External Applicatives and Raising-to-Object/ECM
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Following Kim (2011) for Korean and English, we present original data from Kashaya (Pomoan) arguing that both Voice and Appl can introduce an external argument. In Kashaya, Voice is phonologically null; Appl is realized as *-hqa*, previously assumed to be a causative (Oswalt, 1961, 1977). Our analysis also makes typological predications which are borne out for Raising-to-Object/ECM constructions.

Proposal: Superficially, the morpheme *-hqa*/(*-qa*) can be affixed to any transitive or intransitive verbal element and yield a causative or permissive reading, (1). In fact, *-hqa* is an Applicative head which selects for vP complements, while Voice, phonologically null, can select for vP or ApplP complements. Voice is semantically specified to license an Agent/Causer (building on (Kratzer, 1996; Harley, 2007)); Appl is semantically vacuous (Pylkkänen, 2002). Both heads may be merged without the other, or VoiceP may select for ApplP.

$$[_{\text{VoiceP}} \text{Agent/Causer} [_{\text{Voice}'} \mathbf{Voice^0}=\varnothing [_{\text{ApplP}} \text{DP} [_{\text{Appl}'} \mathbf{Appl^0}=hqa [_{v\text{P}} \dots]]]]]$$

Voice=$\varnothing$ **Fluid-S:** For certain verbs, subjects not in control are Datives (2a), while subjects in control are Nominative (2b) (Mithun, 1991). First, the case alternation suggests that the arguments are being introduced in different projections. Dative Experiencer arguments receive an inherent case in spec-vP. Furthermore, the availability of Agent-oriented adverbs for subjects in control diagnoses the existence a Voice projection in (2b), which is unavailable in (2c). Crucially, there is no added morphology because Voice is phonologically null. **Transitivity:** Verbs can alternate in transitivity without an overt morphological change, (3). In the transitive constructions, (3b), null Voice licenses an external argument.

Appl=*-hqa* **Volitionality:** The addition of *-hqa* to a transitive verb produces a change in volitionality (4), but not a change in valency, or eventivity. These subjects are viewed as accidentally affecting the action, paralleling Applicatives in Spanish (Cuervo, 2003). **Eventivity:** Since causatives are always assumed to introduce an event (Levin and Hovav, 1999), we show using adverbial modification and selectional restrictions that *-hqa* cannot be construed as a causative since it does not introduce another event into the structure. **Psych-verbs:** Psych-verbs may alternate between a "plain" and *-hqa* form, (5). We first show using Binding tests that subjects introduced with *-hqa* are the highest argument in the phrase. Next, adverbial modification shows that the subjects associated with *-hqa* are introduced in a non-Agentive head, ApplP. Further, we demonstrate that a distinct (null) Voice head may be merged above ApplP. This results in different semantic interpretations, as well as produces different binding and morphophonological domains. In (6a) the subject is introduced in Voice, thus the reading is necessarily Agentive and the Subject-Oriented Reflexive (SOR) *tito* can be bound. In (6b), the subject is an ApplP. It cannot bind an SOR, only a morphological reflexive; the reading is non-Agentive. **Causatives:** The causative reading in (1) comes from merging an Agent/Causer in Voice and a Causee in Appl. Following Kim (2011), we demonstrate again using SORs that the Causee is not in a subject position, rather it is in spec-ApplP.

Raising-to-Object/ECM: Raising-to-Object/ECM (RtoO) contexts may involve *-hqa* when the matrix subject differs from the subordinate subject, (7). Restricting ourselves to RtoO with tenseless, irrealis complements (*want*-class verbs (Pesetsky, 1992; Wurmbrand, 2001)), we propose that RtoO is derived straightforwardly by merging an Appl phrase as a complement to V – essentially a Low Applicative. In languages where Applicative heads may select for bare vPs (Kashaya, English (Kim, 2011)), RtoO structures will be allowed (with tenseless, irrealis complement infinitives). We describe a typology of RtoO languages: languages which disallow Double Object Constructions are predicted to not allow RtoO, which appears to be borne out (e.g., French, Hebrew, Russian). We further predict that only languages which allow both Low Applicatives and Applicatives above vP should allow RtoO (again, with irrealis complements). Lastly, we note other languages which display applicative/causative morphology in RtoO contexts (Passamaquoddy (Algonquian), Chuvash (Caucasian)).

Implications: The analysis informs theories of argument structure, with syntactic and semantic consequences. It further motivates a renewed discussion of RtoO constructions.

(1) a. *mo -ad -eꞏ manʔ*
run -DIR -NFV 3sg.Fem$_{subj}$

'She is running along'

b. *mo -ad -hqa -∅ -ya -e· maꞏdal*
run -DIR -APPL -VOICE -VIS -NFV 3sg.Fem$_{dat}$
muꞏkinʔ
3sg.Masc$_{subj}$
'He caused/let her (to) run'

(2) a. *John-to*
John-DAT
c'eꞏlic'-bi-w
fall-INFER-ABS

'John fell' (accidentally)

b. *John mahtaqan*
John on.purpose
c'eꞏlic'-∅-bi-w
fall-VOICE-INFER-ABS

'John fell on purpose'

c. **John-to mahtaqan*
John-DAT on.purpose
c'eꞏlic'-bi-w
fall-INFER-ABS

'#John fell (accidentally) on purpose'

(3) a. *pʰiʔk'oʔem bane-ad-ǎ*
ball DET$_{nom}$ fall-DIR-FACT
'the ball is flying (hither)"

b. *pʰiʔk'oʔel bane-ad-∅-ǎ*
ball DET$_{acc}$ fall-DIR-VOICE-FACT
'(he) is throwing the ball'

(4) a. *John caꞏškaʔel ʔahay wi*
John dish DET$_{acc}$ stick with
pʰis'aꞏ-∅-bi-w
break-VOICE-INFER-ABS
'John broke the dish with a stick' (intentionally)

b. *John caꞏškaʔel ʔahay wi*
John dish DET$_{acc}$ stick with
pʰis'aꞏ-hqa-∅-bi-w
break-APPL-INFER-VOICE-ABS
'John broke the dish with a stick' (accidentally)

(5) a. *ʔamaꞏ cʰiyaꞏc'-eꞏ to*
thing be.afraid-NFV 1sg$_{dat}$
'I'm afraid'

b. *ʔaꞏ ʔamaꞏ cʰiyaꞏc'-hqa-ic'-∅*
1sg$_{nom}$ thing be.afraid-APPL-REFL-ABS
'I'm afraid'

(6) a. *John tito duʔyaꞏqad-hqa-∅-w*
John SOR remember-APPL-VOICE-ABS
'John is thinking about himself'
'*John remembers himself'

b. *John (*tito) duʔyaꞏqad-hqa-ic'-ǎ*
John SOR remember-APPL-REFL-FACT
'J remembered himself'

(7) a. *Anita [qom-ʔ] daꞏ-qa-ic'-∅*
Anita swim-ABS want-APPL-REFL-ABS

'Anita wants to have a bath'

b. *Conrad [Anita-to qom-qa-w]*
Conrad Anita-ACC swim-APPL-ABS
daꞏ-qa-ic'-∅
want-APPL-REFL-ABS

'Conrad wants Anita to have a bath'

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