The evolution of complex predicates

Andrew Garrett
University of California, Berkeley

1 Introduction
1.1 Language background

Languages of the western U.S. from central California to the Olympic peninsula

Nonobvious abbreviations

ABS = absolutive, CONT = continuous, ERG = ergative, INESS = inessive, MM = middle marker, MOM = momentaneous, NOM = nominative, OBL = oblique, PTCP = participle, TRANSL = translocative
1.2 Complex predicates

3 a Complex predicates: ‘each component ... contributes to the predicate information normally associated with a head.’  
   (Bowern 2006)

3 b But what is a ‘predicate’? It seems to be a semantic notion, and talk about complex predicates involves some understanding of ‘single’ vs. ‘complex’ meanings.

4 a Functional complexity, e.g. serialization: distinct formal elements combine into one semantic-syntactic predicate.

4 b Formal complexity, e.g. polysynthesis: elements that contribute distinct semantic-syntactic information combine into one morphologically complex word.

5 a ‘How do complex predicates arise in syntax? Is it from parataxis, or from metaphor, or subordination, or nominalization? or all of the above in different circumstances?’  
   (Bowern 2006)

5 b §2 Functional complexity: From a starting point with two predicates, how does a construction with a single complex predicate arise?

5 c §3 Formal complexity: How do morphologically complex words arise?

5 d §4 Does the story of complex predicates consist just of the story of functional complexity plus the story of formal complexity?

2 Predicate unification

2.1 General remarks

6 From a starting point with two predicates, how does a construction with a single complex predicate arise?

7 a An underrated ingredient of semantic change, or those changes called ‘permutation’ by Stern (1931), is the specialized or enriched meaning that may arise in some specific constructional context.

7 b So Meillet (1905-1906 [1921: 239]): ‘Quelques changements ... proviennent de la structure de certaines phrases, où tel mot paraît jouer un rôle spécial.’

7 c Part of our task is to figure out the specific constructional and usage details of the source of a pattern of interest.

7 d The English prospective future go construction is not a complex predicate stricto sensu, but it has come up more than once at this meeting. Discussion based on Garrett (to appear).

2.2 Inceptive go (MED 11a, OED 34a): ‘begin, turn, proceed (to do)’

8 go + gerund in Middle English

8 a [I]f u gest ['goest'] herof to disputinge ...  
   (a1250 Owl & Night. 873)

8 b He ... bad the servuant cole[s] for to brynge, That he anon myghte go to his werkynge.  
   (c1395 Chaucer CT. CY. (Manly-Rickert) G.1115)

9 go + gerund in Early Modern English

9 a I goe to writing or reading, or suche other businesse as I have.  
   (1577 B. GOOGE Heresbach’s Husb. I. (1586) 3b)

9 b O rare, your excellence is full of eloquence, how like a new cart wheele my dame speakes, and she lookes like an old musty ale-bottle going to scalding.  
   (1600 Thomas Dekker The shomakers holiday)
10 Adjunct going + infinitival

a For Zelmane seeming to strike at his head, and he going to warde it, withall stept backe as he was accustomed, she stopt her blow in the aire, and suddenly turning the point, ranne full at his breast  
   (1593 Philip Sidney *The Countesse of Pembrokes Arcadia*)

b They going to dance, each vnhaspes his weapon from his side, and gives em to the torch-bearers.  
   (1608 Thomas Middleton *Your five gallants*)

11 Finite be going + infinitival

a I hauing shifted no sockes in a sea night, the Gentleman cryed foh; and said my feete were base and cowardly feete, they stuncke for feare. Then hee knock’d my shooe about my pate; and I cryed O, once more. In the meane time comes a shag-hair’d dogge by, and rubbes against his shinnes. The Gentleman tooke the dog in shagge-haire to be some Watch-man in a rugge gowne; and swore hee would hang mee vp at the next doore with my lanthorne in my hand, that passengers might see their way as they went without rubbing against Gentlemens shinnes. So, for want of a Cord, hee tooke his owne garters off; and as he was going to make a nooze, I watch’d my time and ranne away.  
   (1611 Cyril Tourneur *The atheist’s tragedie*)

b Now, when the Eve was come, and that one of the Souldiers was going to untrusse a point, when he came up to me for some Ockame to wipe his posteriors, I rose up, and whispering him in the eare, secretly said unto him ....  
   (1622 James Mabbe [tr.] *The rogue; or, The life of Guzman de Alfarache*)

