

## What do you get when you cross a path verb with a resultative?

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### Goals<sup>1</sup>

- Describe some of the less result-like interpretations associated with the Pima resultative suffix
- Present and evaluate a unified analysis for these interpretations

### 1. The Pima “resultative”

- Pima is a Tepiman language of Southern Uto-Aztecan, spoken in several communities to the east and south of Phoenix, Arizona
  - This talk will look in detail at a suffix *-s*, found in Pima and in the closely-related language Tohono O’odham (or Papago)
    - ↳ Saxton (1982) claims that in Papago this is a passive resultative suffix, but does not give a more detailed analysis
    - ↳ Jackson (2005, forthcoming) notes that this analysis accounts for many though not all occurrences of the *-s* suffix
  - The most resultative-like interpretation of the *-s* is what it receives with eventive transitive verbs
- (1) a. Jason 'a-t mato heg maagina.  
AUX-PFV disassemble:PFV DET engine  
Jason disassembled the engine.
- b. 'Iida maagina 'o matog-s.  
this engine 3:SUB:IMP disassemble-ST<sup>2</sup>  
This engine is disassembled.
- c. \*Jason 'o matogs heg maagina.  
This engine is disassembled by Jason.
- This suffix can also receive something like an EXTENSION INTERPRETATION (Goldberg and Jackendoff 2004), typically expressing geographic relations

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<sup>2</sup> Abbreviations: 1s = first person singular, 2p = second person plural, etc.; AUX = auxiliary vowel; CMP = complementizer DET = determiner; DXF, DXN, DXS = deictic particles meaning ‘far, facing away’, ‘near, facing toward, and ‘sideways’; FOC = focus; IMP = imperfective aspect; IRR = irrealis; OBJ = object; PAST = past tense; PFV = perfective aspect; PL = plural; S = verb class marker; SHD = shared knowledge; ST = stativizing suffix; SUB = subject.

### 2. Geographic interpretation of the resultative

- Goldberg and Jackendoff (2004) discuss stative path resultatives like the following
- (2) a. The road zigzagged down the hill.  
b. The weights stretched the rope over the pulley.  
c. The road goes along the river.  
d. The telephone poles run alongside the road.
- In each case, a typically eventive verb involving motion along a path expresses a spatial relationship between two entities, yielding a stative interpretation
  - The “passive resultative” suffix *-s* yields a similar interpretation
- (3) a. Jeved: 'o-m ge juupin-s.  
earth 3:SUB:IMP-DXF FOC sink-ST  
The ground sinks (*i.e.*, the ground has a depression).
- b. Voog 'o gahi nod:ag-s.  
road 3:SUB:IMP sideways turn.tr-ST  
The road turns to the side.
- In Pima, this interpretation is not limited to motion verbs involving a path, but can be found on positional verbs (4)a and others (4)b!
- (4) a. Los Angeles 'o 'an daha-s kaacki basho.  
3:SUB:IMP DXS sit-ST sea in.front.of  
Los Angeles sits on the coast.
- b. S-cuk Kaacki 'o taatam-s heg hetasp jejved:.  
s-black sea 3:SUB:IMP touch-ST DET five PL:land  
The Black Sea touches five countries.
- ↳ What appears to be crucial is that the relationship be one that is relatively permanent and makes sense as a spatial relationship
  - ↳ Is there any way to predict that a verb like *taatam* ‘to touch, feel’ would pattern in this way with the *-s*?

### PROPERTIES OF THE SUFFIXED FORMS

- Argument structure remains unchanged only with a geographic interpretation
  - ↳ When this suffix occurs with a resultative interpretation, it is associated with the absence of the external argument
  - ↳ The verbs in (3)a, (3)b, and (4)a may be intransitive when used eventively, but *taatam* in (4)b is transitive
  - ↳ Are any of the subjects of verbs with *-s* really external arguments, on this interpretation? (or rather, are they the same as the subject in (1)a?)

