University of Pennsylvania Working Papers in Linguistics

Volume 17
Issue 1 *Proceedings of the 34th Annual Penn Linguistics Colloquium*

Article 19

1-1-2011

The Syntactic Structure of Palauan Resultatives

Justin Nuger
University of Maryland, jnuger@ucsc.edu

The Syntactic Structure of Palauan Resultatives

Justin Nuger*

1 The issue

This paper explores the idea that morphemes that I analyze as verbalizers (instances of *v*) and adjectivalizers (instances of *a*) can attach to constituents larger than VP or $\sqrt{}$P, focusing on data involving resultatives in Palauan, a Western Austronesian language spoken by about 15,000 people in Micronesia.[1] Palauan resultatives are described in the literature as *resulting state verbs* (Josephs 1975, 1990, 1997), which are "derived by taking the verb stem ... and inserting the infix *-l-* or *-el-* after the stem-initial consonant" (Josephs 1997:273); this is exemplified in (1b).[2]

(1) a. TRANSITIVE:
A sensei a **meluches** er a babier.
D teacher TOP write$_{\text{IMPF}}$ ACC D letter
"The teacher is writing the letter."

b. RESULTATIVE:
A babier a **l⟨l⟩uches**.
D letter TOP ⟨RES⟩.write
"The letter is written." [Josephs 1997:273, ex. 17]

In the following sections, I show that the syntactic properties of Palauan resultatives suggest that they begin as instances of V or $\sqrt{\text{ROOT}}$ that are first verbalized as passives (via merge of passive *v* with VP/$\sqrt{}$P) and are then subsequently stativized (via merge of an additional resultative *a* with the passive *v*P). The analysis treats Palauan resultatives as being derived syntactically rather than in the lexicon, with the structure given in Figure 1. If correct, the result aligns with Embick's (2004) pure syntactic analysis of English resultatives (following the proposals of Kratzer 2000, 2005).

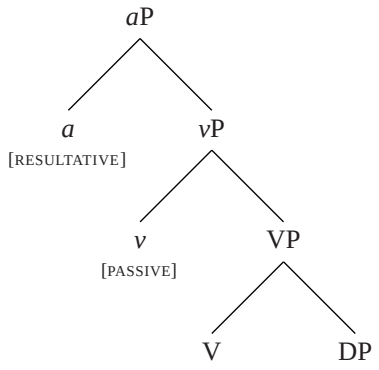

Figure 1: Proposed structure for Palauan resultatives.

I argue that Palauan resultatives have a complex semantics with both eventive and stative components, where the culmination of an event induces a resultative state. I propose that the syntax in

*Many heartfelt thanks to the Palauans who consulted with me for this project. Judith Aissen, Sandy Chung, Jim McCloskey, Kie Zuraw and many others all deserve thanks for their input as this research was conducted. This material is based upon work supported by the National Science Foundation under Grant #BCS-0846979 and the U.S. Department of Education under Grant #P170B050015. The findings expressed here are those of the author and do not necessarily reflect the views of the funding agencies.

[1]Palauan function words are glossed as: D = determiner, P = preposition, L = linker. Agreement morphemes are notated with S, O, or P to indicate subject, object, and possessor agreement, respectively; *e.g.*, 3SGP = third person singular possessor, 2PLO = second person plural object, *etc.* I gloss subject clitics with the "=" sign.

[2]The *-(e)l-* infix can assimilate to *-(e)r-* when it precedes [r]. It is glossed as RES.

Figure 1 provides the structure to compute the semantics using standard compositional operations (*e.g.*, Heim and Kratzer 1998). If correct, this analysis of Palauan resultatives supports the idea that there is syntactic structure beneath the word level, as suggested by Roeper (1987:306) in examples like (2), containing English resultatives that co-occur both with *by*-phrases and *un*- prefixation.

(2) a. The code was *un*-[broken by the Russians].
b. The problem was *un*-[detected by anyone].
c. The case was *un*-[contested by the lawyers].
d. The man was *un*-[seen by police observers]. [Roeper 1987:306, ex. 141a–d]

If it's true that *un*- prefixation is restricted to adjectives and oblique *by*-phrases are only licensed by verbal passives, then Roeper's examples suggest that English resultatives may also be formed from passive *v*Ps, indicated by the brackets in (2), which then change category from verbal to adjectival. This is precisely the analysis I propose for Palauan resultatives.

2 Evidence for internal verbal structure

There are (at least) three types of evidence that resultative predicates are formed from full passive *v*Ps, all suggesting that resultatives, like verbal passives, must have a bounded (and thus necessarily non-stative) event structure component.

