An account of verbal person suffixes*

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1 Introduction

- in previous research, I have argued against the Pronominal Argument Hypothesis, by showing that argument DPs are base generated in argument positions

- in this paper, I argue that these arguments are the goal of true instances of agreement on v probe (theme signs) and T probe (inner suffixes)

    - this provides a further piece of evidence towards a view of the syntax where functional heads check the ϕ features of arguments in a local configuration

- I present the following diagnostics to show that theme signs and inner suffixes pattern as agreement affixes

    Section 3: Position (relative to other verbal suffixes)
    Section 4: Tense variance (allomorphy conditioned by T)
    Section 5: Locality (double object constructions and goal DPs vs. theme DPs)
    Section 6: LDA and default agreement (VTI inflection on verbs with complement clauses)

2 Background

2.1 Agreement vs. clitics

- recent studies have argued that what appears to be object agreement is really clitic doubling, e.g., Woolford (2008), Preminger (2009) and Nevins (2011)

- this has sparked interest in distinction in diagnostics between agreement affixes and clitics

- Kramer (ming) proposes the sketch of the contrast between agreement and clitic doubling in (1)

(1)   AGREEMENT VS. CLITIC DOUBLING (Kramer, forthcoming, 4)
       agreement: affix, obligatory, realization of valued ϕ features on a functional head
       clitic doubling: morphophonological clitic, optional, D that has moved to a verbal functional head
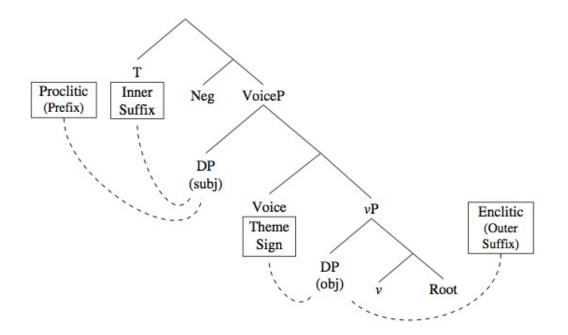
2.2   Algonquian

- Oxford (2013) argues that theme signs and inner suffixes are instances of agreement in Algonquian

- he presents the template in (2) for Proto-Algonquian and the Ojibwe example in (3) as support[1]

(2)   PROTO-ALGONQUIAN PHI-INDEXING VERB MORPHOLOGY
       (INDEPENDENT INDICATIVE TA DIRECT FORM) (Oxford, 2013, 2)

morpheme:	prefix	root	v	theme sign	NEG	inner suffix	T	outer suffix
argument:	**subject**			**object**		**subject**		**object**
features:	**[person]**			**[person]**		**[pers/num]**		**[num/gen]**
exponents:	1 *ne-*			1 *-i*		1/2/3 *-∅*		AN.SG *-a*
	2 *ne-*			2 *-eθ*		1PL *-enān*		AN.PL *-aki*
	3 *we-*			3 *-ā*		1PL *-enaw*		IN.SG *-i*
				INV *-ekw*		2/3PL *-wāw*		IN.PL *-ari*

(3)   n-wābm-ā-sī-**min**ā-banī-**g** (Valentine, 2001, 292)
       1-see-**3**-NEG-**1P**-PST-**3P**
       'We did not see them'

- Oxford (2013) proposes the clause structure for Algonquian in (4)

- I will assume this structure throughout

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[1]Abbreviations: 0 = inanimate third person singular, 1 = first person, 3 = animate third person singular proximate (discourse salient), 4 = animate third person singular obviative (non-discourse salient), *an* = animate, *comp* = complementizer, FIRSTHAND: first hand knowledge, IC = initial change, INV = inverse, obj = object, obv = obviative, PL = plural, *pst* = past, VTA = transitive verb with both animate subject and object, VTI = transitive verb with animate subject and inanimate object.

(4)   Algonquian Clause Structure (Independent Indicative Neutral TA direct) (Oxford, 2013, 6)

- I argue for this same conclusion by showing that the diagnostics in the following section support an analysis of theme signs and inner suffixes as agreement in Mi'gmaq

    - I show that these cases of agreement contrast with that of the outer suffix, although I remain agnostic regarding the status of the outer suffix

3   Position

- clitics tend to appear outside of inflectional morphology, but not inside them (Zwicky and Pullum, 1983)

- the position of the theme sign and the inner suffix are consistent with an agreement analysis; they differ from the outer suffix which attach verb final

- adapted from Oxford's template in (5), I propose the following template for Mi'gmaq in (5), see also Bale and Coon (2013)[2]

