External Applicatives and Raising-to-Object/ECM *

John Gluckman presented at PLC 38

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1 Introduction

• The morpheme -hqa in Kashaya (Pomoan) has been analyzed as a CAUSATIVE morpheme based on its use in (1) (Oswalt, 1961, 1977).¹

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(1) a. mo -w
run -ABS
'He ran'
b. mo -hqa -w
run -hqa -ABS
'He made/let someone run' (also, 'He drove')
```

- -hqa can productively attach to any verbal predicate (iteratively) to yield a causative/permissive reading.
- However, there are other circumstances where -hqa appears which are not transparently related to this causative use.

1. Psych-verbs:

-hqa (plus a reflexive -ic') may attach to any psychological predicate, often with no clear semantic distinction.

Note that the Absolutive suffix is not related to ergative/absolutive. It is a semantically bleached verbal suffix.

 $1/2/3 = 1^{st}/2^{nd}/3^{rd}$ person ABS = absolutive APPL = applicative CAUS = causative CL = cliticDAT = dativeDET = determinerDS = different-subject DIR = directive DISTR = distributive ERG = ergativeFACT = factiveGEN = genitiveINFER = inferential LOG = logophorNOM = nominativeNFV = non-final verb OBJ = objectivePERF = perfective PLAGT = plural agent POST = postposition REFL = reflexivess = same-subjectsg/pl = singlar/plural

^{*}I thank Anita Silva for sharing her time and language with me. I also thank Gene Buckley for introducing me to Kashaya, as well as giving me assistance with both glossing and analysis. I have benefitted from conversations with the following people: Anoop Mahajan, Yael Sharvit, Pam Munro, Margit Bowler, Philippe Coté-Boucher, and Laura Kalin.

¹All examples were collected by myself unless otherwise noted. The orthography used here is the standard orthography in which /-/ represents a long vowel, /t/ is an apico-alveolar stop, /c/ is an affricate [tʃ], and š is a fricative [ʃ]. /C'/ is an ejective consonant.

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(2) a. ku\check{s}ka\ c^hiya\cdot c' -e\cdot to cat be.afraid -NFV 1sg_{obj} 'I'm afraid of cats'
b. ku\check{s}ka\ c^hiya\cdot c' -hqa -ic' -e\cdot ?a\cdot cat be.afraid -hqa -REFL -NFV 1sg_{nom} 'I'm afraid of cats'
```

2. Subordination

• Certain clausal complements, take -hqa on the lower predicate if the matrix and subordinate subject are not co-referential. (Note that there is a -hqa on the matrix verb because da- is a psych-verb.)

3. "Accidental" readings

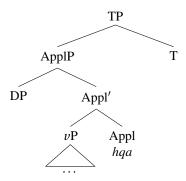
- With certain predicates, affixation of *-hqa* results in the subject being viewed as "accidentally" affecting the event.
 - (4) a. John ca·ška ?el ?ahay wi phis'a·-bi -w
 J dish DET_{obj} stick POST break- INFER -ABS

 'John broke the dish with a stick' (intentionally)
 b. John ca·ška ?el ?ahay wi phis'a·-hqa -bi -w
 J dish DET_{obj} stick POST break -hqa -INFER -ABS

 'John broke the dish with a stick' (accidentally, while swinging a stick around)

Analysis

• -hqa is the realization of a (semantically vacuous) APPLICATIVE head merged above vP. It can license an EXTERNAL ARGUMENT (following Cuervo (2003); Rivero (2009); Kim (2011a,b, 2012)).



• A phonologically null Voice head is responsible for the Agent/Causer semantics (Kratzer, 1996; Kim, 2012).

- The purpose of this talk will be
 - 1. to show that the Agent/Causer semantics is not associated with -hqa
 - 2. to describe how analyzing -hqa as an Applicative accounts for its full distribution.

1.1 Roadmap

- · background
- overview of psych-verbs
- · diagnosing Voice through agreement
- diagnosing Voice through binding
- summary and interaction with logophority
- Raising-to-Object/ECM and causatives as applicative structures
- wrap-up

2 Background

- Northern, CA; extremely endangered.
- · Predominantly verb-final
- Pro-drop
- Highly polysynthetic; the verb bears most of the information
- Two cases NOMINATIVE and OBJECTIVE. Objective covers everything that's not nominative.