2.1 Internalized External Arguments

The external argument of a transitive active sentence may be expressed obliquely or implicitly in passives, as shown in (3) through (5). The "internalized external argument" can be an agent, as in (3b), but it need not be, as in (4b) and (5b).

(3) a. A chad er a chei a **m⟨il⟩urech** a bdel-ul a lluich el ngikel.
D man P D sea TOP ⟨PAST⟩.spear.PF D head-3PLP D 20 L fish
"The fisherman speared 20 fish in the head." EVENTIVE TRANSITIVE
b. A lluich el ngikel a **ule-burech** a bdel-ul (er a chad er a chei).
D 20 L fish TOP PAST.PASS-spear D head-3PLP (P D man P D sea)
"20 fish were speared in the head (by the fisherman)." VERBAL PASSIVE

(4) a. A bli-l a kelebus a **merers** er a redart el kelebus.
D building-3SGP D prison TOP hold.inside.IMPF ACC D 100 L prisoners
"The prison is holding 100 prisoners." STATIVE TRANSITIVE
b. A redart el kelebus a **me-sers** (er a bli-l a kelebus).
D 100 L prisoners TOP PASS-hold.inside (P D building-3SGP D prison)
"100 prisoners are being held (by the prison)." VERBAL PASSIVE

(5) a. Ke **ulle-siich** er a reng-uk.
2SGS= PAST.CAU-tight ACC D heart-1SGP
"You made me proud." (*lit.* "You tightened my heart.") CAUSATIVIZED IDIOM
b. Ng **m⟨l⟩o-siich** a reng-uk (er kau).
3SGS= ⟨PASS⟩.CAU-tight D heart-1SGP (P you)
"I was made proud (of you)." (*lit.* "My heart was tightened (by you).") VERBAL PASSIVE

Er-phrase PPs with internalized external arguments can also appear in resultatives. Like in passives, they may contain agents, as in (6), or non-agents, as in (7) or (8).

(6) A lluich el ngikel a mle **b⟨l⟩urech** a bdel-ul (er a chad er a chei).
D 20 L fish TOP AUX.PAST ⟨RES⟩.spear.PF D head-3PLP (P D man P D sea)
"20 fish were speared in the head (by the fisherman)." RESULTATIVE

(7) A redart el kelebus a **s⟨el⟩ers** (er a bli-l a kelebus).
D 100 L prisoners TOP ⟨RES⟩.enclose (P D building-3SGP D prison)
"100 prisoners are held (by the prison)." RESULTATIVE

(8) Ng mle **ul-siich** a reng-uk (er kau).
3SGS= AUX.PAST RES.CAU-tight D heart-my (P you)
"I was proud (of you)." (*lit.* "My heart was tightened (by you).") RESULTATIVE

The grammaticality of the examples in (6) through (8) suggests that resultatives are formed from passives of transitive verbs, as there do not appear to be thematic restrictions on the types of external argument DPs that can appear in *er*-phrase PPs, just as in verbal passives.

Importantly, simple stative adjectives do not permit internalized external arguments in oblique *er*-phrase PPs because there are no external arguments to internalize, as shown in (9a) for the adjective *mesaul* "tired." However, the resultative *uleksaul* formed from the passive of the causativized verb *omeksaul* "exhaust" is perfectly acceptable with an *er*-phrase, as in (9b).

(9) a. * Ak mle **me-saul** er a rengelek-ek.
1SGS= AUX.PAST INTR-tired P D children-1SGP
("I was tired by my children.") STATIVE ADJECTIVE
b. Ak mle **ulek-saul** (er a rengelek-ek).
1SGS= AUX.PAST RES.CAU-tired (P D children-1SGP)
"I was exhausted (by my children)." RESULTATIVE

The fact that resultatives allow *er*-phrases while ordinary stative adjectives do not suggests that part of the denotation of a resultative makes reference to a non-stative eventuality.

2.2 Manner Adverbials

If resultatives (*i.e.*, of the events that induce resulting states) are derived from passives of transitive verbs denoting events, manner adverbials should be able to modify the non-stative event denoted by the passive *v*P before it becomes a resultative. Consider (10a–b), which contain verbal passives that co-occur with the manner adverbials *omekedelad* "carefully" and *terrekakl* "sloppily." Interestingly, the same manner adverbials can co-occur with resultatives, as shown in (11a–b).

