of Mr. Boas' sketch, while the IVth conjugation of Cuoq becomes the IIIrd in the other paradigms.

² *a'-* is a verbal absolute prefix.

³ Presumably a noun suffix.

⁴ *i-* locative prefix contracted with the pronoun.

<i>a'-a-rô'-k'-ya'</i>	I-log-cut,
<i>ha-^adîcrá-yî'</i>	he-the sun-sees,
<i>a'-k²-âhâ-té'dî'</i>	I-the road-change,
<i>a'-³nô'dâ-té'dî'</i>	I-the paint-change,
<i>-rîwa-wá'e'</i>	(to) word-hold,
<i>y-at-rîwá'-dîyô'</i>	I-self-news-purchase,
<i>a'-y-â⁴-rîwa-ñîmî'</i>	I-self word-know how (i.e. I entreat),
<i>â'-y-at-rîjû'</i>	I-self-fight or kill, (i.e. I am fighting),
<i>a'-y-at-rîhô'⁵</i>	I-self-office hold,
<i>k-hu^mwa-nû^mwé's⁶</i>	I-like the boat.

A few supplementary instances from Cuq's "*Lexique*" will suffice for the present purpose:—

<i>ke-rîo-ta⁷-na'kôre</i>	I-the game-am skilful at (i.e. I am a skilful hunter),
<i>k-at-kenses</i>	I-self-see (i.e. I inspect, - look for),
<i>k-at-tats</i>	I-self-stand near (from <i>iktats</i> : I stand near),
<i>ke-rîwa-weienhon</i>	I-the matter-know how (I am able to do it properly),
<i>ke-wenna-weienhon</i>	I-the language-know how (i.e. I know the language well),
<i>k-at-sentha</i>	I-self-go down,
<i>k'-werkons</i>	I-wrap up.

The *e*- of the first and second persons singular of the IInd conjugation is, taken by itself, a meaningless intrusive vowel; for it does not appear, first, with the pronominal elements of the first and second persons singular when they are either prefixed to any of the stems belonging to what may be called the 'contracted sub-conjugation' of the IInd conjugation⁸, or second, when amalgamated with other elements in order to form

¹ $k + r > r$ (paradigm A, II, C¹): *-rô't-* (log): *-rô't+ya' > rô'kya'* according to the Wyandot phonetic rule $r+ya > kya$.

² *t-* (locative prefix) $+y > k$.

³ $k + s > n$ (paradigm A, II, C²).

⁴ Semi-reflexive prefix, termed 'passive' by Boas.

⁵ *-rîhô'* is derived from *rî'WA-WA'* "function-hold:" $WA+WA > wô > o$, according to an Iroquoian phonetic rule.

⁶ From *ge-nû^mwé's*, I like (II conj); Mohawk instance taken down by Mr E. Sapir, at Caughnawaga.

⁷ *-a-*, noun suffix.

⁸ Paradigm A, II, C¹ and C².

the first and second persons dual and plural (as will be seen later), or, third, as we have seen, in composition. The first two of these points will now be made more explicit.

(a) This element *e-* is non-existent in the first and second persons singular of all the verb stems of the "contracted sub-conjugation" (Wyandot, II, C¹ and C²). The stems of this class, in the Wyandot dialect, are those that begin with *d-* or *n-*, *r-*, *j-* (*j* being derived from the original Iroquoian *kr*, *kr* and *nr*², and original Iroquoian *r*). The Mohawk and Oneida stems that constitute their equivalent "contracted" sub-conjugation seem to correspond, roughly speaking, to the Wyandot ones. From Cuq's "*Lexique*" may be listed a number of verbs with *n-*, *k-*, *h-*, *i-* (imperfect phonetic spelling of Cuq for *y-*) and *st-* stem beginnings, before which the *e-* does not appear in the first, and, presumably, second persons singular; for instance, *kninous* (I bny³), *kniiotha* (I erect), *kkwitha* (I move-something-), *kiatons* (I mark), *ikiaks* (I cut), *khente* (I lead), *ikkens* (I see), *iksta* (I use), *ikkuras* (I pick up), *ikhave* (I hold), and so on. With regard to the Oneida, Mr. Boas gives a few similar "contracted" forms⁴, explaining that they occur in connexion with stems beginning with *h-*, *g-*, *s-*, *d-*, *n-* and *y-*. He further points out that, "In the dialects of the Iroquois the disappearance of the vowel is not always found in the same verb, and even the same dialect has varieties of forms. Thus we find in Oneida both *iglius* and *igclius* ("I kill")."

(b) The intrusive *e-* of the first and second persons singular, moreover, does not, as a rule, follow these prefixes when they are blended with certain other elements to form the composite dual and plural pronominal forms. To anticipate, it may be stated that the first persons exclusive dual and plural pronominal prefixes, at last analysis, resolve into: *somebody* +⁴ *I* + *two*, meaning "two of us, someone else and I" (for the first person exclusive dual), and *somebody* + *I* + *several*, meaning "several of us, I and someone else" (for the first person exclusive plural). In the three dialects here discussed, the actual forms are the

¹ Boas' "*Notes* . . ." pp. 451, 452.

² Small capitals are here consistently used to represent the hypothetical original Iroquoian forms.

³ Although such forms are always translated as infinitives in the "*Lexique*," they are first per. sing. indic. present.

⁴ + is consistently used in this paper with the meaning "and" or "plus."

following: In Oneida, *yagui-* and *yagwa-*, consisting of *ya* ("somebody") + *g* ("I") + *n*[*ɪ*] (one of the two regular dualie particles *-i-* and *-n-*), and *ya* ("somebody") + *g* ("I") + *wa* (pluralie particle, meaning "several"); in Mohawk, *iakeni-* and *iakwa-*, that is *ia-* (better written *ya*, "somebody") + *k* ("I") + *wa* (plurality); and, in Wyandot, *ai-* and *awa-*, going back to the original Iroquoian *ɪ* + *ɪ* (contracted, according to the Wyandot phonetic rules later described, *ɪɪ* into *a-*, and *ɪɪ* into *i-*), and *ɪa* + *ɪ* (*ɪa* similarly contracted into *a-*, and *ɪɪa* always becoming *wa*). To sum up, *κ-* (first person singular) is found but once, in the first persons exclusive dual and plural, with *e-*, that is in the Mohawk first person exclusive dual *ia-ke-ni*. Practically the same remark applies to the *e-* that follows, in certain verbs, the *e-*, *s-* or *z-* of the second person singular, the *e-* being dropped in two out of three cases when the *e-*, *s-* or *z-* are combined with dualie or pluralie elements. Thus the conclusion is reached that *e-* is not an essential part of the pronominal elements of the first and second persons singular (the nature of the *e-* indefinite being uncertain, it may be left aside for the present).