2.3 Prospective future go

12 Examples where the complement clause is passive make it clear that go has lost any sense of motion or agency.

a B How now, what ayles your Master? ... Where is his Cloake and Rapier?  
   O He has giuen vp his Cloake, and his Rapier is bound to the Peace: If you looke a little higher, you may see that another hath entred into hatband for him too. Sixe and foure haue put him into this sweat.  
   B Where’s all his money?  
   O ’Tis put ouer by exchange: his doublet was going to be translated, but for me ....  
   (1630 [performed 1604-1605?] Thomas Dekker *The honest whore, with the humors of the patient man, the impatient wife, Part II*)

b He is fumbling with his purse-strings, as a school-boy with his points when he is going to be whipped, till the master weary with long stay forgives him.  
   (1628 Earle *Microcosmography* §19 [mod. spelling])

c [O]n the morrow the governor entered my room, threatening me still with more tortures, to confess; and so caused he every morning, long before day, his coach to be rumbled at his gate, and about me, where I lay, a great noise of tongues, and opening of doors; and all this they did of purpose to affright and distract me, and to make me believe I was going to be racked again, to make me confess an untruth; and still thus they continued every day of five days to Christmas.  
   (1632 William Lithgow *Travels & voyages* [mod. spelling ed. 1814])

d You see that My Magazine is going to be taken from Me.  
   (1642 Chas. I Sp. Wks. 1662 I. 401)

2.4 What we learn

13 Presumably, for each crosslinguistically common complex predicate pattern, we will be able to find the precise constructional context in which the new, complex sense first arose.
3 Where did all the verbs come from?

3.1 Yurok in context

a Algic

Wiyot (northwest California)
Yurok (northwest California)
Algonquian (Canada & northern U.S. east of the Rockies)

b The usual assumption: Proto-Algic was spoken somewhere between Chinookan and Kootenai; the ancestors of Wiyot and Yurok speech came down the Columbia and then the Pacific coast.

c What follows is based on Garrett (2004); cf. Blevins (2005). Data are cited from Garrett et al. (2005) and our online lexicon (http://corpus.linguistics.berkeley.edu/~yurok/lexicon.html).

3.2 Yurok verb structure

a Just as in Algonquian and Wiyot, morphologically complex words have a tripartite structure in Yurok:

initial + (optional) medial suffix + final suffix

All verbs and some (words that pattern syntactically as) nouns have this structure.

b A word with no other initial will have a default initial, either h-, l-, or r-.

c All inflected verbs have a class marker -e-, -aa-, -o-, or -oo- followed by inflectional endings. If the class markers are analyzed as final suffixes then all inflected verbs have final suffixes; otherwise some inflected verbs have a null final. Here the class markers are treated as final suffixes or parts of final suffixes.

d Initials are an open class; medials and finals are closed classes. The dossiers below are quite incomplete (both as to suffixes and as to forms bearing suffixes).

Representative initials in complex forms below (given here in no special order)

pl- ‘big’ mewol- ‘sweep/swept, wipe(d)’
che’l- ‘dry’ trkt’rrp- ‘hit’
lo’og- ‘black, dark’ s’oop- ‘hit’
kaam- ‘bad’ kwry- ‘whistle’
skew-, skuy- ‘good’ wrrgry- ‘white person’
cheyk- ‘small’ sit- ‘chip(ped)’
kwer- ‘sharp’ him- ‘fast’
laay-, raay- ‘alongside’ chpur- ‘careful’
kwomhl- ‘back’ chwink- ‘speak’
hlmey- ‘mean’ hlk- ‘earth, ground, mud’
tek- ‘stuck together’ weno’om- ‘in a particular place’
tk- ‘thick’ son- ‘in a particular way’

17 Medial suffixes I: Gestalt

a -ohk- ‘round’
pl-ohk-elaye- ‘be big’ (round things): initial pl- ‘big’, finalelaye- ‘state/appearance’
rohk-oat-e- ‘roll’: default initial r-, medial -oat- ‘induced motion’

b -oks- ‘flat’
cheyk-oks-e- ‘be narrow (flat things): initial cheyk- ‘small’
pl-oks-e- ‘be big’ (flat things): initial pl- ‘big’
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Medial suffixes III: Type of action

a -och- ~ -rch- ‘make sound’
  kwry-rch-e- ‘whistle’: initial kwry- ‘whistle’
  ‘wrrgry-rch-e- ‘speak English’: ‘wrrgry- ‘white person’

b -ohs- ‘contact force’
  sit-ohs-o- ‘chip into small pieces’: initial sit- ‘chipped’

c -oks- ‘think’
  kaam-oks-ime- ‘dislike’: initial kaam- ‘bad’, final -ime- ‘animate object’

d -ol- ‘fly’
  l-ol-e- ‘fly’: default initial l-
  laay-ol-e- ‘fly past’: initial laay- ‘alongside, past’
  weno’om-ol-e- ‘fly in a particular place’: initial weno’om- ‘in a particular place’

e -o’r- ‘run’
  raay-o’r-epe- ‘run past’: initial raay- ‘along, past’, final -epe- ‘self-oriented activity’

f -oot- ‘induced motion’
  kwomhl-oot-e- ‘throw back’: initial kwomhl- ‘back’
  l-oot-e- ‘throw’: default initial l-