(10) a. A blai a **omekedelad** el **muk-beches**.
D house TOP careful L PASS.CAU-new
"The house is being renovated carefully." PASSIVE
b. A siasing a **terrekakl** el **me-luches**.
D picture TOP sloppy L PASS-draw
"The picture is being drawn sloppily." PASSIVE

(11) a. A blai a mera el **omekedelad** el **ulek-beches**.
D house TOP really L careful L RES.CAU-new
"The house is really carefully renovated." RESULTATIVE
b. A siasing a mera el **terrekakl** el **l⟨l⟩uches**.
D picture TOP really L sloppy L ⟨RES⟩.draw
"The picture is really sloppily drawn." RESULTATIVE

However, these adverbials are incompatible with simple stative adjectives like *beches* "new" or *mengelengalek* "ugly," as shown in (12a–b).

(12) a. * A blai a **omekedelad** el **beches**.
D house TOP careful L new
"The house is carefully new." STATIVE
b. * A siasing a **terrekakl** el **mengelengalek**.
D picture TOP sloppy L ugly
"The picture is sloppily ugly." STATIVE

The data offers further evidence that resultatives have event structures that are more complex than those of simple statives. If manner adverbials can only describe the actions undertaken by an initiator of some sort (often an agent), then in principle they should be incompatible with statives, which do not permit initiators. And yet they are compatible with resultatives. It would thus appear that resultatives either are not semantically stative (a view I will reject in Section 3) or are not *purely* stative (the view I will eventually adopt).

2.3 Aspectual Modifiers Targeting Telic Endpoints

Resultatives also permit aspectual adverbial PPs that target telic endpoints of events (*cf. in an hour* in English; see *i.a.*, Tenny 1987). The Palauan PP adverbial [*er a chelsel a* + ⟨LENGTH OF TIME⟩] identifies the telic endpoint of a bounded predicate (*i.e.*, an achievement or an accomplishment) but cannot co-occur with an unbounded predicate (*i.e.*, a process or a state), as indicated in (13).

(13) a. Te m⟨il⟩tik a beresengt er tir er a chels-el a ta el sikang.
3PLS= ⟨PAST⟩.find D presents P them P D space.inside-3SGP D one L hour
"They found their presents in an hour." ACHIEVEMENT

b. Te l⟨il⟩uches aike el siasing er a chels-el a ta el sikang.
3PLS= ⟨PAST⟩.draw.PF those L pictures P D space.inside-3SGP D one L hour
"They drew those pictures in an hour." ACCOMPLISHMENT

c. * Te ulemais er a chels-el a ta el sikang.
3PLS= wander.around.PAST.IMPF P D space.inside-3SGP D one L hour
("They wandered around in an hour.") PROCESS

d. * Te mle ungil a reng-rir er a chels-el a ta el sikang.
3PLS= AUX.PAST good D hearts-3PLP P D space.inside-3SGP D one L hour
("They were happy in an hour.")[3] STATIVE

If resultatives can have internal bounded event structure, we might expect that [*er a chelsel a* + ⟨LENGTH OF TIME⟩] PP modifiers would be acceptable in at least some resultatives, just as they are acceptable in passives like in (14), below. This is indeed what we find in (15).

(14) a. A blai a **m⟨l⟩uk-beches** er a chels-el a ta el buil.
D house TOP ⟨PAST⟩.PASS.CAU-new P D space.inside-3SGP D one L month
"The house was renovated in a month." PASSIVE

b. A siasing a **m⟨il⟩-luches** er a chels-el a eim el bung.
D picture TOP ⟨PAST⟩.PASS-draw P D space.inside-3PLP D five L minutes
"The picture was drawn in five minutes." PASSIVE

(15) a. A blai a mle **ulek-beches** er a chels-el a ta el buil.
D house TOP AUX.PAST RES.CAU-new P D space.inside-3SGP D one L month
"The house was renovated in a month." RESULTATIVE

b. A siasing a mle **l⟨l⟩uches** er a chels-el a eim el bung.
D picture TOP AUX.PAST ⟨RES⟩.draw P D space.inside-3PLP D five L minutes
"The picture was drawn in five minutes." RESULTATIVE

Once again, the acceptability of *er a chelsel a*-PP modifiers in resultative predicate phrases contrasts with similar examples containing simple stative adjectives like *beches* "new" and *klebokel* "pretty," which as statives are inherently unbounded; compare (15) with (16).

(16) a. * A blai a mle **beches** er a chels-el a ta el buil.
D house TOP AUX.PAST new P D space.inside-3SGP D one L month
("The house was new in a month.") STATIVE

b. * A siasing a mle **klebokel** er a chels-el a eim el bung.
D picture TOP AUX.PAST pretty P D space.inside-3PLP D five L minutes
("The picture was pretty in five minutes.") STATIVE

The contrast between (15) and (16) provides even further evidence that resultatives have more complex event structures than (simple) statives and pattern in many ways like verbal passives. The distribution of telic aspectual modifier PPs receives a natural explanation if resultatives are themselves derived syntactically from verbal passive *v*Ps.