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[2]Introduced in T are tense and evidentiality, for more information about the interaction between tense and evidentiality in Mi'gmaq, see Carol Rose Little's presentation today at 12:30pm, or Inglis (2003)

(5)   MI'GMAQ VTA REALIS (IN MOST PRESENT AND PAST INTERPRETATIONS)

morpheme:	root	v	theme sign	NEG	inner suffix	T	outer suffix
argument:			**obj/subj&obj**		**SAPPL/subject**		**3rd person**
features:			**[person]**		**[pers/num]**		**[num/gen]**
exponents:			1 -(*i'l*)*i*		1 -(*an*)		OBV -*l*/-*n*
			2 -*ul*(*n*)		2 -(*n*)		3PL -*i*('*g*)
			3 -*a*		3 -*t*/-*g*		0SG -∅
			3>SAPPL -*ugsi*		1PL -*eg*		0PL -*l*/-*n*
			INV -(*gw*)		2PL -*oq*		
					21PL -'*gw*		
					3PL -∅		

- theme signs show person agreement: three for object alone, and two which appear to mark both the subject and object

- inner suffixes show person and number agreement for speech act participant (SAP) plural, whenever they appear, and the subject otherwise

  - in forms with both a first person plural and second person plural, the second person plural form will appear as the inner suffix

- the outer suffix shows agreement for gender, third person animate or inanimate, and number

- (6) shows an example with all slots filled

(6)   mu   ges-al-**ugsi**-'w-**eg**-pn-**ig**
        NEG love-TAFINAL-**3**>**1PL**-NEG-**2PL**-PST.FIRSTHAND-**AN.PL**
        'They didn't love us(me and another)'

- regarding position, both the theme sign and inner suffixes appear between inflectional morphemes, while the outer suffix appears outside of them

  - theme signs appear between the transitive final (*v*/voice)[3] and negation

  - inner suffixes appear between negation and tense

  - outer suffixes appear outside of tense; verb final

- the position of the theme sign and inner suffixes is consistent with an agreement analysis

  - the position of the outer suffix is inconclusive; consistent with either agreement or clitic analysis

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[3]Regardless of whether theme signs are analyzed as object agreement, as in (5), or as markers of the relevant prominence between arguments, e.g., marking direct local and non local and inverse local and non-local, the inverse, or non-local inverse, theme sign crucially refers to the person features of both the subject and the object. This is precisely what we would expect if the probe is on a functional head such as little *v*, or what Oxford (2013) has labelled voice.

4   Tense variance

- Nevins (2011) argues that affixes can display allomorphy conditioned by tense, but clitics cannot

- this can be revised as:

  - ϕ agreement on T may show allomorphy conditioned by other features on T
  - but this may not be the case for agreement on *v*/voice, and should never be the case for clitics

- in Mi'gmaq, the inner suffix has an separate allomorphs which appear in irrealis environments, such as the future, also see Inglis (2003)

- (7) shows the contrast between the two sets

(7)   Mɪ'ɢᴍᴀǫ VTA Iɴɴᴇʀ ꜱᴜꜰꜰɪx ᴀʟʟᴏᴍᴏʀᴘʜʏ

ϕ	Realis-pres/pst	Irrealis-fut
1sɢ	-(*n*)	-∅
2sɢ	-(*n*)	-∅/-*g*
3sɢ	-*t*/-*g*	-*ew*
1ᴘʟ	-*eg*	-*nen*
2ᴘʟ	-*oq*	-*oq*
21ᴘʟ	-'*gw*	-*nu*
3ᴘʟ	-∅	-*aq*

- (8) shows the contrast in the inner suffix between the future (8a) and the past (8b)

(8)   a.   'gs-al-ulsi-tis-**nen**
              love(ɪᴄ)-TAꜰɪɴᴀʟ-3>1ᴘʟ-ꜰᴜᴛ-**2ᴘʟ**
              'S/he/they will love us(me and another)'
       b.   ges-al-ugsi-**eg**-pn-ig
              love-TAꜰɪɴᴀʟ-3>2ᴘʟ-**2ᴘʟ**-ᴘꜱᴛ.ꜰɪʀꜱᴛʜᴀɴᴅ-3ᴘʟ
              'They loved us(me and another)'

- it is also important to note that:

  - there is no outer suffix position in the future, so (8a) is ambiguous for number with 3rd persons (I will return back to this in section 4)
  - the inner suffix follows the future marker *-tis* in (8a), but precedes the past/evidential marker *-pn* in (8b)

- if this is the case, how do we know these are inner suffixes in the future?