3 Psych-verbs

- All verbs in Kashaya which express a psychological state may occur in a "plain-form" or a "HQA-form" the latter often with reflexive -ic'.
- (5) a. kuška c^hiya·c' -e· to
 cat be.afraid -NFV 1sg_{obj}
 'I'm afraid of cats'
 b. kuška c^hiya·c' -hqa -ic' -e· ?a
 thing be.afraid -APPL -REFL -NFV 1sg_{nom}
 'I'm afraid of cats'

- An overt subject is always in the objective case with the plain-form, (5a).
- An overt subject is always in the nominative case with the HQA-form, (5b).
- I propose that -hqa in these contexts is merely a valency increaser, adding a core argument to the verb, but not altering the semantic interpretation.
- As such, the alternations in (5) are analogous to psych-verb alternations seen in other languages, such as Hindi (also Korean, Italian, K'iche' (Mayan) among others).

(6) Hindi²

a. intransitive auxiliary, dative subject

us-ko $mer\bar{i}$ $y\bar{a}d$ $\bar{a}yi$ 3sg-DAT 1sg.GEN remembrance come.PERF

'He remembered me'

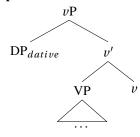
b. transitive auxiliary, ergative subject

us-ne mujhe $y\overline{a}d$ $kiy\overline{a}$ 3sg-ERG 1sg.DAT remembrance do.PERF

'He remembered me'

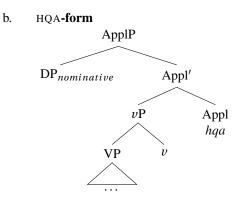
- The phrases in (6) are reported to be semantically equivalent. The dative case is associated with an intransitive (unaccusative) auxiliary, while the ergative case is associated with a transitive auxiliary.
 - A valency alternation co-varies with a case alternation
- While homophony of case forms masks the difference between dative and accusative cases in Kashaya, I assume that the subject of the plain-form is a dative-subject.³
- And I also assume that the structural difference between the choice of auxiliary/-hqa is tied to the case-marking: vP-internal arguments are dative, and vP-external arguments are "canonically" marked.

(7) a. **plain-form**



²Thanks to Anoop Mahajan for this data

³Although nothing crucial depends on this assumption.



• That said, the HQA-form is sometimes associated with a slightly different meaning.

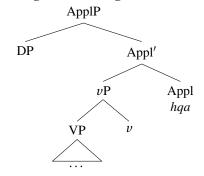
plain-form		HQA-form	
du?ya·qad-	'remember'	du?ya∙qad+hqa	'think about' (or 'remember')
da∙-	'want'	da∙+hqa	'like' (or 'want')
šu?u·m-	'forget'	šu?u·m+hqa	'leave behind (intentionally)' (or 'forget')
muhk ^h un-	'be embarrassed'	muhk ^h un+hqa	'be antisocial' (or 'be embarrassed')

- I'm calling this meaning the AGENTIVE-READING, since it entails that the subject is acting more agentively, or is more in control of the action. That is, there is an Agent theta-role.
 - Because of the correlation between the agentive-reading and the presence of -hqa, we might conclude that -hqa is in fact licensing this Agent-role, as we would expect from a causative morpheme.
- While the HQA-form often implies this reading, it is not guaranteed.
 - That is, the HQA-form can vary between the agentive and non-agentive reading.

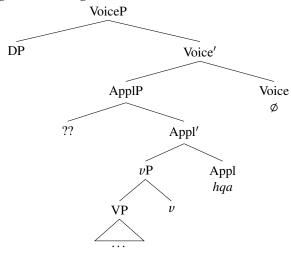
(8) Conrad kafé· da·
$$-hqa$$
 -ic' - \emptyset
C coffee want $-APPL$ -REFL -ABS

- a. 'Conrad wants coffee'
- b. 'Conrad likes coffee'
- I argue that the difference lies in the availability of a phonologically null Voice head merged above Appl.

(9) a. **non-agentive-reading**



b. agentive-reading



- Something needs to be said about what Appl is introducing in this structure.
 - The purpose here is to disassociate the Agent/Causer semantics from the -hqa.
- Thus, there are three distinct structures for psych-verbs, and the difficulty comes in teasing apart the three distinct positions available for the subject.

		subject case	agentive-reading
1.	ν P	objective	no
2.	HQA[vP	nominative	no
3.	Voice[HQA[vP	nominative	yes

Table 1

• In the next two sections, I will concentrate on showing the difference between the latter two structures.

- Crucially, I will show that the Agentive/Causer theta-role is not tied to -hqa
- Following that, I'll propose a tentative distinction between the first two structures.
- Lastly, I'll show how treating -hqa as an Applicative may account for the other occurrences.