[3](13d) is grammatical on the irrelevant interpretation in which they began to be happy after an hour has passed. This is a repair strategy for some unbounded predicates, discussed by Kearns (2000:205–206).

3 Resultatives as resulting state predicates

In spite of the observations made in the previous section, resultatives still seem to be treated like statives in some sense, both syntactically and semantically.

3.1 Truth Conditions of Resultatives

While verbal passives and resultatives have undeniable syntactic parallelisms, resultatives nevertheless differ from passives in their truth-conditional semantics. Basically, passives describe events, and resultatives describe stative eventualities that arise as the result of a particular event's completion. The contrast comes out very clearly under negation; consider (17). The sentences in (17a) and (17b) have different truth conditions. The passive sentence in (17a) is compatible with a scenario in which no house exists because the building has not yet begun. (17b), by contrast, is not compatible with this scenario — it describes an unfinished house. The difference is represented pictorially in (18).

(17) a. A blai a dirkak **le-me-ruul**.
D house TOP not.yet 3SG.IRR-PASS-make
"The house is not built yet." PASSIVE

b. A blai a dirkak **le-r⟨r⟩uul**.
D house TOP not.yet 3SG.IRR-⟨RES⟩.make
"The house is not built yet." RESULTATIVE

(18) TWO CONTRASTING SCENARIOS INVOLVING THE BUILDING OF A HOUSE:

a. *No building has begun.*

↝ describes (17a), not (17b)

b. *The building is unfinished.*

↝ can describe (17b)

I take the differences in (17a)'s and (17b)'s compatibility with the two scenarios in 18 to arise from the semantics of *rruul* "made" (RESULTATIVE). If resultatives like *rruul* describe target states that obtain as a result of the completion of an event, then it makes sense that (17b) is incompatible with scenario (18a), since the event has not yet begun.[4] The contrast suggests that in addition to a (non-stative) eventive component, the denotation of a resultative predicate includes a stative component that must have some duration, possibly persisting to the present.

3.2 Auxiliary Selection: *mla*

The distribution of the aspectual auxiliary *mla* provides further evidence that resultatives are treated on some level like other stative predicates. *Mla* appears to have the properties in (19).

(19) INFORMAL SYNTAX AND SEMANTICS OF *mla*:

a. *Mla* is an aspectual auxiliary of category Asp which selects a predicate XP denoting a non-stative eventuality.

b. *Mla* asserts that the eventuality it describes is either complete or simply indefinitely terminated (if incomplete).

[4] Dubinsky and Simango 1996:750 note a similar contrast in Chichewa.

In some sense, *mla* often appears to behave similarly to the English perfect auxiliary *have*. *Mla* only co-occurs with non-stative predicates (*i.e.*, processes, accomplishments, and achievements) and not with stative predicates, such as *mesisiich* "strong" or *beches* "new" in (20).

(20) a. * Ak **mla mesisiich**.
1SGS= AUX strong
("I have been strong.") STATIVE

b. * Ng **mla beches** a mlai.
3SGS= AUX new D car
("The car has been new.") STATIVE

Because *mla* cannot combine with statives but can combine with predicates of any non-stative aspectual class (see Vendler 1967; Verkuyl 1972; and much subsequent work), co-occurrence with *mla* can be used as a diagnostic for stativity.

But there is one potential complication for the characterization of *mla* in (19a–b), which together suggest that *mla* may not place any restrictions on temporality or boundedness and should thus be able to combine with statives, as even states can cease to hold after some duration of time. Still, I think there is reason to believe that the view of *mla* in (19) is on the right track, particularly if we consider sentences that have been translated from English into Palauan. When an English sentence containing a sequence of [*already* + STATE] is translated into Palauan, the verb *mo* "become" is inserted, as in (21). Crucially, the state is transformed into an event describing a change of state (see Koontz-Garboden 2007 for details and extensive references).

(21) a. Ng **mla mo** kebesengei.
3SGS= AUX become evening
"It is already very late." (*lit.* "It has become evening.") [*Chedaol Biblia*, Matthew 14:15]

b. Ke di mo mereched el obes aike el **le-bla** **bo**
2SGS= just AUX.FUT fast L forget those L IRR.3SG-AUX IRR.become
mo-dengei.
IRR.2SG-know
"You will soon neglect what you already know." (*lit.* "You will be fast to forget those (things) which have become what you know.") [*Chedaol Biblia*, Proverbs 19:27]

(21) illustrates that *mla* can combine with statives, but only if they undergo some sort of conversion into an event describing a change-of-state (*e.g.*, Embick's (2004:366) "fientivization" process; see also Wunderlich 1997).

