

Kiowa-Tanoan agreement and agreement restrictions: II

Daniel Harbour (harbour@alum.mit.edu)
Queen Mary University of London

May 20, 2009

(1) **Today's aims**

- a. To review the data and some of the literature on Southern Tiwa (and, passingly, Jemez).
- b. To offer a descriptive vocabulary for Southern Tiwa that enables direct comparison between it and Kiowa (and Jemez).
- c. To determine where the languages are similar and where not.

(2) **Key issues**

- a. Noun classification and its effect on agreement
- b. Agreement
 - (i) Prefixes
 - (ii) Syncretisms
 - (iii) Restrictions
- c. Syntactic reflexes of specific phi-combinations:
 - (i) "Passive"
 - (ii) "Incorporation"

(3) **WARNING I: Tone**

- a. Southern Tiwa transcriptions are toneless. However, the language is not (e.g., "Stress and/or pitch are not fully predictable, but lacking a complete analysis we have not indicated them in our transcription"; Allen and Frantz 1986: 389, n. 4). This militates against:
 - (i) morphological decomposition of the prefixes (i.e., saying what piece of syntax goes with which piece of phonology)
 - (ii) definitive statements about what syncretizes with what
- b. It is possible that, like some other Tanoan languages (e.g., Jemez; Sprott 1992, Yumitani 1998), Southern Tiwa has uniformly low tone in its prefix system. Leap's (1970) documentation of nearby Isleta is suggestive of this, though the

incompleteness of the work does not inspire complete confidence.¹

- c. A better reference (if it weren't unattainable) might be C.T. Harrington (1920b, and possibly C.T. Harrington 1920a), both apparently based on J.P. Harrington's fieldwork.

(4) **WARNING II: Inverse**

- a. The Southern Tiwa "passive" has been argued by a number of researchers to be a syntactic inverse (Klaiman 1991, 1992, 1993, Watkins 1996, Zúñiga 2006).
- b. This means that one might have to use "inverse" in two different senses:
 - (i) the traditionally Kiowa-Tanoan sense of nominal number marking and its proprietary agreement
 - (ii) the traditionally Algonquian sense of misalignment between syntactic hierarchy and animacy hierarchy (w.r.t. argument structure)

(5) **WARNING III: Prefixes glossing**

- a. As per Week 1, I will gloss prefixes as AG:IO:DO.
- b. Other authors vary between AG:IO:DO (e.g., Allen and Frantz 1983) and AG:DO:IO (e.g., Rosen 1990) and more complex notations AG:IO\DO (e.g., Allen and Frantz 1986). Also, my \emptyset :IO:DO (applicative plus unaccusative 'They came to me', 'He died on me'; or experiencer plus default object 'I know', 'I'm bored') is for others IO:DO (e.g., Allen and Frantz 1983) which looks like my (and Allen and Frantz's 1983) transitive AG:DO.
- c. And there are other variations too. However, if you go into the literature with an awareness of the problem, it's pretty easy to avoid confusion.

(6) **Inverse in Kiowa *versus* Jemez: Nouns**

- a. Like Kiowa, Jemez has a nominal inverse that sometimes yields a non-plural denotation, sometimes a non-singular one, ...
- b. Crucial difference: whereas duals in Kiowa are never inverse-marked, duals (of inverse-marking nouns) in Jemez always are. See Table 1. (Note: Although Kiowa first person belongs to an SII class, the first person pronoun is never itself inverse-marked.)

¹"A complete listing of the prefixes of this paradigm [ditransitives with local agent and applicative, i.e., 1/2:2/1:3] has not been obtained for analysis. Few of these forms appear in the textual materials [Esther Goldfrank's unpublished 1924 fieldnotes?], and attempts to elicit phrases of the sort "The three of us are helping the two of you" proved to be confusing both for the informant as well as the investigator... Consequently, while the existence of this paradigm is noted, discussion of the items themselves must be delayed until a later time." (Leap 1970: 121)

Table 1: *Inverse marking in Jemez nouns*

Noun	singular	dual	plural
deer	pá·	pá·-š	pá·-š
drum	pó·-š	pó·-š	pó·
bread	bélá	béláé-š	bélá

- c. So, where Kiowa has SDI, IDP, SDP, Jemez has SII, IIP, SIP, to judge by nominal marking alone.