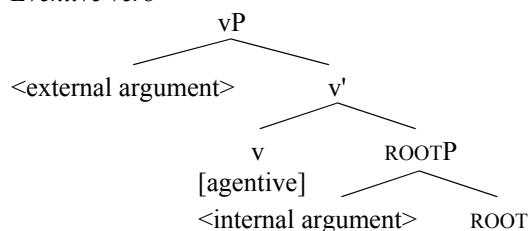
- Aspectually, the suffixed forms pattern like “statives” (following Saxton, Saxton, and Enos 1983 in their classification of Pima and Papago verbs)
    - Many predicates in Pima may occur either with a perfective or imperfective sentential auxiliary
    - Verbs suffixed with the *–s* (those with resultative meanings and those with geographic meanings) **never** occur with a perfective auxiliary
  - Temporally, the suffixed forms are durative and (in neutral contexts) non-transitory or individual level (in the sense of Carlson 1977)
    - The suffixed forms give the impression of permanence similar to individual level predicates; they do not refer to events that unfold over a particular interval of time
    - Despite this sense in a neutral context, suffixed forms can be modified by durative adverbials, both with a resultative interpretation (5)a and a geographic interpretation (5)b
- (5) a. B-o ge kuup-s-kahim heg kuupad:ag hetasp quinta 'ab  
 DXN-3:SUB:IMP FOC close-ST-PST DET door five minute for  
 The door was closed for five minutes.
- b. S-vegi 'Akimel 'o s-gevkam mel-s-kahim vaik tash 'ab.  
 S-red river 3:SUB:IMP S-strongly run-ST-PST four day for  
 The Colorado River ran heavily for three days.
- Forms with the *–s* denote a property that holds at any moment as a contingent fact (a target state), not solely as a result of past action (a post-state)
    - All forms with the *–s* suffix are completely natural with *–kahim*, which asserts that a property or event held or went on in the past and yields a conversational implicature that it does not hold or go on at present
- (6) Los Angeles 'o 'an daha-s-kahim kaacki basho.  
 3:SUB:IMP DXS sit-ST-PST sea in.front.of  
 Los Angeles used to sit on the ocean.
- Another indication that forms with the *–s* are individual level is that such forms show so-called “lifetime effects”: this sentence has an implicature that Los Angeles no longer exists
- Forms with the *–s* can often occur with *ki'ap* ‘still’ (Kratzer 2000), though resultative meanings more natural than geographic meanings
- (7) S-vegi 'Akimel 'o ki'ap mel-s kaacki wui.  
 S-red river 3:SUB:IMP still run-ST sea to  
 The Colorado River still runs to the ocean.
- These forms are made slightly odd by the fact that *ki'ap* ‘still’ indicates that the speaker believe this property may change – which would be atypical for a permanent, individual level predicate
  - While rivers may cease to run, roads may cease to ‘go’ only by falling into extreme disrepair, for example (a non-linguistic fact)

### 3. A unified analysis for the “resultative” *–s*?

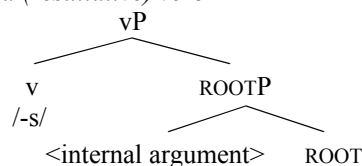
- The really confusing part is that many (if not all) of these verbs appear to be acceptable in exactly the same contexts without the *–s* suffix!
- (8) a. Sacaton wui 'o him 'iida voog.  
 to 3:SUB:IMP go this road  
 This road goes to Sacaton.
- b. S-vegi 'Akimel 'o med: kaacki wui.  
 S-red river 3:SUB:IMP run sea to  
 The Colorado River runs to the ocean.
- c. S-cuk Kaacki 'o taatam heg hetasp jejved:.  
 S-black sea 3:SUB:IMP touch DET five PL:land  
 The Black Sea touches five countries.
- This makes the *–s* in geographic interpretations look more like a filter on non-individual-level (therefore non-stative) interpretations, rather than a morpheme that is involved in introducing new elements of meaning
- The association between the *–s* and individual level interpretations holds apart from verbs with strictly geographic interpretations, as well
- (9) a. M-a-ñ a hem-ceegid heg 'o'ohan.  
 CMP-AUX-1s:SUB SHD 2s:OBJ-show DET book  
 I’m showing you the book. (stage level)
- b. 'Tida tapial 'o ha-ceegid m-a-t has.masma  
 this paper 3:SUB:IMP 3p:OBJ-show CMP-AUX-PFV how  
 vo New York wui.  
 IRR to  
 This paper shows how to go to New York. (individual level)
- c. \*M-a-ñ a hem-ceegid-s heg 'o'ohan.  
 CMP-AUX-1s:SUB SHD 2s:OBJ-show-ST DET book  
 (bad with any meaning) (stage level)
- d. 'Tida tapial 'o ha-ceegid-s m-a-t has.masma  
 this paper 3:SUB:IMP 3p:OBJ-show-ST CMP-AUX-PFV how  
 vo New York wui.  
 IRR to  
 This paper shows how to go to New York. (individual level)

