Strong and weak lexical categories in Oneida*

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- Concerns with parts of speech or lexical categories have been around since the beginning of linguistic thinking

  'By a noun we mean a sound significant by convention, which has no reference to time (...).' 'A verb is that which, in addition to its proper meaning, carries with it the notion of time.' (Aristotle)

  'A noun is a part of the sentence which is subject to case inflection, and signifies something corporeal or non-corporeal' and
  'A verb is a word which is without caase inflection, displaying changes of tense, person, and number, and signifying also activity or passivity.' (Dionysius Thrax)

- Since Dionysius Thrax, distributional evidence has been central to discussions of parts of speech or lexical categories

- Much research in the last thirty years has centered around two broad kinds questions:

(1) a. *Does language X/Do all languages have particular lexical categories?*
    b. What is the "right" comparative semantic or functional concepts to compare lexical categories across languages?

- Until recently (Koenig and Michelson 2014), we claimed that Oneida syntax does not provide evidence for syntactic categories (a fortiori, nouns and verbs), but Oneida morphology *does* provide evidence for nouns and verbs

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- *Now*, we are not sure even of the latter, because of some confusion around the nature of parts of speech or lexical categories

- How are lexical categories defined? Distributional evidence can be of two kinds

Definition 1. *A language provides evidence for a* weak *lexical category if there are morphological or syntactic patterns that target a set of lexemes (or their projections).*

(2) $\text{run}^{\text{Action}} \rightarrow \text{runner}^{\text{Agent of action}}$

Definition 2. *A language provides evidence for a* strong *lexical category when there are morphological or syntactic patterns that target a set of lexemes (or their projections)* and *that set of lexemes cannot be defined intensionally by an independently justified property.*

- Conversion is a good source of strong lexical categories: The lexical category changes but not the semantic type

(3) a. There were only two dances at the high school last year.
b. They only danced twice last year.

Claim 1. *Oneida does not have strong syntactic categories; only weak syntactic categories.*

Claim 2. *Oneida has strong morphological categories, but they do not partition the Oneida lexicon in expected ways. Oneida has weak morphological categories that are more "normal."*

1 A brief description of Oneida parts of speech

(4) né· kati? wí· thikʌ **w-ʌhnisl-ate-**? **tsh-a-hy-ahtʌty-**?
well then it's that 3Z.SG.A-day-exist-STV COIN-FACT-3.M.DU.A-leave-PNC
ak-nulhá? khále? ***lake-?niha*** né· kwí· thikʌ *yo-a?kalash*ʌ
3G.SG>1.SG-mother and 3.M.SG>1.SG-father so it's that 3.Z.SG.P-evening
kwí· ʌ**-ts-yakw-ate-khw-uni-**? *o-sahe?t-a?* kwí·
FUT-REP-1EX.PL.A-SRF-food-make-PNC NP-bean-NSF
wa?-kni-na?tsy-ihal-ʌ? né· kwí· ʌ**-ts-yakwa-k-e**? nʌ
FACT-3.Z.DU.A-kettle-hang-PNC so it's FUT-REP-1EX.PL.A-eat-PNC when
ʌ**-ts-yakw-ate-khw-uni-**? *yo-a?kalash*ʌ
FUT-REP-1EX.PL.A-SRF-food-make-PNC 3.Z.SG.P-evening
'when we will have a meal again evening for our supper, the two of them [my sister Rina and the visitor Rita] boiled beans [for soup], that's what we would eat when we have our supper.'

(5)

osahé·taʔ	*laohwístaʔ*	*waʔukhwístuʔ*
o-saheʔt-aʔ	lao-hwist-aʔ	waʔ-yuk-hwist-u-ʔ
NPF-bean-NSF	3M.SG.POSS-money-NSF	FACT-3>1SG-money-give-PNC
'bean'	'his money'	'she gave me money'

(6)

oska·wáku	*oshuʔkalá·ke*	*ohslaʔké·ne*
o-skaw-aku	o-shuʔkal-aʔke	(y)-ohsl-aʔké·ne
NPF-bush,brush-LOC	NPF-board,woodLOC	NPF-winter,year-LOC
'in the bush'	'on the boards, floor'	'in the winter, winter time'