(7) **Inverse in Kiowa *versus* Jemez: Verbs**

- a. In Kiowa, there is a strict implication: if there's inverse marking on the noun, then there's inverse agreement on the verb (modulo postsyntactic impoverishment). Or, if, like me, you entertain zero as an allomorph of nominal inverse marking (as in **t!áp** 'deer' and **xát** 'door'), there's a biconditional: there's inverse marking on the noun if, and only if, there's inverse agreement on the verb (modulo postsyntactic impoverishment).

- b. In Jemez, there is only a one-way implication: if the verb shows inverse agreement, the noun must be inverse-marked. In unaccusatives, Jemez distinguishes 3D from 3I agreement (example from the SII class; Yumitani 1998: 120):

- (i) Nâ- ∅ k^{hy}áñî-∅ ?ílæ ∅- hóláé
that-∅ dog- ∅ much 3S-heavy
'that dog is heavy.'
- (ii) Ní- t^ʔæ k^{hy}áñî-š ?ílæ îl- híóláé
that-I dog- I much 3D-heavy
'Those [two] dogs are heavy.'
- (iii) Ní- t^ʔæ k^{hy}áñî-š ?ílæ e- hóláé
that-I dog- I much 3I-heavy
'Those [several] dogs are heavy.'

- c. However, nearly everywhere else in the language, third person dual and inverse syncretize (i.e., there's a metasyncretism), e.g.: 1D:3D ≡ 1D:3I, 1I:3D ≡ 1I:3I, 2D:3D ≡ 2D:3I, 2I:3D ≡ 2I:3I, ..., 1D:3D:z ≡ 1D:3I:z, 1I:3D:z ≡ 1I:3I:z, ... (I'd need to double check, but I think the generalization is: if there's any applicative or if there's a non-singular agent, then 3D and 3I syncretize.) Example from the IIP class (Yumitani 1998: 126):

- (i) Ní- t^ʔæ t^vê-tíðæ-š ní· ìl- k^ʔá
that-I box- I I :1S:3I-lie.S/D
'That box is mine.'
'Those [two] boxes are mine.'

- (ii) Nî-- ∅ tʸê.tibɑ-∅ nî. ĩ- gʸó.
 that-∅ box- ∅ I :1S:3P-lie.P
 ‘Those [several] boxes are mine.’

(8) **Class notation**

- a. Jemez: SDI, IDP, SDP (where, obviously, the notation ‘D’ is intended to represent a dual with inverse lurking inside it).
- b. (Like Kiowa, Jemez has other classes that only become apparent if you look at verb agreement (Spratt 1992). These very much parallel those of Kiowa. See Harbour (2005) for analysis of noun classes in Kiowa and Jemez and the different conditions on their inverses.)

(9) **Southern Tiwa noun class**

- a. “... three third-person inflectional categories of Tanoan languages formed by reducing to three the six possible combinations of two numbers (singular and plural) and three gender classes (i, ii, iii), as follows: A = is or iis; B = ip or iiis; C = iip or iiip. Gender class i may be characterized as the class of animate nouns, though it includes a few nonliving objects such as **karude** ‘car’ and **barkun** ‘boat’. The other two gender classes consist of inanimate nouns. Those used in this article are classed as follows. ii: **shut** ‘shirt’, **pan** ‘bread’, **poaha** ‘ball’, **fan** ‘snow’; iii: **mukhin** ‘hat’, **k’uru** ‘dipper’, **bulsa** ‘purse’, **keuap** ‘shoe’, **kahun** ‘box’.”
 (Allen, Gardiner, and Frantz 1984: 293, n. 5)
- b. Translation and hypothesis:
- (i) A=S, B=I, C=P (as noted originally by Noyer 1992?)
- (ii) So, we have noun classes i = SI, ii = SP, iii = IP.
- (iii) Hypothesis: dual-less versions of Kiowa SDI, SDP, IDP (or of Jemez SDI, SDP, IDP, where, contra Kiowa, duals are always inverse-marked).
- c. Southern Tiwa does have a dual, but it is not displayed by third person objects. As in Kiowa/Jemez, inanimates make bad agents, so only the SI class