In the third persons masculine and non-masculine singular, the first persons inclusive and exclusive and second person plural, the *a-* of the Hind conjugation may be considered, in these three dialects, as part of the pronominal prefix. The *a-* in the first persons inclusive and exclusive and the second person plural is, in fact, essential to the pluralie particle *wa*, which is postfixed in all the conjugations to the other constituent elements of these pronouns.¹ As for the *a-* of the third persons masculine and non-masculine singular, although distinctly a part of the pronominal prefix, it is not invariably preserved. It is found, first, in the singular masculine *la-* (Oneida), *ra-* (Mohawk)², and *ha-* (Wyandot); in the non-masculine singular *ga-* (On.), *ka-* (Mo.) and *ya-* and *wa-* (Wy.); and, sometimes also, among the elements of the pronouns for the third persons plural masculine and non-masculine, for instance: *ha-ti-* and *wa-ti-* (Wy.), *la-di-* and *gundi-*³ (On.), and *ra-ti-* and *koti-* (Mo.). It may be pointed out at once that, in the other conjugations, the

¹ The V h conjugation, as we shall see later, is no exception in this respect.

² *la-* and *ra-* become *ha-* after prefixes.

³ Presumably *gawadi-* originally, *ɪwa* > *ɪ* (or *u*), according to the Iroquoian phonetic rule.

same *a* element reappears with these third person pronouns whenever the conditions have not been otherwise disturbed. This vowel, however, is dropped whenever it enters into composition with the dualic particles *-i* or *-u* to form the pronominal prefixes of the third persons dual masculine and non-masculine, as follows: *h-i-* and *i-i* (Wy.), *h-ni-* and *q-ni-* (On.), and *h-ni-* and *k-i²-ni-* (Mo.).

The *i*-vowel in the dual of the Hind conjugation is a part of the pronoun, as it here conveys the idea of pronominal duality. It may, moreover, be said that the dualic particles *-i-* and *-u-* are characteristic of the dualic pronominal prefixes of all the conjugations.

Thus the conclusion is now reached that, as the noun and verb stems of the Hind conjugation do not include the above-described *e-*, *a-* and *i-* which immediately precedes them, they must all be considered as beginning with the following element, that is, a consonant or the semi-vowel *y*. In other words, the *Hind conjugation consists exclusively of stems beginning with consonants*.

In Wyandot, these stems beginning with consonants may be classified into at least two sets, those belonging to the sub-conjugations A and B, and those belonging to the contracted sub-conjugation C¹ and C². The former begin with *t-*, *ts-*, *s-*, *g-*, *gw-*, *gy-*, *k-*, *y-*, *j-*³, *u-*, *b-*, *m-* and *w-*; the latter with *r-*, *n-*, and *d-*, *kw-*, *j-*⁴, and the original Iroquoian *y-*. The stems beginning with the *y-* (*paradigm* A, II, C¹ and C²) provide us with some interesting Wyandot phonetic changes due to contractions with neighbouring elements. In fact, *y-* (found as *y-* in Boas' "Notes" and represented as *i-* by Cuoq and Hewitt) is lost in Wyandot, except when it contracts with a prefixed element. For the stem *-ra²s* ("to eat"), one generally finds *-a²s*; *y-* reappears only when, as we shall see later, it comes into contact with the Wyandot *y-* (= to Oneida *g-* and Mohawk *k-*), *r-*, *h-* and *i-*, where it reappears contracted with these elements as *j-* before a vowel, and *n-* before a nasalized vowel. Quite a number of these stems have already been listed for the Wyandot.

¹ *ky* > *i* in Wyandot.

² *e-* being, no doubt, the intrusive element above described.

³ Presumably derived, here, from the original Iroquoian *ky-* and *ny-*.

⁴ Derived, here, from *ny-*.

Let us now analyse the *vowels of the 1st conjugation*. In the three dialects, only two distinct vowels are found immediately following the consonant of the pronoun, that is, *a-* and *o-* (*o* corresponds to Boas' *u^m*-and Cuq's *ou-*). *o-* appears only in the third persons plural masculine and non-masculine, and in the indefinite.

According to a general Iroquoian phonetic rule, however, *o-* goes back to *awa*. Thus, the Oneida aorist prefix *wa-* combined with the following non-masculine pronoun *wa-* becomes *o¹*, that is, *wa+wa > wo- > o²*; the Wyandot verb stem *wa'*, (Ind conj.) meaning "to have, to hold," when post-fixed to *-riwa-* (stem, meaning "word, custom, function"), becomes *a'-yat-riho'* from the original *a'yat-ri³awawa'*; the compound pronouns first persons dual and plural of *paradigm B* (Cuq's *paradigm A* and 8, and Boas' table of "Objective Prefixes"⁴) consist of the elements *ra* ("else", indefinite) + *wa* ("it" non-masculine singular) + *e* ("I") + *i* (dualic), and, for the plural, *ra+wa+e+wa* (pluralic)⁵, which become, according to the same phonetic law, *yu^mgya-* (dual) and *yu^mgwa-* (plural) in Oneida⁶, *ionkia-* and *ionkwa⁷* in Mohawk, and, in Wyandot, *gña⁸* and *gmg⁹*. The *o-* of the third persons masculine and non-masculine plural, and the indefinite of the 1st conjugation is due to the same phonetic change, produced in the following manner: "they" (plural masculine) is made up of *na* ("he") + *wa* ("several") > *ho-* in Wyandot, *ron-* in Mohawk, and *lu^m-* in Oneida; "they" (plur. non-masculine) consists of *ka* ("it") + *wa* ("several") > *yo-* in Wyandot, *kou-* in Mohawk, and *yu^m-* in Oneida; the indefinite "somebody" is expressed by *ra* ("else") + *wa* ("it") > *o¹⁰* in Wyandot, *ion-* in Mohawk, and *i^m-* in Oneida.

¹ Boas' "Notes", p. 419, 6th line.

² *u-* before *o-* is lost, according to a general Iroquoian phonetic rule.

³ The bracketing "seems" to be a noun suffix (see Boas' "Notes", p. 453).

⁴ Boas' "Notes", p. 463.

⁵ The meaning of which is, respectively, "it — two of us, somebody else and me," and "it — several of us, somebody else and me." Throughout the whole paradigm, *wa-* ("it", third person non-masculine singular) is introduced as a kind of impersonal subject while the regular subjective pronouns are objects of the verb.

⁶ Boas' "Notes", p. 445.

⁷ Cuq's "Etudes Phil.", p. 117.

⁸ *aiA > ja* *kaA* after nasalized vowels > *ga*, in Wyandot, a following *A > a* owing to the vicinity of another nasal, in conformity with the Wyandot phonetic rule.

⁹ *ka + w > m*, and *w* between two nasals > *m*, in Wyandot.

¹⁰ *yo > o*, *na > a* is always lost in Wyandot, except when it is extracted with other elements.

a of the 1st conjugation being thus derived from the original Iroquoian *awa*, we are now justified in concluding that the *a*-vowel is present after every one of the pronominal prefixes of this conjugation. The evidence shows satisfactorily that this *a*-vowel is an integral part of the radicals of the 1st conjugation, for *a*- is retained by the stem whenever it is incorporated after a noun stem or the *-at-* and *-atat-* reflexive prefixes. A few Wyandot instances will answer the purpose here:—

<i>ti-y-[a]wd'sti'</i>	thus-it- (is) fine,
<i>de'ci-sd-ni'-daw'sti'</i>	that far- (to) thee-hair- (is) fine,
<i>de'ci-c-äyd'jed-daw'sti'</i>	that far-hy-spots- (are) fine,
<i>a'-wäyé'-c-[a]'tq'</i>	-it me-mouth-lost (I lose my mouth),
<i>a'-wä-nq'tst'-r-ä'tq'</i>	it me-head-lost,
<i>wäyé-kwi'st-ä'tq'</i>	it me-money-lost,
<i>a'-yé-nq'e-ärf'ta'</i>	I shoulder-bite,
<i>dye'nqt-drf'ta'</i>	I leg-bite,
<i>wäy-at-dm?</i>	it me-self-water is (i.e. I swim),
<i>a'-¹dat-ä'ä'²</i>	I-the village-hit,
<i>h-[a]tälē-ni'-ätē'ya'³</i>	he-to self-hair-burns,
<i>a'nq'st-ätē'ya'</i>	I-seeds-burn,
<i>a'-y-ähq't-ärf'at</i>	I-car-burn.