(7)

kahúhtaku	*sesnú·ke*	*yekúksne*
k ahuht aku	se-snu-ʔke	ye-kuhs/kuks-ne
1SG.A-ear-LOC	2SG.A-hand-LOC	3FI.A-face-LOC
'(in) my ear'	'your hand'	'her face'

(8) $[_{\text{word}}$(Prepro-)Pro$_s$-$[_{\text{stem}}$ $[_{\text{base}}$((semi-)refl)-(NI)-root$_s$-(caus)-(instr)-(benef)] -Asp]]

(9) Pro$_e$-root$_e$-NSF/LOC

2 Strong and weak morphological categories in Oneida

2.1 No strong "verb" and "noun" morphological categories in Oneida

Traditional "tests" of nouniness and verbiness in Oneida

(10)
a. Possessive pronominal prefixes can attach to the stem
b. The stem can be incorporated
c. Pronominal prefixes do not have an initial glide
d. Diminutive suffixes can be attached to the stem[1]

(11)
a. Pronominal prefixes can have an initial glide
b. Aspect suffixes can attach to the stem
c. Transitive pronominal prefixes can attach to the stem
d. Morphosemantic prefixes and suffixes (reflexive and semi-reflexive; causative, instrumental, and beneficiary) can attach to the stem

- All morphological processes affecting a situation category denoting lexeme within the base in (8) are (a) inherently semantically typed or (b) can be stipulated to apply only to situation category denoting lexeme

[1]Koenig and Michelson (2010) also uses negation as evidence of the 'nominal' status of kinship forms. Further analysis has revealed that the form of negation is not an appropriate test and we therefore omit it here.

- The same is true of aspect suffixes or prepronominal prefixes (that affect the base or the stem)
- The situation is more complex with entity category denoting lexemes, as there are several kinds of apparent "conversion"

(12) $\underline{\text{LEC}_{\text{root}}}$
-hwist- 'money, metal'
o-hwíst-aʔ 'money' (NPF, NSF)
lao-hwíst-aʔ 'his money' (POSS, NSF)
waʔ-uk-hwíst-uʔ 'she gave me money' (FACT-3>1SG-money-give-PNC)

(13) $\underline{\text{LSC}_{\text{word}} \rightarrow \text{LEC}_{\text{word}}}$
yu-t-wʌn-a-taʔ-a-st-aʔ 'telephone' (3FI.A-SRF-voice-JR-put.in-JR-CAUS-HAB) [-incorp]

(14) Nominalizerized LSC base
-hyatu-hsl- 'paper, book' (write-NMZR)
ka-hyatú-hsl-iʔ (NPF, NSF)
lao-hyatú-hsl-iʔ 'his book, paper' (POSS, NSF)
waʔ-t-hatzi-hyatú-hsl-a-yʌ-ʔ 'they played cards' (FACT-DL-3M.P.A-paper-NMZR-JR-put-PNC)

(15) $\underline{\text{LSC}_{\text{stem}} \rightarrow \text{LEC}_{\text{stem}}}$

a. atekhwahlákhwaʔ/-atekhwahlaʔtsl- [+incorp]
ate-khw-a-hl-a-hkw-haʔ 'table' ([∅ NPF]-SRF-food-JR-set.on-JR-INSTR-HAB]
akw-atekhwahlákhwaʔ 'my table' (POSS-SRF-...)
waʔ-k-ate-khw-a-hl-a-ʔtsl-oˑkéw-eʔ (FACT-1SG.A-SRF-food-JR-set.on-JR-NMZR-wipe-PNC)

b. an-isnuhs-ohlók-t-aʔ 'ring' ([∅ NPF]-SRF-finger,hand-insert-CAUS-HAB)
akw-anisnuhsohlókta ʔ 'my ring' (POSS-...) [-incorp]

c. yu-t-nikwʌhtal-a-lhó-ˑt-haʔ 'lipstick' (3FI.A-SRF-red-JR-smear-CAUS-HAB)
akw-atnikwʌhtalalhóˑthaʔ 'lipstick' (POSS-...) [-incorp]

Table 1: Classes of LECs in Oneida and the morphological processes they can undergo

	Nominal pro-prefix	Possessive	Nominal suf-fix	Incorporation	Example
LEC root	+	+	+	$\diamond$	
$\text{LSC}_{\text{word}} \rightarrow \text{LEC}_{\text{word}}$	-	-	-	$\neg\diamond$	
Nominalized LSC base	+	+	+	$\diamond$	
(α)$\text{LSC}_{\text{stem}} \rightarrow \text{LEC}_{\text{stem}}$	+	+	-	$\neg\diamond$	
Nominalized (α)				$\square$	