Table 2: *From A,B,C and i,ii,iii to S,P,I*

Class	Agreement		Class	Agreement	
	singular	plural		singular	plural
i	A	B	SI	S	I
ii	A	C	SP	S	P
iii	B	C	IP	I	P

ever exhibits a dual. To describe third person dual agreement, Allen, Frantz, Gardiner, and Perlmutter (1990) extend their notation via subscripts: A_{sg} , A_{pl} . If you have Kiowa/Jemez in mind, you'd probably think (*Hypothesis'*) that this means we're dealing with inverse only in the plural, i.e., with an SDI class.

d. However, observe the following (Allen, Gardiner, and Frantz 1984: 295–296):

- (i) Wim'a seuan-**ide** ti- mū-ban
 one man- **BAS** 1S:**3S**-see-PAST
 'I saw one man'
- (ii) Wisi seuan-**in** bi- mū-ban
 two man- **I** 1S:**3I**-see-PAST
 'I saw two men'
- (iii) Yed-**i** seuan-**in** bi- mū-ban
 that-**I** man- **I** 1S:**3I**-see-PAST
 'I saw those men'

The problem for a Kiowa-like account is that the dual is inverse-marked and triggers I-agreement. So (*Hypothesis''*), we would have to say that there is an SDI class, but that, for objects, the dual vanishes, yielding a singular~non-singular alternation, with the non-singular being marked as inverse.

e. However, a more reasonable position, given Jemez, is (*Hypothesis'''*) that (i) the Southern Tiwa dual is the product of an SDI class, and (ii) that, as in Jemez, this dual is prone to syncretism with the inverse. (Actually, the Southern Tiwa dual has a pretty tenuous grip on the third person: it emerges in some unaccusatives and, by the skin of its teeth, in some unaccusative+applicatives. For instance, in the man-sighting sentences above, Jemez would contrive to maintain an agreement distinction, between 1S:3D **tjɪ** and 1S:3I **te**, but in Southern Tiwa syncretisms sets in even here.)

(10) **A noun class parallel**

Southern Tiwa SDI completely parallels Kiowa SDI (and Jemez SDI) semantically: animates plus independently motile inanimates, including **k!óɖál** 'car', and **p!óó** 'moon' and **táá** 'star' (cf, Yumitani 1998: 107–108).

(11) **Illustrating the noun classes**

a. To illustrate the noun classes in Kiowa/Jemez, you take some nouns and whack some suffixes on them. This is impossible for Southern Tiwa, because inanimate nouns, in the majority of uses, engage in a form a syntactic skulking that has been identified with incorporation and skulking nouns cannot host number marking. Compare the nouns in Table 3 with the sentences below, where basic **-ide** and inverse **-in** are lacking:

Table 3: *Southern Tiwa noun classes*

Class	Characteristic	Examples
SDI~SII	animacy, motility	AGF: seuanide / seuanin ‘man.BAS/INV’, musade / musan ‘cat.BAS/INV’; Gardiner 1977: kanide / kanin ‘horse.BAS/INV’
SP	inanimacy	AGF: shut ‘shirt’, pan ‘bread’, poaha ‘ball’, fan ‘snow’
IP	inanimacy	AGF: mukhin ‘hat’, k’uru ‘dipper’, bulsa ‘purse’, keuap ‘shoe’, kahun ‘box’ (no inverse forms because of obligatory incorporation)

- (i) **Ti-** *seuan*-mũ-ban **Bi-** *seuan*-mũ-ban
 1S:**3S**-man- see-PAST 1S:**3I**-man- see-PAST
 ‘I saw the man / men’ (Allen, Gardiner, and Frantz 1984: 294–295)

- b. Nonetheless, just as one can use the agreement prefix to deduce the class membership of morphological unobliging nouns in Kiowa/Jemez, so one can use the agreement prefix to identify the class of skulking nouns in Southern Tiwa (examples from Allen, Gardiner, and Frantz 1984: 307):