Now that it has been shown that the stems beginning with *a*- and with a consonant belong to the 1st and 2nd conjugations, let us proceed to the 3rd, 4th, and 5th conjugations, into which, as we shall presently see, fall the stems beginning with *i*- (3rd), *e*- and *ε*- (4th), and *u*- and *o*- (5th).

In the 3rd conjugation⁴, three vowels appear in different forms: *i*- in the first and second persons singular, the five persons dual, and the third persons masculine and non-masculine plural; *ε*-⁵ in the third persons masculine and non-masculine singular, the first persons inclusive and exclusive plural and second person plural; and, last, *e*- in the indefinite. The origin of this *e*- vowel may be ascribed, hypothetically, to the influence of the indefinite of the 2nd conjugation upon that of the 3rd, as its intrusion here cannot, apparently, be explained otherwise. The *ε*- vowel is the result of a general Iroquoian process transforming *a + i* into

¹ *a + i > a*, *a + ε > e*, after the general Iroquoian phonetic rule.

² From **dat-*, and **ä'st* (1 conj.).

³ **älē'ya'*, to burn (1 conj.).

⁴ *i* (conj.) = 3rd.

⁵ *ε*-, in Wyandot, *en*- in Chero's Mohawk, and *a**- in Bonap's Oneida.

ɛ-. For the elucidation of this rule, some instances may now be analysed: First, to the Wyandot verb stem *-ihq-* ("to say") corresponds the Oneida stem *i'-i*, which becomes ɛ- (= Boas' *A*¹) in the regular forms of its perfect tense; e.g. *i'z.ɔⁿ < i'² -z.ɔⁿ-i'*, "thou hast said"³; when the Wyandot term *a'yɛⁿditsu* (*a'-y-ɛⁿ-dits-u'*) ("to fish") is used as a noun, it becomes *yɛⁿtsq'* "(a) fish" (*kentsionk* or *kentsia*, in Cuoq), that is, original *κɔ* (pronominal prefix, meaning "it") + *its-* (a verb) i.e. (*ɔ + i > ɛ*); from *-ihc'* ("to die", Hrd conj., *parad. B*) is derived, in the same way, the term *āyɛw'i'eɛⁿhc'*, "I am tired" (or, literally, "it- (to) me-strength-dies or ends"), (*ɔ + i > ɛ*); and, finally, *yɛⁿsa'a* "rib" (i.e. *ya-'i'sa*) becomes *-i'sa-* when incorporated.⁴ Second, whenever ɛ- appears in the Hrd conjugation of the Wyandot *paradigm A* (or in its Oneida and Mohawk equivalents), an *a-* which is found to be part of the pronominal prefix in the other conjugations, namely: *ha-*, *la-* and *ra-* (Wyandot, Oneida, and Mohawk, third persons singular masculine), become *hɛ-*, *lɔ-* and *ren-*, in the Hrd conjugation; *ya-*, *ga-*, and *ka-* (third person non-masculine, in the same dialects) become *yɛ-*, *gɔ-* and *ken-*. Similarly, in the first persons inclusive and exclusive plural, and second person plural, *wa-* becomes *wɛ-*; the second person singular (Wyandot *paradigm B*⁵) *sa-* becomes *sɛ-*; and, among other changes, *hya-* of the first two Oneida conjugations⁶ becomes *hyɔ-*, in the Hrd. It is thus evident that ɛ (or *ɔ* and *en*) is derived from *A* plus another element, with which it contracts. It may safely be inferred that the latter is the same *i*-vowel as follows the majority of the pronouns in the same conjugation: that is, *ɔ + i* becomes ɛ exactly in the same way as the above-described *i' + z.ɔⁿ*, *i > i'z.ɔⁿ*, in Oneida.

As the vowel *-i-* immediately follows all the pronominal forms of the Hrd conjugation, and cannot belong to these pronouns, it becomes clear that it is an integral part of the stems. The

¹ Boas, *Ibid.*, p. 153.

² Absolute verbal prefix.

³ Compound pronoun, 2nd per. sing. of Boas' "Objective Pref.," Wyandot *paradigm B*, and Cuoq's *paradigm A* and S.

⁴ *i'* "to say."

⁵ For other forms, see Boas, *Ibid.*, p. 151.

⁶ *-qⁿl-* noun stem, the meaning of which is not clear.

⁷ *-u'* suffix, meaning "in water."

⁸ *-tsq'* in incorporated form.

⁹ *ya-*, pronominal prefix, 3rd person non-masculine, meaning "it."

¹⁰ See other instance in Boas' "Notes", p. 151, "to desire."

¹¹ Boas, *Ibid.*, "Objective prefix", Cuoq's *paradigm A* and S.

¹² Compound pronoun meaning "he — thee", Boas, *Ibid.*, p. 116.

very few stems of the IIIrd conjugation (being almost all neuter verbs (i.e. expressing a state of being) have not, as yet, yielded the supplementary evidence as to the retention or non-retention of the preceding vowel after an incorporated noun stem.

The vowels of the IVth and Vth conjugations do not offer the same difficulties as those of the first three conjugations, as they undergo comparatively slight phonetic changes. ϵ and ξ in the IVth conjugation, and u or o and φ in the Vth, appear quite consistently in all the forms¹. The Wyandot sub-conjugation C (paradigm A, IV C), however, has some exceptional forms in the third persons masculine and non-masculine plural, and the indefinite: in the case of certain verbs of this sub-conjugation, it is optional to use either the regular form of the IVth conjugation $-h\xi n-$ or the irregular form $-h\varphi-$. The only explanation for this is that the verbs of this series must have been, originally, a -stems of the Ist conjugation, which would explain the retention of the φ -forms of that conjugation. The fact that ξ goes back, in certain cases, to i or u , as shown above, is further reason for believing that these ξ -verb stems (IV, C) were, originally, stems beginning with u -. These original u -stems, having thus become assimilated to the ϵ - and ξ -stems (IV, A²) of the IVth, must have slipped gradually from one conjugation into the other. The Wyandot stems of sub-conjugation B (of the IVth)³ with their i -vowel may have passed, in the same way, from the IIIrd conjugation into the IVth.