3.1 Diagnosing Voice through agreement

• PLURAL AGENT AGREEMENT: The number of an Agent subject is reflected through agreement on the verb (Oswalt, 1961, p.154).

- Plural Agent Agreement

Change all /d/s starting from the end of the word up to and including a final /d/ in the root into /c'/.⁴

• Unless there's a /d/ in the verb, the Plural Agent has no overt reflex. But we can ensure a /d/ by adding a durative suffix.

(10) a. **Non-agentive subject**

kató·te mo -ht <u>-ad</u> -*ă* marble run -PLMVT <u>-DUR</u> -FACT

'The marbles are rolling'

(Oswalt, 1961, p. 154)

b. **Agentive subject**

'They are running'

(Oswalt, 1961, p. 154)

• Under the assumption that Agents/Causers are merged in VoiceP (and other theta-roles aren't) Plural Agent agreement can only obtain if the subject has been merged in VoiceP.

Prediction

- 1. the plain-form should never mark Plural Agent
- 2. the HQA-form should variably mark Plural Agent
 - → Furthermore if Plural Agent morphology is present, only the agentive-reading of the verb should be available.
- The plain-form may never mark Plural Agent.

(11) plain-form

- a. $c^h iya \cdot c' id e \cdot yal$ be.afraid -DUR -NFV 1pl_{Obj} 'We are afraid'
- b. $*c^h iya \cdot c' \cdot wac'$ $-e \cdot yal$ be afraid -DUR.PLAGT -NFV $1pl_{obj}$ Intended: 'We are afraid'

⁴This is a slight simplification. See Buckley (1994, p. 140-) for in-depth discussion.

• The HQA-form may variably mark Plural Agent.

(12) HQA-**form**

```
a. ya q'o'7o ?el du?ya\cdotqad -hqa -med -u 1\mathrm{pl}_{nom} song \mathrm{DET}_{Obj} remember -APPL -DUR -ABS
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'We are remembering the song'5

```
b. ya q'o'?o ?el du'?ya·qad -hqa -mec' -\emptyset 1pl_{nom} song DET_{Obj} remember -APPL -DUR.PLAGT -ABS
```

- a. 'We are thinking about the song'
- b. 'We are remembering the song'
- With plural agent morphology on the verb, only the agentive-reading is available.⁶
- The semantic variation seen in the HQA-form has a structural basis, which is overtly manifested in agreement morphology.
 - And crucially, this variation is not tied to the presence or absence of -hqa.

3.2 Diagnosing Voice through binding

- Kashaya has a set of logophoric pronouns, which display classic anti-locality effects in that they cannot be bound within some "minimal" domain.
- Locally bound anaphora are marked with the suffix -ic'.
- (13) a. $John c^h oq \underline{-ic'} -bi -w$ $John shoot \underline{-REFL} -INFER -ABS$ 'John shot himself'
 - b. *John $\underline{\text{tito}}$ $c^h oq -bi$ -w

 John $\underline{\text{LOG}}$ shoot -INFER -ABS

Intended: 'John shot himself'

- Binding a logophor under a psych-verb is acceptable, but the only interpretation available is the agentive-reading.
- (14) a. John <u>tito</u> du?ya·qad -hqa -w John <u>LOG</u> remember -APPL -ABS
 - a. 'John is thinking about himself'
 - b. 'John remembers himself'
 - b. John du?ya·qad -hqa <u>-ic'</u> -ǎ John remember -APPL <u>-REFL</u> -FACT
 - a. 'John remembered himself'
 - b. 'John is thinking about himself'⁷

⁵Unfortunately, I do not know whether this phrase can mean "We are thinking about the song", although I predict that it cannot.

⁶I remain agnostic about the mechanism for agreement.

⁷Both forms are fine here, presumably because the reflexive anaphor can be bound from either position. Note as well that the surface form of hqa+ic' with the reflexive reading [qayic'] is different that what we normally see with the HQA-form, [qac']. I have no explanation for this.

• This dichotomy is understandable if we suppose that merging an argument in VoiceP above ApplP is satisfactorily non-local for the purposes of binding.

- We can perhaps insert a phase-boundary between Appl and Voice.
- Or we can rely on some other Minimality concern. (I can elaborate on this later.)
- Either way, the difference between binding domains and agentive-reading is not tied to the presence or absence of *-hqa*.

3.3 Summary

• Both the agreement and binding diagnostics show that the agentive-reading is dependent on the availability of a null Voice, not -hqa.⁸

	subject case	agentive- reading?	Plural Agent agreement?	binds a logophor?
HQA-form	nominative	no	no	no
Voice + HQA-form	nominative	yes	yes	yes

Table 2

- Having established the distinction between Voice and -hqa, I will briefly address why I think psychverbs have this alternation.
 - Q: If -hqa isn't doing anything, what's the difference between the plain-form and the HQA-form without Voice?
 - A: Logophoricity
- There is a person restriction on psych-verbs:
 - 3rd person subjects require the HQA-form.
- (15) a. Beatrice $?ama \cdot q^h a?adid hqa w$
 - B thing dream -APPL -ABS
 - 'Beatrice dreamed about something'
 - b. *Beatrice -to ?ama· qha?adid -u
 - B -OBJ thing dream -ABS

Intended: 'Beatrice dreamed about something'

- However, this restriction is lifted in all contexts in which logophoric pronouns are licensed.
 - hšiyic' is a verb meaning "to say". It requires its (indirect discourse) complement to be samesubject and always allows a logophoric pronoun.

⁸See Appendix 1 for more evidence of a null Voice morpheme.