- (i) **kuchin** ‘pig’ is SI
Ka- kuchi-thã-ban **Kam-** kuchi-thã-ban
 Ø:2S:**3S**-pig- find-PAST Ø:2S:**3I**-pig- find-PAST
 ‘I found your pig’ / ‘I found your pigs’

- (ii) **shut** ‘shirt’ is SP
Ka- shut-k’euwe-m **Kow-** shut-k’euwe-m
 Ø:2S:**3S**-shirt-old- pres. Ø:2S:**3P**-shirt-old- pres.
 ‘I found your box’ / ‘I found your boxes’

- (iii) **kahun** ‘box’ is IP
Kam- kahun-thã-ban **Kow-** kahun-thã-ban
 1S:2S:**3I**-box- find-PAST 1S:2S:**3P**-box- find-PAST
 ‘I found your box’ / ‘I found your boxes’

- c. Alternatively, given that only *nouns* can skulk, not nominal modifiers, we can use inverse marking on nominal modifiers to tell us about noun class without the confound of incorporation. For instance, note covariation between agreement prefix and demonstrative suffix below (examples from Allen, Gardiner, and Frantz 1984: 294, 297; there is insufficient data to illustrate without varying the noun):

- (i) Yed- **e** **ti-** shut-pe- ban Yed- **i bi-** musa-tuwi-ban
 DEM-S/D/P 1S:**3S**-shirt-make-PAST DEM-I 1S:**3I**-cat- buy- PAST

Table 4: *Incorporation-proofing: ‘which’ and noun classes (Gardiner 1977: 35)*

Class	singular	plural	Class	singular	plural
SI	yoade-	yoadin-	SI	S	I ^{+an}
SP	yoade-	yoadi-	SP	S	I
IP	yoamben-	yoadi-	IP	I ^{-an}	P

‘I made that shirt / bought those cats’

Although this data is indicative, demonstratives do not occur with enough nouns for all noun+number combinations to be illustrable. However, we can do this for ‘which’, following Gardiner (1977) (but, as her sentence list is complete, I’ll just replicate her summary: Table 4).

(12) **Skulking adamically: Southern Tiwa / Kiowa parallels**

- a. In (11b), the contrast between bare, basic and inverse was illustrated.
- b. Similarly for Kiowa. E.g., **tá(á)**, **tááde**, **táágo** for ‘eye’. (Note: ‘eye’ is SDI, so the last form given means ‘more than two eyes’. Examples of bare ‘eye’ *versus* basic: **∅-táhotgũumɔ** ‘he was watching’ *versus* **tááde ∅-hotgũumɔ** ‘the eye was bouncing about’.²) (However, most Kiowa nouns have no special marking in the basic form, making bare and basic identical: e.g., **tógúl**, **tógúldɔ**, ‘young man’ (example of bare *versus* basic: **∅-tógúldɔ** ‘he’s like a young man’ *versus* **tógúl ∅-dɔ** ‘he’s a young man’).
- c. For various reasons, I’ve argued that the locus of **de/go** and other number-related nominal morphology is D. (Observe, for instance, that adjectives intervene between the noun and the inverse suffix: **tógúú-dɔ** ‘young men-I’ *versus* **tógúl-bij-dɔ** ‘young men-big.D/P-I’.) So, absence of **de/go** on bare nouns suggests that these are smaller than DP.
- d. The fact that *über*-D-level elements (‘that/those’ in (11c), ‘which’ in Table 4) do not incorporate suggests that skulking nouns in Southern Tiwa are just like bare nouns in Kiowa.

(13) **Person notation**

- a. Kiowa first person operates an inclusive/exclusive distinction. In the Southern Tiwa literature, I cannot find any note of clusivity contrast, but, then again, I haven’t yet found definitive statement of its non-existence. For the moment, I’ll assume that absence of evidence is evidence of absence, but I do so uncomfortably.

²The last example should probably be checked with a native speaker, but I’m guessing that’s what it would mean.