The retention of their respective stem vowels ϵ -, ξ -, u - and φ - by the verbs of the IVth and Vth conjugations, when incorporated after a noun stem, will be illustrated in the following Wyandot instances:

(IVth conj. with ϵ -)

$ye-skur[é]é'ere'$	I-switch-drag,
$\bar{e}-ur-[é]tsi'$	-it-long is,
$\bar{a}y-e'st-\bar{e}tsi'$	-it me- bark-long (is),
$\bar{a}'-y-\varphi ar-e'tsi'$	-I-lake-lengthened,
$a'-y-\bar{a}l-\bar{e}'t-urá'$ ³	-I-self-am or go-away,

¹ Cuq and, after him, Boas only refer, in their paradigms, to ϵ and a (o) (Wyandot a) of the IVth and Vth conjugations. The available lists of stems, in these dialects, show, however, that these conjugations each lend stems beginning with i ($\bar{a}$) and u ($\bar{e}$) corresponding to Wyandot ξ - and u ($\bar{e}$) and o ($\bar{e}$) (Wyandot φ), as is the case in Wyandot.

² Only two of which have, so far, been recorded.

³ From $\bar{e}'t$, "to go", IVth conj. A.

<i>ta-y-at-é-'stz'</i>	thence-I-self-am or go-down,
<i>a'y-ǎt-é'-sku'</i>	-I-self-am or go- into water,
<i>ǎ-ri'wá'-ǎri't</i>	-I-word or promise-comply with,
(IVth conj. with ǎ-)	
<i>a'y-ǎ'díyó'-ra-ǎta'</i>	-I-mind- (noun suffix) -set
	or make up,
<i>awǎ-dù'lǎ-ǎta'</i>	it me-magic-belongs.
(Vth conj. with u-)	
<i>a'-k-at(e)-nǎ'st-ǎwá'</i>	(with) two I-self-seeds-scatter,
<i>ǎy-akya'tl-uri'</i>	it me-self body-covers
	(i.e. "I wear a coat"),
<i>a'-kwǎr'-uri'</i>	I quilt with-cover,
<i>a'-t-ròt-ǎrǎ'</i>	(in) two I-log-split
	(i.e., I split log),
<i>lǎ-r[ǎ]-nò'e-ǎyú'ta'</i>	there-he-house-is through
	(i.e., he went through the house).
(Vth conj. with o-)	
<i>a'-ye-hòmǎ-ò'gya'</i>	I-boat-make,
<i>ǎ-nò'e-ò'gyá'</i>	I-house-make,
<i>a'-dà'-tarǎ'gyá'</i>	I-bread-make,
<i>a'-ri'wǎ-ǎ'gyá'</i>	I-story-make,
<i>a'-rǎn-ò'gya'</i>	I-song-make,
<i>a'-ye-kwǎ'st-ò'gya'</i>	I-money-make,
<i>a'-ye-gyǎrá'u't-ò'gya'</i>	I-canoe-make,
<i>a'-wa-nǎ'st-ò'ti'</i>	-it me-seed-abandon
	(i.e. "I abandon the seeds"),
<i>a'-wǎ-nǎ'-ò'ti'</i>	-it me-hair-abandon,
<i>a'-wǎy-ǎ'st-ò'ti'</i>	-it me-bark-abandon,
<i>wǎyè'-dǎ'e-ò'ti'</i>	-it me-sand- abandon.

To sum up, the stem beginning is the determining factor in the classification of Iroquoian noun and verb stems into several conjugations. Thus, the stems beginning with *a-* belong to the Isth conjugation; those beginning with a consonant or semi-vowel to the IIrd; the stems beginning with *i-* to the IIIrd; those with *e-* and *ǎ-* (or *A-* and *en-*) to the IVth; and those with *u-* and *o-* (or *o,* *u-* and *on-*) to the Vth. In other words, the stem beginning is an unmistakable sign of the conjugation to which the stem belongs.

¹ From *-at* ("e-If") + *ra'st* ("body").

² *t* (dual or locative) + *A* ("I") > *k*.

STRUCTURE OF THE SUBJECTIVE PRONOMINAL
PREFIXES IN WYANDOT, MOHAWK,
AND ONEIDA.

So much for the stem elements. Now let us analyse the structure of the subjective pronominal prefixes, their variants and distribution through the five conjugations of *paradigm A* (Wyandot), Cuq's *paradigm K*, and Boas' "subjective prefixes."

The pronominal prefix of the first person singular ("I") is the same throughout, and appears as *g-* in Oneida, *k-* in Mohawk, and *y-* in Wyandot, all of which are dialectic forms of the original Iroquoian *-k*. The prefix for the second person singular ("thou") is also fundamentally the same in these three dialects, that is *z-* (On.), *s-* (Mo.), and *c-* (Wy.). The third person singular, masculine is *la*⁻¹ (On.), *ra*⁻² (Mo.), and *ha-* (Wy.) in the first three conjugations, and *ra-* in the last two. In these prefixes for the third person masculine singular, however, the *a*-vowel is not always retained in its original form, owing to the operation of the following Iroquoian phonetic rules: *la*^m- (Boas' IIIrd conj.), *ren-* (Cuq's IVth), and *hɛ̃-* (Wyandot IIIrd) are, as we have already seen, developments of *RE < RA* (pronominal prefix) + *r-* (part of the stem). In the Ist, IVth (Cuq's IIIrd), and Vth conjugations, moreover, the *a*-vowel of the pronominal elements of the third person singular masculine *la-* (On.), *ra-* (Mo.), and *ha-* and *ra-* (Wy.) combine with the stem vowels *a-* in the Ist conjugation, *e-* and *ɛ̃*⁻³ in the IVth, and *u-* or *o-* and *ɔ̃-*, *u*^m-, or *on-* in the Vth, thus becoming *la-*, *ra-* and *ha-* in the Ist conjugation, *le-*, *re-* (Mohawk and Wyandot) or *lɛ̃-* and *rɛ̃-* in the IVth, and *lo-*, *ro-*, and *ru-* or *lu*^m-, *ron-*, and *rɔ̃-* in the Vth. These changes are in conformity with the general Iroquoian phonetic rules: *A+A > a*, *A+E > e*, *A+E > ɛ̃*, *A+o > u* or *o*, and *A+ɔ̃ > u*^m, *on* or *ɔ̃*.

The pronominal forms in the third person non-masculine singular (including feminine and inanimate) are: *wa-* in the Ist, IVth,⁴ and Vth conjugations of the three dialects and, besides, in the Wyandot sub-conjugation B of the IIrd conjugation; and *ga-*

¹ These 3rd person elements are from the Iroquoian *RA-* and *HA-*, perhaps phonetically unaltered, originally.

² Mohawk and Oneida *ra-* and *la-* become *-ha-* after a prefix, in the first three conjugations.

³ Cuq's *en-*.

⁴ Cuq's IIIrd.

(On.), *ka-* (Mo.), and *ya-* (Wy.) in the other conjugations. The phonetic changes due to the combination of *-a-* (part of the pronoun) and the following vowels of the stems are the same as for the third person masculine singular. The prefixes *yo-* (On.), *i-¹* (Mo.), and *u-* and *o-* (Wy.), in the third person non-masculine singular of the Vth conjugation, are fundamentally the same as in the other conjugations, being the result of the following Iroquoian phonetic rules: *waō* and *waō* > *raō* and *raō*, through a process of phonetic dissimilation, > *yo-* or *u-*, and *yon-*, *yum-* or *o-*. In Wyandot, we find *u-* and *o-* owing to the usual loss of the original Iroquoian *y*. The *m*-consonant, seen in the place of *w-* in the third person singular non-masculine of the Wyandot IVth conjugation (sub-conj. C), is due to the Wyandot change of *w-* to *m-* when followed by a nasalized vowel.