1. they mark the same person/number elements as in the realis paradigm

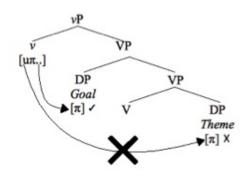 - the only difference is that 3rd person plural is also marked in this slot

2. the same selectional properties hold

- when a SAPPL subject or object appears it will agree with T, if not the subject will
- when both 2PL and 1PL arguments are present, the 2PL will agree with T

3. the 2PL form *-oq* is identical in the future and realis paradigm

(9) a. 'gs-al-i-t-**oq**-s'p
         love(IC).TAFINAL-1OBJ-FUT-**2PL**-NONFIRSTHAND
         'You-all will love me'
     b. ges-al-i-**oq**-op
         love.TAFINAL-1OBJ-**2PL**-PST
         'You-all loved me'

4. both allomorphs appear in the future paradigm: affirmative vs. negative

- the inner suffix in the future affirmative, in (10a), differs from the one in the future negative paradigm, in (10b)
- the inner suffix in the future negative is identical to the present negative, (10b) and (10c)

(10) a. 'gs-al-i-tis-**nen**
          love(IC)-TAFINAL-1OBJ-FUT-**1PL**
          'You will love us(me and another)'
      b. ma   'gs-al-i-w-**eg**
          NEG.FUT love(IC)-TAFINAL-1OBJ-NEG-**1PL**
          'You won't love us(me and another)'
      c. mu   ges-al-i-w-**eg**
          NEG love-TAFINAL-1OBJ-NEG-**1PL**
          'You don't love us(me and another)'

- note that the theme sign, *-i* 1st person object, stays constant throughout these examples
- it seems that it is in the T T domain where the inner suffixes show different 2PL allomorphs, e.g., *-nen* vs. *-eg*
- this is predicted under an analysis where inflectional agreement can undergo variance in the T domain

- for these reasons, I conclude that the future has inner suffixes, and they form a separate set from the ones used in the realis paradigm

  – this supports an agreement analysis for the inner suffix
  – while the lack of variance of the theme signs is expected since it occurs on *v*/voice
  – while nothing can be concluded about the outer suffix

5   Locality

- Preminger (2009) argues that locality is a diagnostic for an agreement relationships, given a probe-goal configuration

    - where there are two potential DP goals, DP_1 and DP_2, and DP_1 c-commands DP_2, the probe should only be able to enter into an AGREE retain with DP_1

    - this is the description of a probe which is sensitive to defective intervention, as discussed by Lochbihler (2012) for Ojibwe

    - this is coupled with the generalization that goals are structurally higher than the theme as argued by Lochbihler (2012) and previously by Branigan and MacKenzie (1999) for Innu-aimûn

(11)   Deffective intervention and double object structure (Lochbihler, 2012, 123)

- it is important to note, that clitics do not necessarily have such a tight locality restriction

- in double object constructions in Mi'gmaq, both the theme sign and the inner suffix can only refer to the φ features of the goal, and not the theme

    - in (12a), both the theme sign and inner suffix make reference the 2PL goal argument

    - if they both show 3SG agreement, as in (12b), this is interpreted as referencing a 3SG and crucially not *mijua'ji'j* 'baby'

    - in fact, 'baby' must be marked for obviation in (12b) in order to be grammatical, which indicates that the goal is the proximate argument

(12)   a.   mu   ignm-uln-u-oq-op   mijua'ji'j
             NEG give.VTA-**2OBJ**-NEG-**2PL**-PST baby
             'I didn't give you-all the baby'
        b.   mu   ignm-aq-'ap-n   mijua'ji'j-(*l)
             NEG give.VTA-**3OBJ**-**3**-PST-OBV baby-**OBV**
             'I didn't give her/him the baby'; *'I didn't give you-all the baby';

- interestingly, the outer suffix, can reflect the number and gender features of the theme argument

- in (13a) the goal is not marked on the verb, thus the goal can be either animate singular, *atla'i* 'shirt', or inanimate singular, *wigatign* 'book'
- however when neither the subject or object is a 3rd person, the outer suffix will reflect the gender and number features of the goal
  * when the goal is animate plural, as in (13b), or inanimate plural, as in (13c)

- this suggests that the outer suffix differs from both the theme sign and the inner suffix

(13)   a.   ignm-uln-u-oq-op   atla'i/wigatign
            give.VTA-**2OBJ**-NEG-**2PL**-PST shirt.AN/book.IN
            'I didn't give you-all a shirt/book'

       b.   ignm-uln-u-oq-opn-ig   atla'i-g/*wigatign-n
            give.VTA-**2OBJ**-NEG-**2PL**-PST-AN.PL shirt.AN-PL/*book.IN-PL
            'I didn't give you-all shirts'

       c.   ignm-uln-u-oq-opn-n   wigatign-n/*atla'i-g
            give.VTA-**2OBJ**-NEG-**2PL**-PST-IN.PL book.IN-PL/shirt.AN-PL
            'I didn't give you-all books'