Table 5: *Southern Tiwa agreement prefixes (adapted from Rosen 1990)*

	∅	3S	3P	3I	RX
1S:	te	ti	te	bi	te
1D:	in	in	kin	imim	kin
1I:	i	i	kiw	ibi	kibe
2S:	a	a	ku	i	a
2D:	men	men	men	mimim	men
2I:	ma	ma	mow	bibi	bebe
3S:	∅	∅	u	i	be
3D:	in	in	in	imim	in ^a
3I:	i	i	iw	ibi	ibe
3P:	u	—	—	—	—
1:2S:	i	ka	kow	kam	ka ^b
1:2D:	men	mim	miw	mim	mim? ^b
1:2I:	ma	mam	mow	mam	mam? ^b
1S:3S:	—	ta	tow	tam	ta ^b
1S:3D/I:	—	mim	miw	mim	mim? ^b
1D/I:3:	—	mim	miw	mim	mim? ^b
2S:1S:	bey	ben	bow	bem	ben? ^b
2D:1S:	bey	men	mow	mem	men? ^b
2I:1S:	bey	mim	mow	mim	mim? ^b
2:1D/I:	?/ku	mim	mow	mim	mim? ^b
2S:3S:	—	a	ow	am	a ^b
2S:3D/I:	—	mim	miw	mim	mim? ^b
2D/I:3:	—	mim	miw	mim	mim? ^b
∅:1S:	—	in	iw	im	
∅:1D:	—	ki(m)	kiw	kim	
∅:1I:	—	ki	kiw	kim	
∅:2S:	—	ka	kow	kam	
∅:2D:	—	mam	mow	mam	
∅:2I:	—	bim	bow	bim	
∅:3S:	—	a	ow	am	
∅:3D:	—	im	iw	im	
∅:3I:	—	im	iw	im(im)	

^a Leap records **ibe**

^b plus obligatory incorporation of **be** [‘self’]

- b. Kiowa dual always syncretizes with plural. Southern Tiwa dual and plural remain distinct, e.g., “1D”:3P = **kin** ≠ **kiw** = “1P”:3P. Therefore,
- c. Kiowa first person (exclusive) syncretizes (for non-*y*, non-*z* agreement) with third inverse. This is not absolute in Southern Tiwa (e.g., “1D”:3P = **kin** ≠ **in** = 3D:3P), but the same tendency is observed, e.g., “1D”:3I = **imim** = 3D:3I and “1P”:3I = **ibi** = 3I:3I.
- d. This motivates the notation 1S, 1D, 1I for first person, paralleling 3S, 3D, 3I for third person: this doesn’t force dual-plural syncretism but, if 1 is impoverished, does yield a first-third syncretism.
- e. Similarly, I’ll write 2S, 2D, 2I.

(14) **Agreement restrictions**

- a. *3:1/2—in this configuration, a “passive” is used:
 - (i) Seuan-ide- **ba** i- mu-**che**- ban
 man- BAS-INST 1I-see-“PASS”-PAST
 ‘The man the saw us’ (Allen and Frantz 1983: 306)
- b. *3:*y*:*z*—in this configuration (and providing the next condition doesn’t hold), a “passive” is used or the applicative is expressed as a non-agreeing PP (also an option in Kiowa) (Allen and Frantz 1983: 308):
 - (i) Liora-de- **ba** in- khwien-wia- **che**- ban
 lady- BAS-INST :1S:3S-dog- give-“PASS”-PAST
 ‘The lady gave me a dog’
 - (ii) Liora-de ∅- khwien-wia- ban na-’ay
 lady- BAS 3S:3S-dog- give-PAST 1- to
 ‘The lady gave me a dog’
 - (iii) Liora-de- **ba** a- khwien-wia- **che**- ban ’u’u- de
 lady- BAS-INST :3S:3S-dog- give-“PASS”-PAST child-BAS
 ‘The lady gave the child the dog’
 - (iv) Liora-de ∅- khwien-wia- ban ’u’u- de- ’ay
 lady- BAS 3S:3S-dog- give-PAST child-BAS-to
 ‘The lady gave the child the dog’
- c. **x*:*y*:1/2, ∅:*y*:1/2—the strong PCC, as per Kiowa

(15) **Reflexives**

- a. Like Kiowa, there is special agreement for reflexives in the transitive prefixes. However, once an applicative enters, the language resorts to more generic agreement means.