The indefinite consists of two combined pronominal elements to be literally translated "else it," meaning "some one else" or "somebody." Briefly stated, the first of these two elements is *ra-* ("else"), and the second is *ka-* or *wa-* ("it") of the third person non-masculine singular.

On account of contractions and other phonetic disturbances, however, these elements can be isolated only after an analysis of the indefinite prefixes as they are actually found in the paradigms.

The indefinite prefix of the 1st conjugation appears as *im¹* in Boas' Oneida, *ion²* in Cuoq's Mohawk, and *o-* in Wyandot. These prefixes go back to *rawa* > *raō*, according to a general Iroquoian phonetic rule, *r-* being lost, as usual, in Wyandot. In the IVth and Vth conjugations, the prefixes for the indefinite are *yag-* (On.), *iak⁴* (Mo.), and *ay-* (Wy.), all three of which may be traced back to *ra* ("else") + *ka* ("it"), *r* of *ka* being contracted, as usual, with the following stem vowels. The history of the prefixes for the indefinite in the IIrd and IIIrd conjugations is not quite easy to explain. These prefixes are the following: in the IIrd conjugation, *ye-* (On.), *ie-* (Mo.), and *e-* (Wy.); and, in the IIIrd conjugation, *ye-* (On.), *ie-* (Mo.), and both *e-* and *ay⁵* (Wy.). In all these prefixes the characteristic

¹ *im* is better written *yo-*.

² These forms are better written *yom-* and *yom-*.

³ As above demonstrated, in connexion with the study of the stems of the 1st conjugation.

⁴ the prefix *aks*, found in Cuoq's IIIrd conjugation, is a misprint for what he usually writes *yak*.

⁵ This last form is rather exceptional.

element *ya* ("else"), although appearing only in a contracted form, is nevertheless present, and is followed by the vowel *e*-, the origin of which is rather doubtful. The prefix *ayə-*, found, though only exceptionally, in the Wyandot Hrd conjugation, seems to point to the fact that *ya-* (Mo. and On.) and *e-* (Wy.) may be due to the influence of the Hnd conjugation upon the Hrd, thus causing the assumed original form *yaKa¹ + i²* (>*yaKa³* > Wyandot *ayə-*) to be replaced by that of the Hnd conjugation.

It may further be stated that in the Oneida "objective prefixes",⁴ Cuoq's *paradigm A* and *8*, and the Wyandot *paradigm B*, the indefinite prefix reappears practically in full, in all the conjugations, as *yaKa-*.

The dual is characterized throughout by the introduction of one of two elements postfixed to the other pronominal prefixes. These two dualic elements, found in slightly modified dialectic forms, consist of *i* and *x*. The first person dual inclusive "we two" "thou and I" is expressed by *te-* or *te⁵ + i* or *x* ("both"), which may be literally interpreted as "(we) two both". These pronominal prefixes, in the Hnd conjugation, are the following: *tə-*⁶ (Wy.), *təni-* (Mo.), and *dui-* (On.). In the last three conjugations, it becomes Wy. *t-* (*te + x > t*, according to a Wyandot phonetic rule), *tən-* (Mo.), and *du-* (On.).

In the 1st conjugation of the three dialects and in the Wyandot Hnd conjugation are found the original Iroquoian *te + i* instead of the *te + x* of the last three conjugations. These elements become *dy-* (On.), *tə-* (Mo.), and *ky-* and *tə-* (Wy. 1st and Hnd conj.) The peculiar Wyandot form *ky-* is the result of a Wyandot change: *te + ia > tɛi > kya-*.

The first person dual exclusive "we two" or "he and I" are expressed as *ya* ("else") + *ka* ("I") + *i* or *x* ("both"), to be literally translated "else I both," or, more freely, "both I and somebody else." In the 1st conjugation these prefixes are: *yagya(a)-* (On.), *ikya(a⁷)-* (Mo.), and *əj(a)-* (Wy.), all of which are derived from *yaKa¹(a)-*. The Wyandot *əj(a)-* resolves

¹ Indefinite prefix

² Stem vowel

³ Boas, *ibid.*, p. 443.

⁴ Cuoq's "Études Philologiques," p. 59

⁵ There are two Iroquoian *te-* prefixes, one of which means "here" and the other expresses the idea of duality

⁶ The equivalents of *te-* being *t-* in Wyandot and Mohawk, and *e-* in Oneida

⁷ (a) is stem vowel

itself, when analysed, into *ra* (*r*- always being lost in Wyandot unless protected by a preceding element) + *κr* (*κ*) (*κra* > *ja-* in Wyandot). In the last three conjugations, the same prefixes are: *yagn*-¹ (On.), *iaken*- (Mo.), and *ād-* or *ān-* (Wy.), <*YAKN-*. The Wyandot forms *ād-* and *ān-* are the reflexes of *YAKN-*, as follows: original *r*- is always lost initially; *κ-* is elided when immediately followed by *d-*, *n-*, *r-*, and *j*-²; and, finally, *x-* generally appears as *n-*, in Wyandot, when followed by a nasalized vowel, and *d-* before an unnasalized vowel³.

While the Wyandot prefix *ai-*, in the IInd conjugation, is from *YAKI-* (*r*- being lost, and *κi* > *ri* > *i*), the equivalent Oneida and Mohawk prefixes *yagni-* and *iakeni-* are historically connected with *YAKNI-*. It may be stated, in this connexion, that, throughout the dual, the distribution of the dualic elements *i* and *x* is not quite the same in the three dialects, as we have already noticed. While the dualic elements are *i* in the first two Wyandot conjugations, and forms derived from original *x* in the last three, *i* is used only in the Ist conjugation of the Mohawk and Oneida dialects, and *x* in the other four conjugations. It seems plausible that the use of *i* in the Wyandot IInd conjugation is more archaic than that of *ni-* in the other dialects; the *n-* of *ni-* being apparently due to the analogical influence of the last three conjugations.

The second person dual "you two" is expressed as *s + i* and *s + x*, that is, literally, "thou both". These *si* and *sx* appear in slightly different forms in the several conjugations of the many dialects, namely: in the Ist conjugation, *ts-* (Wy.: *s + i* (*κ*) > *sr*(*κ*) > *ts*(*a*)⁴), Mo. *tsi-* (*s + i* (*κ*) > *sr*(*κ*) > *tsi*(*a*)-, and *a-* (On.⁵); in the last three conjugations, the same prefix is Wy. *st-* (*s + x* > *st-*), *sen-* (Mo.) (*-ē-* being perhaps an intrusive element), and *zn-* (On.⁷); in the IInd conjugation, the same Wyandot prefix is *tsi-* (*si*(*e*) > *sr*(*e*) > *tsi-*) and the Mohawk and Oneida equivalent forms are *seni-* and *zni-* (with intrusive *n*, as above).

¹ The stem vowel being omitted here.

² The contractions found in the first person singular (Wyandot IInd conj., sub-conj. C¹) are due to the same Wyandot phonetic rule.