Now, (22) and (23) show us that *mla* can select (at least some) passive *v*Ps (as in the (a) examples), but not resultative *a*Ps (as in the (b) examples) unless *mo* appears between *mla* and the resultative (as in the (c) examples).

(22) a. ... aike el beluu el **mla me-ngai**.
... those L nations L AUX PASS-take
"... the nations that I have already conquered." [*Chedaol Biblia*, Joshua 23:4]
(*lit.* "... the nations that have been conquered") PASSIVE

b. * ... aike el beluu el **mla ng⟨l⟩ai**.
... those L lands L AUX ⟨RES⟩.take
("... the nations that have been conquered.") RESULTATIVE

c. ...aike el beluu el **mla mo** ng⟨l⟩ai.
...those L lands L AUX become ⟨RES⟩.take
"... the nations that have become conquered." *mo* + RESULTATIVE

(23) a. Ng **mla me-dul**.
3SGS= AUX PASS-burn
"It had already been burned." [*Chedaol Biblia*, Leviticus 10:16] PASSIVE

b. * Ng **mla d⟨el⟩ul**.
3SGS= AUX ⟨RES⟩.burn
("It had been burned.") RESULTATIVE

c. Ng **mla mo** d⟨el⟩ul.
3SGS= AUX become ⟨RES⟩.burn
"It had become burned (*i.e.*, was visibly roasted)." *mo* + RESULTATIVE

It would appear that *mla* cannot select (bare) resultatives, as shown in (22b) and (23b). If part of the denotation of a resultative predicate refers to an ongoing (resulting) state, then this fact receives a natural explanation: *mla* simply cannot select stative predicates of any type, simple or complex.

3.3 Resultatives have Stative Past Tense Morphology

Resultative *a*Ps share the external distribution of simple stative *a*Ps and *v*Ps with respect to another morphosyntactic phenomenon involving the morphology of past tense marking, which takes different forms depending on whether the predicate is stative or non-stative, as shown in (24) and (25).

(24) PAST TENSE WITH *-il-* INFIX (NON-STATIVES):

A Ignacio Anastacio a **k⟨il⟩tmekl-ii** e oders-ii el mo er a Court.
D Ignacio Anastacio TOP ⟨PAST⟩.prepare.PF-3SGO and offer.PF-3SGO L go P D Court
"Ignacio Anastacio prepared it and is offering it to the Court." [*Tia Belau*, 12 October 2009]

(25) PAST TENSE WITH *mle* AUXILIARY (STATIVES):

a. Ng kmal **mle** me-rau.
3SGS= very AUX.PAST INTR-rich
"He was very rich." [*Chedaol Biblia*, Matthew 19:22]

b. A Toki a **mle** medenge a tekoi er a Siabal.
D Toki TOP AUX.PAST know D language P D Japan
"Toki used to know Japanese." [Josephs 1990:146]

It was already shown in several examples above that the *mle* auxiliary is used to express past tense with resultative predicates, *e.g.*, in (6), (8), and (15). Whatever the relevant property is that drives the differing past tense morphology on eventive and stative verbs, resultatives pattern with stative verbs rather than eventive verbs. This result aligns with the differences in truth-conditional semantics between passives and resultatives and the *mla* auxiliary selection facts in Sections 3.1–3.2.

4 Syntactic and semantic analysis of Palauan resultatives

The generalization that emerges from the facts presented in Sections 2 and 3 is that Palauan resultatives appear to have the internal structure of (non-stative) passive *v*Ps, but they behave syntactically and semantically like stative predicates. Consequently, the syntactic analysis I proposed in Figure 1 begins with a V (which might be substituted for a category-neutral $\sqrt{\text{ROOT}}$ in a theory in which lexical categories are defined in the syntax; see Marantz 1997 and much subsequent work) that merges with a DP internal argument. The resulting VP then merges with passive *v* to form a passive *v*P. Finally, the passive *v*P merges with a resultative *a* head, which changes the lexical category of the predicate phrase from verbal to adjectival, *i.e.*, it transforms the passive *v*P into a resultative *a*P.