Kinship terms

- Kinship terms have some properties of entity category denoting lexemes and some properties of situation category denoting lexemes
- Koenig and Michelson (2010) treats kinship terms as a mixed Category à la Malouf (2000), i.e. as a fourth part of speech

(16)

lakeʔníha	*aksótha*	*onatatyʌha*
lake-ʔni-ha	(w)ak-hsot-ha	(y)on-atat-yʌ-ha
3M.SG>1SG-father-DIM	3FZ.SG>1SG-grandmother-DIM	3FZ.DP.P-REFL-child-DIM
'my father'	'my grandmother'	'mother and daughter'

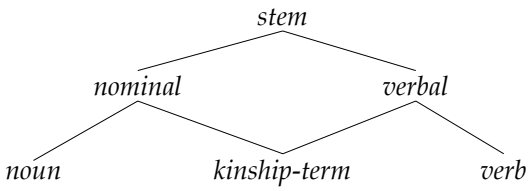

Figure 1: Parts of speech in Oneida

- Koenig and Michelson's analysis does not explain *why* kinship terms have the "noun" and "verb" properties they have
- By distinguishing between strong and weak lexical categories we can explain why kinship terms are both "nominal" and "verbal":
    1. Kinship terms index one member of the kinship relation ⇒ they undergo morphological processes characteristic of lexemes that have an entity INDEX value
    2. Kinship terms contribute relational content (the kinship relation) ⇒ they undergo morphological processes charateristic of relational terms

(17) Diminutive suffixes target entity-category describing bases

(18) (Semi-)reflexives target roots that contribute relational semantic content

(19) Incorporation without nominalizers is only possible for native entity-category denoting roots that do not contribute relational content

(20) Rules of exponence for Transitive and Intransitive Patient prefixes for entity-category describing bases do not have initial glides

- Hypothesis that there is no *[cat N]* or *[cat V]* in Oneida leads to a better analysis of kinship terms

2.2 Strong inflectional categories in Oneida

- In languages like English (or French), strong morphological and syntactic categories stem from the fact that lexemes can shift category without bringing along their semantic type
- Oneida does not have conversion in that sense. There are only morphological or lexical processes that change the semantic type of expressions
- But there *are* strong morphological categories in Oneida. They are all associated with partial "grammaticalization" of inflectional processes and do not corrrespond to traditional parts of speech

Inflected vs. uninflected lexemes

- Oneida lexemes can be divided into inflected and uninflected words. Entity category denoting lexemes can be sometimes uninflected and most often inflected

(21) *Names of animals*:
   a. Particles: é·lhal 'dog', síksik 'sheep', ta·wél 'flea', to·tís 'spring frog'
   b. Entity category stems: oli·té· 'pigeon', oná·kʌt 'groundhog' otsiʔnowʌ 'mouse', onhéhtaʔ 'porcupine'
   c. Situation category stems: kályoʔ 'wild animal' (it kills), tewahúhtes 'donkey' (long ears), skʌhnáksʌʔ 'fox' (bad skin)

The Agent vs. Patient category

- All inflected words take pronominal prefixes, transitive or intransitive. Intransitive prefixes fall into two groups, so-callled Agent or Patient
- While motivated the distinction between Agent and Patient must sometimes be lexically recorded

(22) waʔ-o-kʌ·nól-eʔ
FACT-3FZ.SG.P-rain-PNC
'it rained, it started to rain'

(23) waʔ-ka-nye·yʌ́·
FACT-3FZ.SG.A-snow:PNC
'it snowed (so that there is snow on the ground)'

(24) waʔ-te-k-núnyahkw-eʔ
FACT-DL-1SG.A-dance-PNC
'I danced'

(25) waʔ-t-wak-wísko-ʔ
FACT-DL-1SG.P-slip-PNC
'I slipped'

- Agent vs. Patient prefix distinction matters not only for situation category denoting stems but also for entity category denoting stems

(26) Entity category stems that select A prefixes: ka·nʌheʔ 'seed, oats, grain', kalʌ·ná· 'song', kaʔnáhkwaʔ 'barrel, tub', á·shaleʔ 'knife, blade' kákhwaʔ 'food', kʌ·yé· 'fat, grease, oil, gasoline', kané·waʔ 'pelt'