³ See table of Wyandot specialized phonetic rules, at the end of the paper.

⁴ The same Wyandot phonetic rule applies to the prefix for the first person singular of the IIIrd conjugation, where *i* is found as reflex of *κi*.

⁵ See table of general Iroquoian phonetic laws, at the end of the paper.

⁶ Boas, *ibid.*, p. 442; this disappearance of *si* is rather difficult to explain here.

⁷ See table of compared phonetic values in the three dialects, at the end of the paper.

The third person masculine dual "they both (masculine)" consists of $u + i$ or $u + x$ meaning, literally, "he both". They appear as follows: in the 1st conjugation, $hi(a^1)$ - (Mo.), On. $hy(a)$ - (written as 'ya by Boas), and Wy. $[\bar{v}.]j'a$ - ($v. + ur(a) > \bar{v}.ja^2$); in the last three conjugations hn - (Boas' 'n-) in Mohawk and Oneida, and $[\bar{v}.]d(v.)$ and $[\bar{v}.]n(y.)$ in Wyandot.

The third person non-masculine dual "they both (non-masculine)" is expressed as $\kappa + i$ and $\kappa + x$, i.e., "it both." Its actual forms are: $ki(a^3)$ - (Mo.), $gy(a)$ - (On.), and $j(a)$ - ($\kappa i + (v.) > Wy. j(v.)^4$), in the 1st conjugation; ken - (Mo.), gn - (On.), and d - and n - ($\kappa + x > Wy. d(v.)$ and $n(y)$) in the last three conjugations; and, in the 2nd conjugation, $keni$ - (Mo.), gni - (On.), and i - ($\kappa i > Wy. i$).

One of the two original Iroquoian elements wa and ti or x is used in connexion with other pronominal elements, throughout the plural, to denote the plural persons, as we shall see.

The first person plural inclusive consists of $\tau + wa$ "both several," meaning "we several (including you and me, or us)." The actual forms are: dwa - (On.), twa - (Mo.), and kwa - (Wy.), a - of wa - being contracted with the following stem vowels of the 1st, 3rd, and 4th conjugations. In the 5th conjugation, the corresponding prefixes are: $dy(o)$ - (On.), $ti(o)$ - or $ti(on)$ - (Mo.), and $ky(u)$ - or $ky(o)$ - (Wy.)⁵, which are also derived from the same original forms $\tau + waio > \tau + rao > tro$, and $\tau + wa\phi > t\phi$.

The first person plural exclusive "we several excepting you," is $\tau\kappa wa$; the $\bar{t}$ is, τa ("else") + κ ("I") + wa ("several"), to be literally translated "else I several," meaning "I and several others (excluding you)". This prefix is actually, for the first four conjugations, $iakwa$ - (Mo.), $yagwa$ - (On.), and Wy. $\check{a}wa$ - (r being lost, and $\kappa w(v.) > w(v.)^6$; the a - of wa - contracting with the following stem vowels in the 1st, 3rd, and 4th conjugations. In the 5th conjugation, the same prefix becomes $iaki(o)$ - (Mo.), $yagy(o)$ - (On.), and $\check{a}j(u)$ - or $\check{a}\check{n}(o)$ - (Wy.), owing to the general Iroquoian process of dissimilation, above

¹ (a) being stem vowel.

² Cf. table of special Wyandot phonetic rules; u followed by i , being lost as such, transforms the preceding vowel into the corresponding long vowel.

³ (a) is stem vowel.

⁴ See table of Wyandot phonetic rules.

⁵ dy - ti - and ky - followed by the vowels of the 5th conjugation are the reflexes, in the three dialects, of τy ($v.$).

⁶ See special Wyandot phonetic rules, at the end of this paper.

discussed, and to other phonetic rules special to the dialects, the Wyandot forms $\bar{a}j(u)$ - and $\bar{a}\bar{n}(\rho)$ - being derived from the original Iroquoian as follows: $\gamma\gamma + \kappa\gamma(o) > \bar{a}j(u)$ -, and $\gamma\gamma + \kappa\gamma(\rho) > \bar{a}\bar{n}(\rho)$ -.¹

The second person plural consists of the elements s ("thou") + wa ("several"); that is, literally, "thou several," or "you several." It appears in the first four conjugations, as zwa - (On.), $sewa$ - (Mo.), and Wy. $skwa$ - ($s + wa > skwa$ -), and, in the Vth conjugation, as $tsi(o)$ - (Mo.), $J(o)$ - (On.), and Wy. $ts(u$ - or ρ -) (wa being regularly dissimilated into γwa , causes the transformation of the preceding s into ts , according to the general Iroquoian phonetic law: $s\gamma > ts$).

The elements entering into the formation of the third person plural masculine are: la - (On.), ra - (Mo.), and ha - (Wy.)² + $\bar{a}$ in the Ist conjugation, and γr^3 and γ^4 in the other conjugations; the meaning of which is "he several" or, less literally, "they several (masculine)." In the Ist conjugation, the Mohawk prefix is ron -, the Oneida lu^m -, and the Wyandot $h_\rho(on$ -, u^m - and ρ - $\leq awa$, general Iroquoian phonetic rule already explained). Remarkable disturbances, due to the borrowing of forms originally belonging to other conjugations, are to be found in the corresponding prefixes of the four other conjugations. The pronouns $ladi$ - (On.), $rati$ - (Mo.), and $hadi$ - (Wy.) constitute the third person masculine plural in the IIrd conjugation. While the same $lad(i)$ - and $rat(i)$ - are also used in the Oneida and Mohawk IIIrd conjugation, another prefix, $h_\frac{1}{2}d(i)$ -, characterizes the equivalent Wyandot form. It may be supposed that this $h_\frac{1}{2}$ - element, prefixed to γ , has been borrowed from the third person masculine singular, $h_\frac{1}{2}$ - of the Wyandot IIIrd conjugation. In the IVth and Vth conjugations a similar discrepancy is found in the three dialects. Wyandot and Oneida, on the one hand, have analogous forms, $Li^m n$ - (On.), and Wy. $h_\frac{1}{2}d(\gamma$.- or $h_\frac{1}{2}n(\gamma$.-; and, on the other hand, the corresponding Mohawk form $ron(\gamma$.- seems to have been borrowed partly from the third person masculine plural, Ist conjugation.

¹ See Wyandot special phonetic rules.

² Meaning "he."

³ Meaning "several."

⁴ No satisfactory explanation has yet been arrived at of the derivation of γ and its possible connexion with TL , a pluralic element.