Now, although I have opted to analyze the syntactic functional head that derives a resultative predicate from a passive *v*P as a category-changing *a* morpheme, the resultative functional head might in actuality be either resultative *v* or resultative *a*.The line of demarcation between (especially stative) verbs and adjectives is extremely blurry in Palauan and in Austronesian more generally. The analysis aligns with Lieber's (1980) analysis of English and German resultatives as adjectival, where a null suffix attaches to the (verbal) participle and changes the category from V to A. The difference between languages like German and English on one hand and Palauan on the other, then, is that the category-changing morpheme is overt in Palauan (*-(e)l-*). Furthermore, recent experimental research on verbal passives and "adjectival passives" (resultatives) suggests that, in some languages, resultatives require longer processing times than passives do. For instance, Stolterfoht et al. (2010)

analyze the differences in processing time between passives and resultatives as a byproduct of a syntactic category conversion from V to A.[5]

On the analysis I propose, the resultative *a* head is the locus of the resultative *-(e)l-* morpheme[6] and selects a passive *v*P complement. A Kratzerian semantics for the resultative head might look something like (26), *e.g.*, for the interpretation of the resultative *lluches* in (1b).

(26) KRATZERIAN SEMANTICS OF RESULTATIVE FORMATION:

a. $[\![vP_{[\text{PASSIVE}]}]\!] = \lambda s \lambda e$ [WRITE(e) & EVENT(e) & WRITTEN(letter)(s) & CAUSE(s)(e)]

b. $[\![a_{[\text{RESULTATIVE}]}]\!] = \lambda \mathfrak{R} \lambda s \exists e$. $\mathfrak{R}(s)(e)$

c. $[\![aP_{[\text{RESULTATIVE}]}]\!] = \lambda s \exists e$ [WRITE(e) & EVENT(e) & WRITTEN(letter)(s) & CAUSE(s)(e)] [*cf.* Kratzer 2000:391, ex. 14]

The resultative *a* head functions to existentially quantify the event argument of a passive *v*P that also contains a target state component (Parsons 1990:234–235), following Kratzer (2000, 2005). That Palauan resultatives formed from the infix *-(e)l-* denote (or at least *can* denote) what Parsons calls target states is indicated by their ability to co-occur with *dirk* "still," as shown in (27).

(27) TARGET STATE RESULTATIVES CO-OCCUR WITH *dirk* "still"

a. A teki-ngel a Rubak a m⟨l⟩o er a Jeremia er se er a **dirk**
D words-3SGP D Lord TOP ⟨PAST⟩.go P D Jeremiah P that.(time) P D still
le-che⟨l⟩simer er a mekesekes-ir a remengkar.
3SGS.IRR-⟨RES⟩.imprison P D yard-3PLP D guards
"The words of the Lord came to Jeremiah while he was still imprisoned in the palace courtyard." [*Chedaol Biblia*, Jeremiah 39:15]

b. Kemiu a **dirk r⟨r⟩engodel** er a kngt-miu.
you.PL TOP still ⟨RES⟩.bind P D sins-2PLP
"You are still lost in your sins." [*Chedaol Biblia*, 1 Corinthians 15:17]

The ability to co-occur with *dirk* "still" suggests that the resulting state is not permanent (*i.e.*, not a resultant state, in Parsons's terminology).

The claim that resultative predicates have an internal eventive structure (*i.e.*, a full passive *v*P) aims to explain why certain properties that characterize passive *v*Ps manifest themselves in resultative predicates as well, as was illustrated in Section 2. And the claim that resultative *a* effectively transforms the (non-stative) event into an internally complex stative *a*P predicate aims to explain the truth-conditional semantics of resultatives and their apparently stative (predicate-external) syntax, examined in Section 3. The analysis has at least two primary consequences.

The first consequence is that the syntax allows the resultative *a* head to merge freely with any passive *v*P in the syntax, even those that lack a target state component.[7] But it is important to note that this analysis of resultatives depends on a classification of intransitive verbs in which passive *v*P can be distinguished syntactically from other types of *v*Ps in some way — I have encoded the distinction featurally, treating $v_{[\text{PASSIVE}]}$ as distinct from other instances of *v*.

[5]However, it is unclear whether similar differences in processing time would obtain in languages whose passives and resultatives are morphologically distinct, like Palauan.

[6]I am agnostic about whether resultative *a* is spelled out post-syntactically as *-(e)l-* (compatible with theories assuming late insertion of morphological material, *e.g.*, Halle 1990; Anderson 1992; Halle and Marantz 1993, 1994) or whether there is a lexical entry for resultative *a* which specifies the morphophonological form *-(e)l-* (compatible with theories assuming that syntax operates on lexical items, *e.g.*, the framework in Chomsky 2000 *et seq.*).