```
(16) Gene [ tito kumi?da? tú·lse qha?adi·d -u ] hšiyic' -Ø
G LOG always candy dream -ABS say<sub>log</sub> -ABS
'Gene says that he always dreams about candy'
```

- I take this as evidence that -hqa is tied to the inherent logophoricity associated with psych-verbs.
 - They require knowledge about the mental state of the experiencer subject.
- Deal and O'Connor (2010), in analyzing Northern Pomo's case-marking patterns (which are nearly
 identical to those here, minus the causative suffix), propose that accusative (=objective) case on the
 subject-experiencer is dependent on the perspective from which the context is being evaluated.
 - An objective-subject case can be used if the subject and the "judge" of the context are the same.
- So -hqa in these structures is required for "perspective shifting" reasons.
- In any event, having established that -hqa is not associated with the Agentive semantics, I will address in the next sections the implications of treating it as an Applicative head.

4 Raising-to-Object/ECM

- It has been argued that *-hqa* functions as a "switch-reference" marker in certain contexts (Oswalt, 1977)
 - complement of da·-, "want"
 - complement to the optative suffix -iš, "I hope"
 - Purpose clauses, "in order to ..."
- All these contexts involve tenseless, irrealis predicates.
- If the matrix subject and the embedded subject are different, -hqa is used on the lower predicate, and the lower subject appears in the objective form.
- (17) a. Pinocchio [s'imun ?i -w] da· -hqa -ic' -Ø
 P alive ASS -ABS want -APPL -REFL -ABS

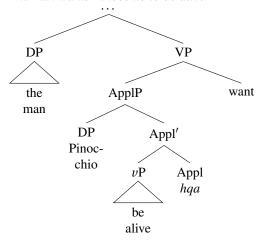
 'Pinocchio wants to be alive'
 b. hi?baya ?em [Pinocchio -to s'imun ?i -hqa -w] da· -hqa -ic' -Ø
 man DET_{nom} P -OBJ alive ASS -APPL -ABS want -APPL -REFL -ABS

 'The man wants Pinocchio to be alive'
 - Note first that the phrase in (17b) does not mean "The man wants to make/let Pinocchio be alive".9
 - Secondly, the embedded predicate is non-eventive. The predicate *s'imun ?iw* means "to be alive", not "to come alive". ¹⁰

⁹Although the two phrases are actually homophonous. This is because the causative form of the lower verb would have a subject which is co-referential with the matrix subject.

¹⁰The inchoative "come alive" is expressed with the derived verbal form s'imunam-.

- See appendix 4 for more evidence that -hqa does not come with an event.
- Lastly, the objective case on the lower subject is generally indicative of an ECM or Raising-to-Object (RtoO) construction, where the lower subject is an argument of both the embedded and the matrix predicate.
 - An unembedded subject of s'imun ?iw would be nominative.
- I analyze these structures as basically Low Applicatives, where the objectively case-marked lower subject is merged in the Applicative phrase.
- (18) The man wants Pinocchio to be alive



- As an applicative argument, "Pinocchio" relates to both the lower and higher predicate.
- This use of -hqa is restricted to tenseless, irrealis complements, because Appl is merged above the ν P but below any tense projection.
 - Predictions:
 - 1. we should never see any "higher" morphology (e.g., evidentials, tense, "true" switch-reference, etc) on these complements.
 - * this prediction holds
 - 2. agreement and binding diagnostics from earlier should obtain as well.
 - * this holds at least for the binding
 - * I have no negative evidence for the agreement. (Although there are additional complications here as well.)

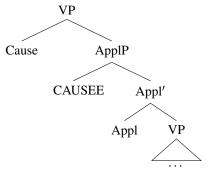
5 True causatives

• This analysis is quite similar to that proposed in Ippolito (2000) for Romance causatives. The causee is merged in spec-ApplP.¹¹

¹¹I thank an anonymous reviewer for bringing this analysis to my attention.

- See appendix 2 for evidence that the causee is not merged in VoiceP

(19) Causative structure (adapted from Ippolito (2000))



• The applicative analysis of causatives can thus apply RtoO/ECM structures.

6 Wrap up

- I have argued that -hqa should be treated as instantiating an Applicative head merged externally to the verb phrase.
 - cross-linguistic data for psych-verbs involving valency increases correlated with case alternations.
 - agreement and binding diagnostics divorce the agentive semantics from -hqa
 - RtoO/ECM are essentially Low Applicatives, as are "true" causatives.
- What remains unexplained is the interaction of this applicative with the logophorocity inherent to psych-verbs.

Thank you.

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Appendices

Appendix 1: Null Voice

- Kashaya is a well-known Fluid-S (Dixon, 1994) or Active-Stative (Mithun, 1991) language.
- Case marking reflects the level of control/agentivity that the subject has over the action of the verb.