- b. Unlike Kiowa, in the transitives, the reflexive isn't coopted for/from animate plurals; and, when applicatives are present, it syncretizes with S-agreement, not D~I.
- c. Transitives (Rosen 1990: 691, plus my Kiowa):
- (i) Te- mĩ-ban (De- bǫ́ŭ-∅)
 1S:RX-see-PAST 1S:3A-see- PF
 'I saw myself'
- (ii) Seuan-ide be- wini- ban (em- phǫ́ǫ- ∅)
 man- BAS 3S:RX-stand-PAST 1S:3A-stop/stand-PF
 'The man stood/stopped'
- (iii) Seuan-ide be- g'oa-ban (em- mǫ́ǫ-∅)
 man- BAS 3S:RX-lay- PAST 1S:3A-lay- PF
 'The man lay down'
- d. Ditransitives (Rosen 1990: 692):
- (i) Ta- be- d'awiani-ban 'u- ide
 1S:3S:3S-self-listen- PAST child-BAS
 'I listen to the child'
- (ii) Ka- be- d'arape-hi
 1S:2S:3S-self-pray- FUT
 'I will pray for you'
- (iii) In- be- d'awiade- ban 'u- ide- ba
 ∅:1S:3S-self-listen.PASS-PAST child-BAS-INST
 'The child listened to me'

(16) **Passives or “Passives”?**

- a. “the frequencies associated with the direct/inverse opposition in connected discourse are borne out in the Tanoan languages. A small sample count of the case marked NPs in so-called passive clauses reveals that they do not correspond to the frequencies reported for passives in narrative material (e.g., Givón 1979:59 for English) where agentless passives are by far the most frequent. Instead, in two Picuris narrative texts (Harrington and Roberts 1928) with specific and referential participants, the case-marked Agent is in fact more frequently present. The total number of passive clauses is small (barely 3%), but of those clauses fully 80% have an overt case-marked agent NP.” (Watkins 1996: 12)
- b. Cf, Kroskrity's (1985) legend: “All forms of linguistic expression are reducible to a common psychological ground, but this ground cannot be properly understood without the perspective gained from a sympathetic study of the forms themselves.’ (Sapir & Swadesh 1946:104)”

- c. Note the tacit assumption about the uniformity of discourse tendencies crosslinguistically. If passives have different rates of usage across English and German (or between day-to-day talk and high-level register within English), is it not possible that the Southern Tiwa construction is a passive, but that passive usage is different from that of English? If so, does Watkins' comparison require further argument?
- d. We can bolster Watkins' position with Southern-Tiwa-internal evidence.
 - (i) "Passive" is inexplicably unavailable (the descriptions imply) as means of escape from PCC violations: why can't we passivize 3S:1S:2S, knocking out 3S:, advancing :2S to subject position, creating 2S:1S:∅, which is a legitimate prefix (**bey**)? In fact, I think this is one of the points where Relational Grammar opacifies matters: when an unaccusative 'subject' combines with an applicative, you get :y:z agreement, i.e., the erstwhile subject agrees like a direct object. If you look at the morphology, this is somewhat apparent, e.g., ∅:2:z ≡ 1:2:z (and likewise for Kiowa). Thus, we lack the 2-to-1 advancement typical of passives.³
 - (ii) Binding in passives: Rosen draws a parallel between Southern Tiwa **-be-** and Italian **se stesso** (as opposed to the transitive strategy, which is like **si**). But note that **-be-** can be bound from a passivized subject (15diii). My memory of Binding Theory in Italian is poor, but I'll bet you can't say, e.g., *Se stesso è stato difeso (solo) da Chiara*.