[7]Note that even in English, unlike in German, adjectival passives may be formed from certain verbs which lack target states, such as *know* (*cf.* German *wissen* in Kratzer 2000:389, ex. 9b), as in (i) below (indicated by *un-* prefixation and the presence of *remain*; see Emonds 2006 and references therein for further details).

(i) Ms. Kennedy is a paradox: a universally recognized person who **remains** largely **unknown** by the public. ["As Privacy Ends for Kennedy, a Rough Path Awaits," *The New York Times*, 16 December 2008]

Of course, the selectional restrictions of resultative *a* could have been formulated differently, perhaps selecting intransitive *v*Ps of any type (including unergatives and unaccusatives) or just intransitive *v*Ps with internal arguments (including unaccusatives, but barring unergatives). But even with simple modifications such as these, the analysis still predicts that the derivation will crash at LF if the event denoted by the *v*P doesn't have a target state component. To illustrate, there are unaccusatives of achievement and existence which do not have resultative forms in English, *e.g.*, *appear* in (28) and *flourish* in (29). They do not have target states.

(28) UNACCUSATIVE OF ACHIEVEMENT *appear*:
  a. The stars appeared.
  b. * The stars are/remain (un)appeared.
  c. * [$_{DP}$ the (un)appeared stars]

(29) UNACCUSATIVE OF EXISTENCE *flourish*:
  a. My plants flourished.
  b. * My plants are/remain (un)flourished.
  c. * [$_{DP}$ the (un)flourished plants]

If Palauan resultatives are only compatible with *v*Ps that denote a target state, then resultatives just should not be able to be formed from a verb (or $\sqrt{\text{ROOT}}$) corresponding in meaning to *appear* or *flourish*, as is evidently the case in English. A natural empirical question to ask at this point is whether the class of verbs/roots that have resultative forms shares any semantic or aspectual properties, a question that requires extensive study of the lexical semantics of verbs of different languages (such as Levin 1993 for English) and is well beyond the scope of the present paper.

The second consequence of the analysis is that resultatives cannot be formed from transitive *v*Ps. This is a natural fact of German and English resultatives, (possibly) the Malagasy *tafa-* resultative, and the Greek *-tos* resultative (none of which exhibit agentivity effects; see Kratzer 2000 for German, Emonds 2006 for English, Travis 2005 for Malagasy, and Anagnostopoulou 2003; Alexiadou and Anagnostopoulou 2008 for Greek). But Palauan clearly allows external arguments to appear in oblique *er*-phrase PPs even in resultatives (with associated agentivity effects if the DP in the *er*-phrase is an agent), as do the Malagasy *voa-* resultative and the Greek *-menos* resultative.

This restriction actually provides further evidence for the selectional approach to resultative formation on the present analysis: the resultative *a* head may only select passive *v*Ps. For instance, resultatives can be formed from canonically intransitive predicates that have been causativized — this was shown in examples (9b) and (11a) above. It seems clear that there is no inherent incompatibility between resultatives and agents (and external arguments more generally) in Palauan, but it seems to be the case that agents (and other external arguments) must be implicit or realized in an oblique *er*-phrase. The situation also provides evidence that the causative morpheme does not license a DP itself; it merely creates a new event of causation that needs a higher functional head (*e.g.*, a transitive or passive *v*) to license a DP that can serve as the causer of the eventuality denoted by the XP. On this analysis, passives of causative verbs are then (correctly) predicted to be able to combine with resultative *a* precisely because causative verbs can have passive forms.

These two consequences of the analysis essentially amount to restrictions on which verb stems allow resultative forms. The first consequence involves issues surrounding how to delimit the class of possible verb stems based on their lexical semantics, suggesting that the class of verb stems that may form resultatives coincides with the class of verb stems that may appear in a verbal passive predicate *v*P. In some sense, then, the term "adjectival passive" is quite suitable, given the analysis of Palauan resultatives presented here. The second consequence takes this point seriously, showing both that (i) a verb stem that ordinarily has no resultative form can suddenly have one as long as it is causativized (and, I argue, subsequently passivized), and (ii) a verb stem that ordinarily has a resultative form can suddenly not have one if it has a transitive argument structure (*i.e.*, if it is not passivized). The analysis predicts that in the absence of any modifications to (or further restrictions on) resultative *a*, the number of resultative predicates should be roughly equivalent to the number of transitive verbs that may appear in the verbal passive. This result leaves open the possibility that certain combinations of functional heads and lexical heads will be syntactically permissible but ruled out later in the derivation if they are semantically incompatible.