- Sticky point: How can we independently determine if a verb has an individual-level interpretation?
  - Restriction to progressive *vs.* simple present tense might distinguish these forms in English (*cf.* the English glosses in (9)a and b)
  - Since Pima generally lacks tense marking, both types of predicate are marked with imperfective aspect only
  - Other tests seem to allow stage level behavior of individual level predicates – such as the acceptability of temporal or locative modification
- More stickiness: How are individual level predicates distinguished from stage level predicates (besides their meaning) such that *-s* can differentiate them?
  - This may cause problems in trying to unite the resultative analysis with the geographic (which may actually be just individual level) analysis!
- Jackson's (2005) analysis of the *-s* suffix
  - Verbs are morphosyntactically composed of a target state component (indicated in (10) as ROOTP) and an eventive component (a light verb)
  - The eventive light verb, which may have no phonological content, is responsible for introducing an (agentive) external argument
  - In resultative forms, the *-s* combines with just the target state component, yielding a stative meaning with no external argument

(10)a. *Eventive verb*



b. *Stativized (resultative) verb*



- Applying this to the geographic cases
  - On verbs with stage level (*i.e.*, eventive) interpretations, the above is what happens – the *-s* attaches to the stative component and prevents the eventive component (and agentive external argument) from attaching
  - When these verbs have individual level (*i.e.*, stative) interpretations, *-s* attaches with no apparent change in meaning

#### PROBLEMS WITH THIS ANALYSIS

- Overall problem: is it reasonable to claim that every root is stative?
  - Not every verb that this suffix occurs on with a resultative meaning is amenable to a decomposition analysis involving a target state (*e.g.* *gaswua* 'to comb'?)
- This presupposes a structural difference between stage level and individual level predicates
  - If the *-s* attaches to a root in place of an agentive light verb, where does the external argument in individual level interpretations come from?
  - If it is an argument of the root, why does it look so similar to other external arguments that are **not** arguments of the root, and what allows it to be present just in these cases?
  - Is it base-generated in the specifier position of IP? (Jäger 2001)
- This initially seems to fit with independent claims regarding the differences between stage level and individual level predication
  - Kratzer (1995): individual level predicates lack a Davidsonian eventuality argument, while stage level predicates have one
  - This meshes nicely with the analysis here if the agentive light verbal head is responsible for introducing the eventuality argument
  - BUT** the most straightforward account of the temporal modification facts in (5) requires that we do have an eventuality argument – one that ranges over (target) states
- Every instance of an individual level predicate – and more specifically for us, a root – must then involve a state of the relevant sort, *contra* Kratzer
  - The idea that even individual level predicates involve an eventuality argument ranging over states is not new, but it is not the only proposal (Jäger 2001 is in favor of this; Chierchia 1995 presents an alternative)
- In comparison, note that transitive psychological predicates that allow the *-s* to attach also surface with their argument structure apparently unchanged

(11)a. S-heñ-kee'id 'o heg 'Uupio.  
 S-1s:OBJ-hate 3:SUB:IMP DET Skunk  
 Skunk hates me.

b. S-heñ-kee'id-s 'o heg 'Uupio.  
 S-1s:OBJ-hate-ST 3:SUB:IMP DET Skunk  
 Skunk hates me.

- Perhaps the *-s* may attach above other types of light verbs, or perhaps such cases are treated exactly as other individual level predicates
- Temporal modification would pose a problem here, as well: do psychological predicates of this type have an eventuality argument that differs from other (eventive) verbs, ranging over states, not events?

#### 4. Conclusion

- The Pima resultative suffix –s may not be a resultative, but rather a suffix that allows a stative root to surface without an agentive external argument
- The “geographic” interpretations that this suffix yields on path verbs, positional verbs, and others may be straightforwardly derived on this analysis
- The nature of eventuality arguments involved in individual level predication and in roots deserves closer examination to determine if this line of analysis is correct

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