(17) **Agreement restrictions as per Adger and Harbour (2007)**

- a. *3:1/2 ≡ *[-participant]:[+participant]
- b. *3:y:z ≡ *[-participant]:[±participant]:...
- c. *x/∅:y:1/2 ≡ *...:[±participant]:[+participant]
- d. I.e., if we accept AH's argument that applicatives must have a [±participant] specification (whether they have one inherently, like 1/2, or not, like 3), then the first two heterogeneous conditions—(a)–(b') *3:1/2, *3:1/2:z *versus* (b'') *3:3:z—are subsumed under a single condition concerning the distribution of [±participant].
- e. Note: It remains to be explained why such a distribution of [±participant] features causes the agent to be specially marked and the verb to be pronounced with an extra morpheme. I.e., what are instrumental **ba** and "passive" **che** (and its allomorphs) the pronunciation of?

³Rosen (1990) attempts to get away from Relational Grammar in her treatment, but she treats the agreement prefix like a black box, never probing its constituency. Given the absence of tone markings, I argued that decomposition of the prefixes is questionable. However, not treating the constituency at all also seems problematic.

References

- Adger, David and Harbour, Daniel. 2007. Syntax and syncretisms of the Person Case Constraint. *Syntax* 10:2–37.
- Allen, Barbara and Frantz, Donald. 1983. Advancements and verb agreement in Southern Tiwa. In David Perlmutter, ed., *Studies in Relational Grammar 1*, 303–314, Chicago, IL: University of Chicago Press.
- Allen, Barbara and Frantz, Donald. 1986. Goal advancement in Southern Tiwa. *International Journal of American Linguistics* 52:388–403.
- Allen, Barbara, Frantz, Donald, Gardiner, Donna, and Perlmutter, David. 1990. Verb agreement, possessor ascension and multistratal representation in Southern Tiwa. In Brian Joseph and Paul Postal, eds., *Studies in Relational Grammar 3*, Chicago, IL: University of Chicago Press.
- Allen, Barbara, Gardiner, Donna, and Frantz, Donald. 1984. Noun incorporation in Southern Tiwa. *International Journal of American Linguistics* 50:292–311.
- Gardiner, Donna. 1977. Embedded questions in Southern Tiwa. Phd, State University of New York, Albany, NY.
- Harbour, Daniel. 2005. Valence and atomic number. Ms., Queen Mary, University of London. Under review.
- Harrington, Carobeth Tucker. 1920a. *Isleta Language: Texts and Analytical Vocabulary*. Washington D.C.: Bureau of American Ethnology.
- Harrington, Carobeth Tucker. 1920b. *The Isleta Pronoun*. Washington D.C.: Bureau of American Ethnology.
- Klaiman, M.H. 1991. *Grammatical Voice*. Cambridge: Cambridge University Press.
- Klaiman, M.H. 1992. Inverse languages. *Lingua* 88:227–261.
- Klaiman, M.H. 1993. The relationship of inverse voice and head-marking in Arizona Tewa and other Tanoan languages. *Studies in Language* 17:343–370.
- Kroskrity, Paul. 1985. A holistic understanding of arizona tewa passives. *Language* 61:306–328.
- Leap, William Lester. 1970. The language of Isleta, New Mexico. Phd, Southern Methodist University, Dallas, TX.
- Noyer, Rolf. 1992. *Features, Positions and Affixes in Autonomous Morphological Structure*. Cambridge, MA: MITWPL.
- Rosen, Carol. 1990. Rethinking Southern Tiwa: The geometry of a triple agreement language. *Language* 66:669–713.
- Sprott, Robert W. 1992. Jemez syntax. Ph.D. thesis, University of Chicago.
- Watkins, Laurel. 1996. Reconstructing person and voice in Kiowa-Tanoan: Pitfalls and progress. In David Librik and Roxanne Beeler, eds., *Special Session on Historical Issues in Native American Languages*, number 22 in Berkeley Linguistics Society: Proceedings of the Annual Meeting, 139–152, Berkeley, CA: Berkeley Linguistics Society.
- Yumitani, Yukihiro. 1998. A phonology and morphology of Jemez Towa. Ph.D. thesis, University of Kansas.
- Zúñiga, Fernando. 2006. *Deixis and Alignment: Inverse Systems in Indigenous Languages of the Americas*. John Benjamins.