The third person non-masculine plural consists of $\kappa 1 + a$ ("several"), in the 1st conjugation, and $\kappa 1 + r$ or v , in the other conjugations, the meaning of which is, literally, "very many" or, more freely, "they several (non-masculine)". The distribution of forms is not the same in the three dialects, and is not even similar to that of the parallel third person masculine plural. While in the third person plural masculine the Oneida and Wyandot forms are strictly comparable, the non-masculine Oneida prefixes are here structurally the same as those found in Mohawk. These pronouns are, in the 1st conjugation, *kon-* (Mo.), *guⁿ-* (On.), and Wy. *ya-* ($\kappa 1 + a > \kappa p$). In the IIrd conjugation, we find On. *gadi-* and Mo. *kati-* (corresponding respectively to masculine *ladi-* and *rati-*), and Wy. *wati-* (corresponding to the masculine *hati-*). In the other Wyandot conjugations, we have *m₂ⁿd(v.)-* and *iⁿd(v.)-* or *m₂ⁿ(y.)-*, and *pu(y.)-* (*h₂ⁿ-* being related to *m₂ⁿ < w₂ⁿ* as *hati-* to *wati-*). The forms (Mo.) *koti-* and (On.) *gundi-* (not corresponding to the parallel masculine prefixes *rati-* and *ladi-*) in the IIrd conjugation, *koti(i)-* and *gundi(i)-* in the IIIrd, and *kon(v.)-* (Mo.) and *gud(v.)-* (On.) in the IVth and Vth, are apparently derived from κp (prefix of the third person plural masculine, 1st conj.) + *x*.

With reference to the phonetic changes above referred to, this paper may usefully conclude with lists of (I) general Iroquoian phonetic laws, (II) special Oneida, and (III) Wyandot phonetic rules, and (IV) equivalent or correlated vowels and consonants in the three dialects discussed.

(I)

List² of general Iroquoian phonetic laws, applying to Mohawk, Oneida, and Wyandot:—

$A + I > a$; $I + E > e$; $A + E > \frac{3}{2}$; $A + a < \frac{3}{2}$; $A + p > p$; $A + t > \frac{3}{2}$; $I + a > p$.

$I + a > ya$.

$wa > va$ (dissimilation) $> yo$.

$wo > o$; $wq > q$.

$st(v.) > sr(v.) > ts(v.)$.

$ti(v.) > ty(v.)$; $ki(v.) > ky(v.)$.

¹ Meaning "many" or "all"

² The following lists do not claim to be exhaustive

(II)

Phonetic rules special to Oneida:—

$\tau s(v.) > j(v.)^1$; $sy(v.)$ sometimes $> j$.
 $n > l$: n is replaced by h in certain circumstances².
 $\kappa + n > k'$; $\kappa + \kappa > kq$; $\kappa + s > ks$; $\kappa + r^3 > kd^4$.
 $s + n > s'^5$; $s + s > ts$.

(III)

List of phonetic rules special to Wyandot:—

*Vowels and Semivowels:—**a-* generally becomes nasalized when preceded or followed by a nasalized vowel, even when a consonant stands between them; the same tendency is noticed in the cases of *i-* and, possibly, *e-* and *i-*.

r is always lost in Wyandot unless protected by a preceding consonant with which it appears combined: $\kappa + r(v.) > j(v.)$; $[v.] + nr(v.) > [\tilde{v}.]j(v.)$; $\tau + r(v.) > ky(v.)$; $(i)r(y.) > i\tilde{n}(y.)$; $t + r(v.) > ij(v.)$; $s + r(v.) > ts(v.)$; $r + r(v.) > \tilde{u}w(v.)$; $\kappa + r(y.) > \tilde{n}(y.)$; $(y.) + \kappa r(v.) > (y.)\tilde{n}(v.)$; $rr(v.) > j(v.)$; $(y.) + rr(v.) > (y.)\tilde{n}(v.)$; $ay\epsilon > d\epsilon$.

r is lost notwithstanding the presence of a preceding consonant in the case of: $c + r > c$.

w: $\pi + \epsilon > m\tilde{z}$ in some cases, and $w\tilde{z}$ in others; $(y.) + w > (y.)m$; $s + w(v.) > skw(v.)$.

Consonants: $\kappa (> g)$ is always lost before *d-* or *n-*, *r-* and *j* ($< rr$); $\kappa + i(c.)^6 > i(c.)$; $\kappa + r(v.) > j(v.)$; $\tau + \kappa r(v.) > ky(v.)$; $\kappa + w(v.) > w(v.)$; $\kappa n > k$; $\kappa + w(y.) > w(y.)^7$; $(v.)n + r(v.) > (v.)j(v.)$; $(v.)n + x(v.) > (\tilde{v}.)d(v.)$, or $(\tilde{v}.)n(y.)$.

$j < (v.)\kappa r(v.)$; $(v.)nr(v.)$; $(i)r(v.)$; $(v.)rr(u)$.

$\tilde{n} < (v.)\kappa r(y.)$; $(v.)nr(y.)$; $(i)r(y.)$; $(v.)rr(y.)$; $(y.)\kappa r(v.)$.

$ni(v.) > nr(v.) > ^ngy(v.)$; $n (> d-$ or $n-)$: $\tau + n > t$; $\kappa + n > d(v.)$ or $n(y.)$; $s + n > st$; $(v.)n + x > (\tilde{v}.)d(v.)$ or $(\tilde{v}.)n(y.)$.

s and *c*: $s + x > st$; $c + r > c$; $w + r(v.) > its(v.)$, only one in-

¹ Boas, *ibid.*, pp. 442, 443, 449.

² Boas, *ibid.*, p. 449.

³ Boas', $\tilde{r}$ is the equivalent of r in other dialects.

⁴ Transcribed from Boas' list, *ibid.*, p. 452.

⁵ Boas' z is equivalent to s .

⁶ (c.) indicates "consonant".

⁷ This does not include ϕ .

stance of which is known, so far, $s+r(v.) > ts(v.)$; $s+v(v.) > st(v.)$; $s+w(v.) > skw(v.)$; $s+h(v.) > s(v.)$; $s+k > sk$; $s+s$ or $c > s$.

t : $\tau+k > k$; $\tau+w(v.) > kw(v.)$; $\tau+r(v.) > r(v.)$; $\tau > s$; $\tau+h(v.) > t(v.)$; $\tau+k > tr$; $\tau+r > tr$ or tit ; $\tau+s > t$.

(IV)

Hypothetical *original Iroquoian sounds and their derived Mohawk, Oneida, and Wyandot equivalents*:--

Vowels: $A > a$; $E > e$; $i > i$ or y according to circumstances; $o > o$ (Mohawk and Oneida) and u (Wyandot); Wy. z is sometimes derived from rE .

Nasalized Vowels: $o > on$ (Mo.), $u^* (On.)$, and p (Wy.), often derived from awA ; $e > A^*$ (On.), en (Mo.), and z (Wy.), often derived from At ; q and j are special to Wyandot and are due to the influence of a neighbouring nasalized vowel.

Semi-vowels: $r > y^1$ in Oneida, also in Mohawk², and is lost in Wyandot unless protected by a preceding element.

$w > w$ (Mo., On., and Wy.), and Wyandot m when followed by a nasalized vowel.

Consonants: $\kappa > g$ (On.), k (Mo.), and y (Wy.).

h and κ are used in place of one another, in the several dialects, their phonetic relation, however, being doubtful. h is lost in Wyandot, after t , k , and s . Before r it transforms the preceding brief vowel into a long one.

$\kappa h > kh$ (Mo.), k (On.), and Wy. k .

$s > n$ (On. and Mo.), and Wy. $n(y.)$ and d or $*d(v.)$.

$\kappa > r$ (Mo. and Wy.) and l (On.), being in many cases replaced by h , in the three dialects.

$s > s$ (Mo. and Wy.), and z (On.), Wy. c of the second person singular (*paradigm A*) being another reflex of s .