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Final suffixes I: Valence-changing

a -ete- ‘transitive/causative’
  chiwey-ete- ‘crave’: cf. chiwey-e- ‘be hungry’
  kaam-ew-ete- ‘dislike: something’s taste’: cf. kaam-ew-e- ‘taste bad’
  myooley-ete- ‘shove, stick: something’: cf. myooley-e- ‘be fixed in the ground’
  skuuw-ete- ‘like: something’s taste’: cf. skuuw-e- ‘taste good’
  tek-un-ete- ‘stick: things together’: cf. tek-un-e ‘be stuck together’
  tk-ohp-ete- ‘thicken: something liquid’: cf. tk-ohp-e- ‘be thick’ (of liquid)
Final suffixes II: Aktionsart and related meanings

b **-ine** ‘causative’
- **k'rrk-ine** ‘let: something wilt’: cf. *k'rrk-r* ‘wilt’
- **l-ohp-ine** ‘scrape out’: cf. *l-ohp-e* ‘molt, come in lumps’
- **s'rrk-ine** ‘pull (something) apart’: cf. *s'rrk-r* ‘come apart’

c **-ume** ‘animate object’
- **kwyr-ume** ‘whistle at (someone)’: cf. *kwyr-rwr* ‘whistle’
- **spry-ume** ‘blow a whistle at (someone)’: cf. *spry-rr* ‘blow a whistle’
- **telog-ume** ‘be in pain, resent (someone)’: cf. *telog-e* ‘be ill’
- **'rp-ry-ume** ‘tell (someone)’: cf. *'rp-r* ‘tell (something)’

22 Final suffixes II: Aktionsart and related meanings

a **-epe** ‘self-oriented activity’
- **chwink-epe** ‘speak’: initial *chwink* ‘speak’
- **him-o'r-epe** ‘run quickly’: initial *him* ‘fast’, medial *-o'r* ‘run’
- **skuy-k-epe** ‘get dressed’: initial *skuy* ‘good’, suffix *(e)k* ‘do, treat’

b **-emoye** ‘be (covered with), have the appearance of’
- **chaalk-emoye** ‘be sandy’: initial *chaalk* ‘sand’
- **kweruhl-emoye** ‘have a pointed snout’: initial *kwer* ‘sharp’, medial *-uhl* ‘nose’
- **hlkoolonk-emoye** ‘be muddy’: initial *hlkoolonk* ‘mud’

c **-owo** ‘be or act in a certain way’
- **chpur-owo** ‘menstruate’: initial *chpur* ‘careful’
- **hlmey-owo** ‘be mean’: initial *hlmey* ‘mean’
- **kaam-un-owo** ‘grow badly’: initial *kaam* ‘bad’, medial *-un* ‘grow’
- **son-owo** ‘be a certain way’: initial *son* ‘thus’

3.3 Initial-medial coverbs + ‘light’ finals

23 Two kinds of verbal formation in Yurok:

a Inflected verb = initial (+ one or more optional medials) + final + inflection

b ‘Noninflected verb’ (VN) = initial (+ medial) only; no final, no inflection

The term ‘noninflected verb’ is due to Robins (1958), the analysis to Garrett (2004).

c Inflected verbs thus consist of VN + final + inflection.

24 Noninflected verb

A final C loss process applies in VNs.

- **son** ‘be a certain way’
- **cheyk-e’r** ‘be small’ (trees, etc.)
- **pus-o’m** ‘smell of musk’

- **komch/i → kom** ‘know’
- **hlk-orkw- → hlkyor** ‘look at’

- **srm** ‘be beaten, killed’
- **mewp-ew** ‘be strangled’
- **s'oop-e'wey** ‘be hit in the mouth’

- **/mekw-ehlk/ → mekwehl** ‘be in a heap’
- **/men-ehlk/ → menehl** ‘go out’ (of a fire)

25 a Inflectional endings mark mood (indicative vs. subjunctive vs. imperative vs. attributive) and person-number agreement. VNs are thus devoid of marking for modality.
In narrative texts (the only genre analyzed), VNs are used in two contexts not unexpected for a modally unmarked category: (1) contexts where modality is supplied from context, i.e. close coordination with inflected verbs or in their scope; and (2) non-assertive (i.e. presuppositional or backgrounded) contexts.