(27) Entity category stems that select P prefixes: oʔkʌ·laʔ 'soil, dirt, ashes', ohnʌná·taʔ 'potatoe' o·kwíleʔ 'twig', o·nʌsteʔ 'corn', shes 'syrup, gum', nhwaleʔ 'fur'

Active vs. stative situation category denoting bases

- Some situation category denoting bases can occur in all three aspects (habitual, punctual, stative), some only in the stative aspect. The distinction while motivated is must sometimes be stipulated.

(28) Active verbs: -hʌleht- (requires P prefixes) 'holler, yell', -ahsʌtho- (A/P prefixes) 'cry', -atati- (A/P prefixes) 'speak', -thal- 'talk', -atkatho- 'see'

(29) Stative verbs: -thal- (with P prefixes) 'converse'; -kahnl(e)- 'look, focus, see'

- Oneida has strong morphological categories, but they classify stems quite differently from Oneida weak morphological categories

  1. Oneida weak morphological categories partition the lexicon along the "usual" semantic types, entity vs. situation categories
  2. Oneida strong morphological categories partition the lexicon along the vagaries of Oneida inflections: inflected vs. uninflected; Agent prefix vs. Patient prefix selection; Active vs. Stative situation category denoting base

3 Strong and weak syntactic categories in Oneida

- Syntactic rules in Oneida do not make reference to categories or their projections (NP, VP, . . .) but to semantic types

3.1 Oneida "direct syntax"

(30) lake-ʔníha kʌs lo-hsotha
3M.SG>1SG-father customarily 3FZ.SG>3M.SG-grandmother
te-yakwa-yashe
DL-1EX.PL.A-be.together[STV]
My father's grandmother stayed [lived] with us.' (Georgina Nicholas, An Oneida Childhood, 1981)

- *Entity adjunction*: Two entity expressions can co-occur in either order. The meaning of the whole bears the index of one daughter (the semantic head) and the index of the other daughter is an argument of the semantic head's content. The meaning of the whole is the conjunction of the contents of the daughters.

(31) lake-ʔkʌha Leo né· kʌs né· wa-h-atkatho-ʔ
3M.SG>1SG-brother Leo it's customarily it's FACT-3M.SG.A-look,see-PNC
'My brother Leo saw it' (Rose Antone, What My Brother Saw, 2011)

- *Situation adjunction*: A situation-describing expression can consist of a situation-describing word (the semantic head) preceded or followed by zero or more entity-describing expressions whose indices are arguments of the semantic head's content. The meaning of the whole is the conjunction of the contents of the daughters.

(32) nʌ kiʔ ok kwí· waʔ-e-kweʔtalu·kó· kaʔikʌ
and then FACT-3FEM.SG.AGT-cut.into.chunks:PUNCTUAL.ASP this
kaná·talok
bread
'and then she cut this bread into chunks' (NJ, The Bird, 21)

- *Entity apposition*: Two entity expressions can co-occur in either order. The meaning of the whole bears the index of both daughters (which must be the same) and the content of the whole is the conjunction of the contents of the daughters.

(33) yah né· teʔ-yʌ-elh-eʔ aa-yu-atekhuni-ʔ kʌʔ ni-yak-áʔ
NEG it's NEG-3FI.A-want-STV OPT-3.FI.A-eat-PNC small PART-3FI.A-small[STV]
'the little one doesn't want to eat,' (olive elm, visits to my aunties, 1993

(34) cultus kuwa-yat-s tsiʔ nú· thikʌ tho
cultus 3>3FZ.SG-name-HAB where that there
y-aʔ-yakw-atyʌ-ʔ kʌ·
TRL-FACT-1EX.PL.A-sit.down-PNC yknow
'It's called Cultus where we moved to, (Mercy Doxtator, What I remember about tobacco, 1998)

- *Internally-Headed Relative Clauses*: An entity expression can have as sole daughter a situation expression. The content of the whole is that of the daughter while its index is that of one argument of the content.