$sh > sh$ (Mo.), s (On.), and Wy. s .

$c > c$ (Wy.) and j (On.) in the adverb of location ci (Wy.) and ji (On.).

$\tau > t$ (Wy. and Mo.), and d (On.)³.

$\tau h > t$ (Wy.), t (On.), and th (Mo.).

¹ Boas writes i for y in the 1st conj. indef.

² Cuoq and Hewitt both write t and p as s .

³ Wyandot t and k are unaspirated sibilants, thus differing from Boas' aspirated t and k in Oneida.

APPENDIX.

I.

LIST OF WYANDOT PHONETIC SIGNS.

NOTE.—The following explanation of the signs used in this paper is merely provisional and not intended as an explicit description of the sounds.

Vowels:—

a, a vowel closely resembling those in English *mat* and French *parade*.

ε, French *ê*, as 1 English *a* in *cave*.

ε, French *ê*, and English *e* in *pet*.

i, French *i*, and English *i* in *fit*.

u, French *ou*, and English *o* in *lose*.

Nasalized Vowels:—

g, *z*, and *j*, above vowels nasalized; nasalized *a* resembles *an* of French *marchand*, and nasalized *ε* is approximately like French *in* in *vin*.

ρ, open *o* nasalized, as, in French, *bon*.

Semivowels:—

w, as, in English, *wine*.

y, as, in English, *yes*.

Consonants:—

c, English *sh* and French *ch* of *chat*.

j, closely resembling that of French *j* (as in *jamais*), followed by a very brief *y*.

s, English *s* of *sit*.

t, approximately as in English and French.

d, approximately as in English *done*, often with a preceding weak *u*.

k, approximately English *k*.

gy, sonant *g* immediately followed by *y*, often with a preceding weak *ε*.

m, and *n*, as in English and French.

ñ, as *ñ*, in Spanish.

r, roughly corresponding to English *r*.

h, aspiration followed by a vowel.

Superior letters indicate extremely brief, and sometimes unvoiced, consonants and vowels, as in "*dətrə^haskwɨju^hə^hdi^h*".

Diacritical Marks.

- ' glottal stop or catch as in **gga'wic*.
- ' breathing after a vowel and before a consonant, as in *a'eɣ'k*.
- ' (over a vowel) indicates the place of the main stress in a word, which generally corresponds to rising pitch of the voice.
- ' denotes minor or secondary stress.
- ' (inverted period) placed after a letter indicates preceding long sounds, : in *ɪgg'tz'*.
- ' indicates a short vowel, as in *tshát*.

Unmarked vowels are intermediate in length.

Small capitals are used for original Iroquoian hypothetical sounds.

II.

Dr. F. Boas' "Subjective Prefixes."

Vocalic character	a	e	i	ɛ	o
Inclusive dual	dya-	dni-	dni-	dne-	dno-
Inclusive plural	dwa-	dwa-	dwi.1 st -	dwe-	dwo-
1st per. sing	qa-	qe-	qi-	qɛ-	qo-
Exclusive dual	yadya-	yadni-	yadni-	yadɛ-	yadno-
Exclusive plur.	yadwa-	yadwa-	yadwi.1 st -	yadwe-	yadwo-
2nd per. sing	za-	ze-	zi-	zɛ-	zo-
2nd per. dual	a-	na-	ni-	ne-	no-
2nd per. plur	zwa-	zwa-	zwi.1 st -	zwe-	zwo-
3rd per. masc. sing.	la-	le-	li-	lɛ-	lo-
3rd per. masc. dual	'ya-	'ni-	'ni-	'ne-	'no-
3rd per. masc. plur.	lwa-	lwa-	lwi.1 st -	lwe-	lwo-
3rd per. non-masc. sing	wa-	wa-	wi.1 st -	we-	wo-
3rd per. non-masc. dual	ya-	ya-	ywi.1 st -	ye-	yo-
3rd per. non-masc. plur	ywa-	ywa-	ywi.1 st -	ywe-	ywo-
Indefinite	wa-	ye-	ye-	yadɛ-	yadno-

Dr. F. Boas' "Objective Prefixes."

Vocalic character.	a	o	e	u
1st per. sing.	awān-	ay-	i	uān-
1st per. dual.	yū ^m yūn-	yū ^m on-	yū ^m -	yū ^m yūn-
1st per. plur.	yū ^m yūn-	yū ^m on-	yū ^m -	yū ^m yūn-
2nd per. sing.	zā-	zā-	zē-	zā-
2nd per. dual.	jā-	zān-	zān-	zān-
2nd per. plur.	zān-	zān-	zān-	jā-
3rd per. masc. sing.	ā-	lā-	awē-	lān-
3rd per. masc. dual, plur. .	lān-	lān-	lān-	lān-
3rd per. non-masc. sing.	yā-	yā-	yān-	yān-
3rd per. non-masc. dual, plur.	yān-	yān-	yān-	yān-
Indefinite.	yān-	yān-	yān-	yān-

¹The *a* forms agree with the *i* forms, except that in the 1st person singular the ending is *i*; in the 1st person plural, 2nd person singular, and plural, the ending is *ā*.

²*j* originates from *zj*.

III.

Cuoq's Paradigm K.

	1ère Conj.	2me Conj.	3me Conj.	4me Conj.	5me Conj.
1e p. sing.	ka	ke	ke	ki	ko
2e p. sing.	sa	se	se	si	so
3e m. sing.	ra	ra	re	ren	ro
3e fem. sing.	sa	ka	se	ken	ro
Ind ..	ton	se	ake (correct to take)	se	take
1e p. duel inc.	tia	tena	tene	teni	teno
1e p. d. ex.	iakia	se na	iakene	iakena	iakeno
2e p. duel.	tia	se. i	se ne	se ni	se no
3e p. d. m.	hia	hni	hne	hni	hno
3e p. d. f.	kia	keni	kne	kni	kno
3e p. pl. inc.	teSa	teSa	teSe	teSen	tio
3e p. pl. ex.	iakSa	iakSa	iakSe	iakSen	iakio
2e p. pl.	seSa	seSa	seSe	seSen	tsia
3e p. m. pl.	ron	rati	rone	rati	rono
3e p. f. pl.	kon	konti	kone	konti	kono

Cuoq's Paradigms A and S.

	1ère Conj.	2me Conj.	3me Conj.	4me Conj.	5me Conj.
1e p. sing.	Saka	Sake	Sake	Saki	Sako
2e p. sing.	sa	sa	se	sen	so
3e p. m. s.	ro	ro	raSe	ro	rao
3e p. f. s.	io	io	iaSe	io	iao
Ind ..	iako	iako	iakaSe	iako	iakao
1e p. duel.	ionkva	ionkeni	ionkene	ionkeni	ionkeno
2e p. duel.	tsia	se ni	se ne	se ni	se no
1e p. pl.	ionkSa	ionkSa	ionkSe	ionkSen	ionkio
2e p. pl.	seSa	seSa	seSe	seSen	tsio
3e p. m. pl.	rona	roti	rone	roti	rono
3e p. f. pl.	iona	ioti	ione	ioti	iono

uj.

'onj.

o

no

k, no

"

kio

o

no

no