**Claims**

a Diachronically, Yurok inflected verbs < two separate words: VN + inflected ‘light’ final.

b This is generally the origin of Algonquian tripartite stem morphology as well.

c Yurok VN (coverb) + inflected final patterns echo patterns of Udi (Harris 2006), northern Australian languages such as Jaminjung (Schultze-Berndt 2000), or Papuan languages such as Kalam (Pawley 2006). In some of those cases also there is comparable univerbation; this is the emergence of formal complexity.

### 3.4 Northwest Algic

A Proto-Algic with a northern-Australian-style coverb + inflecting verb system would not be out of place in the area between Chinookan and Kootenai in the northwest U.S. c. 3000-4000 years ago, or whenever Proto-Algic was spoken. Kootenai has very similar constructions and so too, with many fewer known inflecting verbs, does Chinookan. And these patterns do run in areas (Harris 2006, Schulze-Berndt 2000, et al.).

Representative Wishram (Chinookan) ‘verbal particles’ (Dyk 1933: 124-130)

a **Transitive particles**

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>iwi</td>
<td>‘to do thus and thus, so and so’</td>
</tr>
<tr>
<td>juk’</td>
<td>‘to loosen, to slack’</td>
</tr>
<tr>
<td>jak’</td>
<td>‘to hollow out’</td>
</tr>
<tr>
<td>wiʃ’</td>
<td>‘to rebuke, to scold’</td>
</tr>
<tr>
<td>wax</td>
<td>‘to spill’</td>
</tr>
<tr>
<td>ut’s</td>
<td>‘to kiss’</td>
</tr>
<tr>
<td>alas</td>
<td>‘to injure incurably’</td>
</tr>
<tr>
<td>bak bak</td>
<td>‘to brush off’</td>
</tr>
<tr>
<td>tʃak’</td>
<td>‘to uncover’</td>
</tr>
<tr>
<td>k’ilu</td>
<td>‘to glance at’</td>
</tr>
</tbody>
</table>

b **Intransitive particles**

<table>
<thead>
<tr>
<th>Word</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ax</td>
<td>‘to cough up’</td>
</tr>
<tr>
<td>bak</td>
<td>‘to part from, to turn off’</td>
</tr>
<tr>
<td>p’ala</td>
<td>‘to halt’</td>
</tr>
<tr>
<td>t’uk</td>
<td>‘to drip’</td>
</tr>
<tr>
<td>t’uja</td>
<td>‘to be angry’</td>
</tr>
<tr>
<td>tʃax</td>
<td>‘to step along, take steps’</td>
</tr>
<tr>
<td>k’um</td>
<td>‘to be sleeping’</td>
</tr>
<tr>
<td>k’au</td>
<td>‘to belch’</td>
</tr>
</tbody>
</table>

c **wif** | n-i-u-x-t

<table>
<thead>
<tr>
<th>Verbs</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>scold</td>
<td>1SG:ERG-3SG:MASC:ABS-TRANS-do-t</td>
</tr>
<tr>
<td></td>
<td>‘I’m scolding him.’</td>
</tr>
</tbody>
</table>

d | k’ilu | tʃ-∅-u-x-t

<table>
<thead>
<tr>
<th>Verbs</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>glance.at</td>
<td>3SG:MASC:ERG-3SG:FEM:ABS-TRANSL-do-t</td>
</tr>
<tr>
<td></td>
<td>‘He is glancing at her.’</td>
</tr>
</tbody>
</table>

e | k’um | i-kiax

<table>
<thead>
<tr>
<th>Verbs</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>be.sleeping</td>
<td>3SG:MASC:ABS-do:INTR</td>
</tr>
<tr>
<td></td>
<td>‘He is sleepy.’</td>
</tr>
</tbody>
</table>
4  Radical complexity

4.1  Numic postural verbs > secondary verbs

29  a  Northern Paiute postural verbs (Thornes 2003: 316, 419)