- the ability for only the ɸ features of the goal to be referenced, supports the agreement analysis of the theme sign and inner suffix, based on a structural criteria of locality
  - while the outer suffix seems to pattern differently, as it does does not have as strict of a locality restriction

6 LDA and default agreement

- Preminger (2009) argues that when an probe-goal AGREE relationship cannot be established, a default form must appear, whereas with clitic doubling, nothing need appear

- Mi'gmaq, like many Algonquian languages, have constructions which display long-distance agreement (LDA) forms, where the matrix verb shows object agreement with an embedded argument

- an example where LDA does not appear is shown in (14a), and (14b) is an example where it does
  - the matrix verb 'know' in (14a) has a TI theme sign -*u*[4], and shows 3rd person singular subject agreement, which is -*g*
  - in (14b), 'know' appears with no VTA final, the 3>SAPPL theme sign -*ugsi*, and the 2nd person plural inner suffix -*oq*

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[4]see Gretchen's talk next at 12:00 for more information about finals

(14) a. geit-u   [(gilew) wigtm-oq   plamuei   ]
          know-TI [(2pl)   like.taste.of.VTI-2PL salmon.meat]
          'I know you-all like salmon'
      b. gej-**uln**-**oq**   [(**gilew**) wigtm-oq   plamuei   ]
          know.VTA-**2obj**-**2PL** [(**2pl**)   like.taste.of.VTI-2PL salmon.meat]
          'I knows **you-all** like salmon'

- analyses of LDA in Algonquian posit that the embedded argument which undergoes LDA is in the left-periphery of the embedded clause, e.g., Bruening (2001), Branigan and MacKenzie (2002), Mathieu and Lochbihler (2013), as well as me Brandon Fry, from our talk yesterday

  - the goal of LDA agreement is in a local enough configuration for the probe on matrix *v* to find it and trigger person agreement for the theme sign, as well as on T for the the inner suffix

  - but in the cases where LDA does not occur, the potential LDA triggering argument is not in a local enough configuration, e.g., not at the left-periphery of the embed clause

  - as such, the resulting VTI inflection on the matrix verb can be analyzed as default agreement

    * when the probe on matrix *v* does not find an animate argument goal, a default TI theme sign appears

    * this explains why VTI morphology appears with verbs that take a complement clause

- one source of support for this analysis is from the fact that in fact, if there are conjoined embedded clauses, the matrix verb will not be marked for a plural inanimate object outer suffix

  - the third person inner suffix -*g* and the outer suffix for inanimate plural, -*l* appears, as shown in (15a)

  - however, the plural outer suffix cannot appear with conjoined clauses, as in (15b)

  - this makes sense if C does not have any inherent ϕ features

(15) a. (gi'l) geit-u-n-**n**
          (2)   know-TI-2-**IN.PL**
          'you know them(IN.PL), e.g., phone numbers'
      b. (gi'l) geit-u-n-*(**n**)   [[(Lance) pegwatel-g-'p wi'gatign] aq   [(ni'n)
          2   know-TI-2-(**IN.PL**) [[(Lance) buy-3-PST   book   ] CONJ [(1st)
          maqut-m-a-p gaqpesaq   ]]
          eat.TI-1-PST wenju'sun]]
          'you know Lance bought a book and I ate an apple.'

- it does not seems that there is any active agreement relationship between the matrix *v* and the complement clause itself, since C does not have ϕ feature specification

  - thus the appearance of the TI theme sign can be analyzed as default agreement, which occurs when the probe on *v* does not find an animate object goal

7 Summary and Conclusion

- the table in (16) summarizes the results if the diagnostics which where applied

(16)   SUMMARY OF RESULTS

Diagnostic	Theme sign	Inner suffix	Outer suffix
Position	AGREEMENT	AGREEMENT	?
Tense-variance	?	AGREEMENT	?
Locality	AGREEMENT	AGREEMENT	?
Default form	AGREEMENT	?	?

- there is enough evidence to conclude that both the theme sign and inner suffix are agreement affixes

- however, there is not enough evidence regarding the status of the outer suffix to make any solid conclusions

  - but there is evidence which shows that fact that outer suffixes behave differently from theme signs and inner suffixes

- Algonquian languages have true instance of agreement on v, theme signs, and on t, inner suffixes

- this provides direct support for a syntactic analysis where argument are base-generated in argument positions and must enter into AGREE relationships with surrounding functional heads in a local configuration

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