3.2 Oneida weak syntactic categories

- At least three pieces of evidence that Oneida syntax must make reference to semantic types (and, thus, provides evidence for weak syntactic categories):
  1. "Adjunction" to entity categories is bounded, "adjunction" to situation categories is not
  2. Argument clauses must follow the verb, entity arguments can either precede or follow the clause
  3. IHRCs type-shift situation expressions into entity expressions

(35) Kwah=s nók thikʌ́ káhik k-é·yal-eʔ waʔ-e-hni·nú·.
Just only that fruit 1SG.A-remember-STV FACT-3FI.A-buy:PNC
'I remember she would just buy fruit.' (Verland Cornelius, A Lifetime of Memories, recorded 1995)

(36) Te-ka-núhs-a-ke ka-nuhs-o·t-áhkweʔ nók tsiʔ
DL-3FZ.SG.A-house-JN-amount.to[STV] 3FZ.SG.A-house-stand-HAB.PAST but
yah teʔ-wak-anuhte-ʔ kátshaʔ yaw-e·-nú.
NEG NEG-1SG.P-know-STV where 3.FZ.SG.P-walk-STV
''There were two houses there but I don't know what happened to them (lit. where it went).' (spoken by Mercy Doxtator, 1991)

3.3 Rule-based and vs. semantico-pragmatic mono-categoriality

- Evans and Osada (2005) discusses four kinds of mono-categoriality. Oneida does not fit any of them
- In *pre-categorial languages*, roots/stems/words are not specified for their syntactic or semantic/pragmatic role

(37) a. write(e, x, y)
b. write(e, x, y)

- If Oneida were a pre-categorial language = Index selection would be induced by syntactic rules not specified lexically. But, that is not the case:
  1. Morphological processes target types of indices (see glide deletion and Table 1)

2. Kinship terms illustrate further the need for lexical specification of indices

(38) a. aksótha
(w)ak-hsotha
3ZOIC.SG>1SG-grandparent-grandchild
'my grandmother'

b. utatatléha
(y)utat-atleha
3FEM.SG>3FEM.SG-grandparent-grandchild 'her granddaughter'

(39) a. lakeʔníha
lake-ʔniha
3MASC.SG>1SG-father-child
'my father'

b. liyúvha
li-yʌha
1SG>3MASC.SG-father-child
'my son'

- Mono-categoriality may be due to *rampant conversion*: Any entity word can be type-shifted to a situation word, and conversely. As we saw above, Oneida does not have rampant conversion
- Monocategoriality may be due to the pragmatic underspecification of lexemes = *Omnipredicativity* (Launey 1994). Entity expressions In Oneida cannot serve as predicates on their own. They can only do so in the context of a specific presentative construction

(40) Né·s thikʌ John Láets kháleʔ Simon Láets, tho wahotiké·tohteʔ.
it's that John Elijah and Simon Elijah there they showed up
'John Elijah and Simon Elijah, they showed up there.'

3.4 Conclusion

- Our study shows that it is important to distinguish between strong and weak lexical categories:
  1. Oneida's morphology partitions the lexicon in very different strong and weak lexical categories
  2. Oneida's syntax only provides evidence for weak lexical categories
- Answering the question whether a language has "noun-like" or "verb-like" parts of speech or lexical categories is impossible without specifying whether one is talking about weak or strong lexical categories

- Is the presence of weak morphological or syntactic entity and situation categories in Oneida interesting? The answer is different for morphological and syntactic categories, as it seems that when people talk about syntactic categories they have in mind strong syntactic categories while when they talk about morphological categories they have in mind weak morphological categories

    1. The presence of weak morphological entity and situation categories is not that surprising: If you have tense and gender, under most semantic views, you have situation and entity categories
    2. The absence of strong syntactic entity and situation categories in Oneida is news

- Can there be a syntactically monocategorial language that has no strong *or* weak syntactic categories?

- Often hard to tell from summary descriptions

(41) tatlo-ng bata
three-LIG child
'three children'

(42) tatlo-ng umawit
three-LIG AT:PF:sing
'three persons that sang'

(43) tatlo-ng inaawit
three-LIG PT:PF:sing
'three things that are being sung'

'Gil (1991) advocates this analysis on the basis of the total syntactic parallelism of morphological nouns and verbs. Thus, both can follow quantifiers (39, 40) [our (41) and (42), respectively]; where the quantified expression is a morphological verb, the numeral selects the participant selected as topic by the voicing – actor in (40) . . . ' Evans, op. cit. , p.721.