<table>
<thead>
<tr>
<th>NOUNS</th>
<th>SINGULAR</th>
<th>DUAL</th>
<th>PLURAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>sit</td>
<td>katy</td>
<td>jygwi</td>
<td>aata’a</td>
</tr>
<tr>
<td>stand</td>
<td>wyny</td>
<td>wami</td>
<td>kono</td>
</tr>
<tr>
<td>lie</td>
<td>hapy</td>
<td>kwapi</td>
<td>pokwa ~ wakwapi</td>
</tr>
</tbody>
</table>

b  Huzziba  wyndy-gwe  katy.

bird tree-INESS  sit:SG  
'A bird is sitting in the tree.'  (Mono Lake Paiute: BP04-3-s, elicitation)

c  Mogo’ni  wyny-hu  

woman  stand:SG-MOM  
'The woman stood up.'  (Mono Lake Paiute: BP05-1-s, elicitation)

30  The same (or very similar) forms can also be used as verbal suffixes: secondary verbs.

a  Shoshoni (Miller 1996)  b  Northern Paiute (Thornes 2003: 418)

-katy  'in an upright position'  -katy  'sit, remain'

-wyny  'in a vertical position'  -wyny  'continuous' (sing.)

-hapi  'in a prone position'  -tapi  'keep V-ing'

c  It is widely accepted that Uto-Aztecan suffixes with aspectual and directional meanings have evolved from secondary verbs of this general kind (Crapo 1970).

4.2  Problems in diachronic analysis

31  Northern Paiute verb-verb compounds (Thornes 2003: 348-349)

a  watsi-mia  b  watsi-tiuna  c  sami-tyky

hide-go:SG  hide-put:PL  soak-put:SG

'sneak off'  'put things away'  'soak' (tr.)

d  Mysu-passa-wyny.

be.able-dry-CONT:SG  'It dries readily.'  (Nepa Kennedy, ‘Chokecherries’, 1999 [Thornes 2003: 526])

e  Su  nady’ja  tabya-’puni-su  ka  na-matsi-kwny-puni-na.

NOM  tough  appear-see-ADV  OBL  MM-slant-stand-see-PTCP  
‘It was pretty rugged-looking, and steep.’  (Nepa Kennedy, ‘Chokecherries’, 1999 [Thornes 2003: 521])

32  Differences between V-V compounding and secondary verb suffixation

a  ‘Compound verbs tend to be right-headed, with the first member of the compound often interpretable as adding a manner feature to the complex. In secondary verb constructions, on the other hand, the core lexical verb appears first, and the secondary verb adds postural or associated motion to the complex.’  (Thornes 2003: 348)

b  V-V compounds are followed by the applicative-causative suffix -ky but secondary verbs are preceded by -ky (and followed by other inflectional suffixes).

c  Therefore V-V compounding cannot be the source of new secondary verbs. But secondary verb formation is not productive: you cannot freely move new items into the relevant position. On the other hand, the secondary verb dossier is not uniform across Numic; new verbs have been inducted into the class.
Two problems follow.

a  Formal complexity: what, exactly, is the synchronic process by which a non-secondary verb is induced to reposition itself in the secondary verb position within the verbal suffix template?

b  Functional complexity: once a secondary verb is formally in place, how exactly does it acquire its aspeclual and directional meanings?

Shibatani’s paradox (Shibatani 2006) in Mono Lake Paiute, en route from postural meanings in Shoshoni’s to grammaticalized meanings in Northern Paiute

a  Salient postural interpretations if contextually plausible

i  Ny  saa-wyny.
   1SG  cook-stand:SG
   ‘I’m cooking standing up.’
   (Mono Lake Paiute: elicitation)

ii  Tammi  jaga-katy.
    we  cry-sit:SG
    ‘We are sitting here crying.’
    (Mono Lake Paiute: BP05-2-s, elicitation)

b  Aspectual interpretations otherwise

i  Ymy  jaga-mia-wyny.
   3PL  cry-go:SG-CONT:SG
   ‘They are walking along crying.’
   (Mono Lake Paiute: BP05-2-s, elicitation)

ii  Ny  tykaa-wyny.
   1SG  eat-CONT:SG
   ‘I’m eating right now.’
   (Mono Lake Paiute: elicitation)

iii  Pauma-wyny.
    rain-CONT:SG
    ‘It’s raining.
    (Mono Lake Paiute: BP02-2-2-s, elicitation)

iv  Tyysy-wyny
    cold-CONT:SG
    ‘It’s freezing.’
    (Mono Lake Paiute: BP02-2-2-s, elicitation)
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Department of Linguistics
University of California
1203 Dwinelle Hall #2650
Berkeley, CA 94720-2650

garrett@berkeley.edu
http://socrates.berkeley.edu/~garrett/