```
(20) a. John (mahtaqan) c'e·lic' -bi -w
J (on.purpose) fall -INFER -ABS

'John fell (on purpose)'
b. John -to (??mahtaqan) c'e·lic' -bi -w
J -OBJ (on.purpose) fall -INFER -ABS

'John fell (??accidentally on purpose)'
```

- The nominative subject in (20a) is compatible an adverbial modifier "on purpose", while the objective subject in (20b) is not.
- This falls out from merging the agentive subject in VoiceP, an external projection.
- In contrast, the subject in (20b) is merged internally. Adverbial modification is unavailable.

Appendix 2: causees are not in VoiceP

- We can apply the same agreement and binding diagnostics to show that the causee in a causative construction is not merged in VoiceP.
 - Plural Agent agreement should not be able to obtain with a causee, (21a)
 - A causee should not be able to bind a local logophor, (21b). 12

(21) a. Plural Agent agreement

```
Gene p^hala yal ma·kina ?ana· šahya mo -ad -wad -hqa -hqa -med -u G too us car very fast run -DIR -DISTR -APPL -APPL -DUR -ABS 'Gene made us drive the cars too fast'
```

b. **Binding**

```
Anita John-to tito šu?u·m -hqa -ic' -hqa -w
A J-OBJ LOG forget -APPL -REFL -APPL -ABS
a. 'Anita made John forget her'
b. 'Anita made John forget himself'
```

• Similar arguments have been put forth by Kim (2012) for the English have-causatives in (22).

(22) John had Mary pick up the book

¹²Although it may be able to bind a logophor even more embedded. I have not attempted to get this phrase.

Appendix 3: "Accidental"-readings

• The "accidental" use of -hqa, repeated in (23), applies to resultative predicates.

```
(23) a. John ca·ška ?el ?ahay wi phis'a·-bi -w
J dish DET<sub>obj</sub> stick POST break- INFER -ABS

'John broke the dish with a stick' (intentionally)

b. John ca·ška ?el ?ahay wi phis'a·-hqa-bi -w
J dish DET<sub>obj</sub> stick POST break -hqa -INFER -ABS

'John broke the dish with a stick' (accidentally, while swinging a stick around)
```

- This use if analogous to accidental-causatives studied in Cuervo (2003); Rivero (2009); Fernández-Soriano and Mendikoetxea (2013) a.o.
- (24) Al tintorero se le quemaron los pantalones de Carolina the tintorero $_{dat}$ CL.REF CL.DAT burned.PL the trousers of Carolina
 - a. 'The dry-cleaner (accidentally) burned Carolina's trousers'
 - (b. 'The dry-cleaner had Carolina's trousers burn on him')

(Cuervo, 2003, ex 74, p. 142)

• The reading in (24a) has been shown involve an applied argument high in the structure, which can be applied to resultative predicates to yield an accidental reading.

Appendix 4: non-eventive -hqa

- -hqa doesn't come with a causation event.
- This is demonstrable through embedded contexts.

- Oswalt notes that this might be said if someone heard a rustling in the bushes, and s/he thinks it might be a dog or a bear.
- There is no event associated with the copular predicate here.