References

Alexiadou, Artemis, and Elena Anagnostopoulou. 2008. Structuring participles. In *Proceedings of WCCFL 26*, ed. C. Chang and H. Haynie, 33–41.

Anagnostopoulou, Elena. 2003. Participles and voice. In *Perfect Explorations*, ed. A. Alexiadou, M. Rathert, and A. Von Stechow, 1–36. Berlin: Mouton de Gruyter.

Anderson, Stephen. 1992. *A-Morphous Morphology*. Cambridge, Mass.: MIT Press.

Chomsky, Noam. 2000. Minimalist inquiries: The framework. In *Step by Step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, ed. R. Martin, D. Michaels, and J. Uriagereka, 89–155. Cambridge, Mass.: MIT Press.

Dubinsky, Stanley, and Sylvester Ron Simango. 1996. Passive and stative in Chichewa: Evidence for modular distinctions in grammar. *Language* 25:749–781.

Embick, David. 2004. On the structure of resultative participles in English. *Linguistic Inquiry* 25:355–392.

Emonds, Joseph. 2006. Adjectival passives. In *The Blackwell Companion to Syntax, Volume I*, ed. M. Everaert and H. van Riemsdijk, 16–60. Malden, Mass.: Blackwell.

Halle, Morris. 1990. An approach to morphology. In *Proceedings of NELS 20*, ed. J. Carter, R.-M. Déchaine, B. Philip, and T. Sherer, 150–184.

Halle, Morris, and Alec Marantz. 1993. Distributed Morphology and the pieces of inflection. In *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*, ed. K. Hale and S.J. Keyser, 111–176. Cambridge, Mass.: MIT Press.

Halle, Morris, and Alec Marantz. 1994. Some key features of Distributed Morphology. In *MITWPL 21: Papers on Phonology and Morphology*, ed. A. Carnie and H. Harley, 275–288.

Heim, Irene, and Angelika Kratzer. 1998. *Semantics in Generative Grammar*. Oxford: Blackwell.

Josephs, Lewis. 1975. *Palauan Reference Grammar*. Honolulu: University of Hawaii Press.

Josephs, Lewis. 1990. *New Palauan-English Dictionary*. Honolulu: University of Hawaii Press.

Josephs, Lewis. 1997. *Handbook of Palauan Grammar: Volume I*. Koror: Ministry of Education, Republic of Palau.

Kearns, Kate. 2000. *Semantics*. New York: Palgrave.

Koontz-Garboden, Andrew. 2007. States, Changes of State, and the Monotonicity Hypothesis. Doctoral dissertation, Stanford University.

Kratzer, Angelika. 2000. Building statives. In *Proceedings of BLS 26*, ed. L. Conathan, J. Good, D. Kavitskaya, A. Wulf, and A. Yu, 385–399.

Kratzer, Angelika. 2005. Building resultatives. In *Events in Syntax, Semantics, and Discourse*, ed. C. Maienborn and A. Wöllstein-Leisten, 177–212. Tübingen: Niemeyer.

Levin, Beth. 1993. *English Verb Classes and Alternations*. Chicago: University of Chicago Press.

Lieber, Rochelle. 1980. On the Organization of the Lexicon. Doctoral dissertation, MIT.

Marantz, Alec. 1997. No escape from syntax. In *Penn Working Papers in Linguistics 4.2: Proceedings of PLC 21*, ed. A. Dimitriadis, L. Siegel, C. Surek-Clark, and A. Williams, 201–225.

Parsons, Terrence. 1990. *Events in the Semantics of English*. Cambridge, Mass.: MIT Press.

Roeper, Thomas. 1987. Implicit arguments and the head–complement relation. *Linguistic Inquiry* 18:267–310.

Stolterfoht, Britta, Helga Gese, and Claudia Maienborn. 2010. Word category conversion causes processing costs: Evidence from adjectival passives. *Psychonomic Bulletin & Review* 17:651–656.

Tenny, Carol. 1987. Grammaticalizing Aspect and Affectedness. Doctoral dissertation, MIT.

Travis, Lisa. 2005. Passives, states, and roots in Malagasy. In *Proceedings of AFLA XII*, ed. J. Heinz and D. Ntelitheos, 395–409.

Vendler, Zeno. 1967. *Linguistics in Philosophy*. Ithaca: Cornell University Press.

Verkuyl, Henk. 1972. *On the Compositional Nature of Aspects*. Dordrecht: Reidel.

Wunderlich, Dieter. 1997. Cause and the structure of verbs. *Linguistic Inquiry* 28:27–68.

UMD Department of Linguistics
1401 Marie Mount Hall
College Park, MD 20742
!@ju-st.in