

Find Construction Analyze: Making Sense of Serial Verb Constructions

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1. Introduction: SVC - Structure, meaning, unifying features?

- **Central Question:** What are SVCs? How can they be defined?
- i. What is/are *the* structure(s) of SVCs?
- ii. What is/are *the* semantics of SVCs?
- iii. Is there something like a proto-typical SVC?
- ⇒ **What can formal EVENT semantics contribute to these questions?**

- **Preliminary answer:**
- i. Formal semantic analysis shows that different sub-kinds of SVCs come with different interpretive properties regarding various phenomena: ADVERB MODIFICATION, A-QUANTIFICATION, ASPECT, CUMULATIVITY, (NEGATION, WORD ORDER)

“Semantic criteria have received much less attention in the study of verb serialization than the syntactic ones. One (obvious) reason for this is that, as we will see below, serial verb constructions do not form a homogeneous class from a semantic point of view.” (Veenstra & Muysken 2018)
- ii. Observable semantic differences are likely to be correlated with structural/syntactic differences: ⇒ different syntactic sub-kinds of SVCs; cf. eg. Stewart (1998)
- iii. From a theoretical perspective, SVC seems to be a rather meaningless cover term for a range of superficially related phenomena with different underlying syntax and semantics (Muysken 1988, Veenstra 1989, den Dikken 1991, Stewart 1998)

Superficial formal diagnostics (Veenstra & Muysken 2018):

- (1) a. only one grammatical subject;
- b. at most one shared grammatical object;
- c. one specification for tense/aspect:
 - often only on the first verb;
 - sometimes on both verbs, but agreeing in the specification given;
 - sometimes only on the second verb;
- d. only one possible negator;
- e. **No intervening coordinating conjunction!**

⇒ (1cde) entail that SVCs are mono-clausal structures, with clause = finite sentential structure with a single extended verbal projection spine (EVP).

- (2) Potential unified structure: [TP [NegP [AspP [vP [V(P) V(P) V(P)]]]]]]

- **SVCs: Semantic subtypes:** Informal semantic characterizations: Variation in underlying conceptual representation/ semantic templates/ thematic mapping (Jackendoff 1983)?

(3) [KHMER, Self 2014: 84f.]

- . sokh **jə:k** kambət **ka:t** sac (INSTRUMENTAL)
 Sokh take knife cut meat
 'Sokh cut the meat with a knife.'
- b. kɲom**tiŋ** siəwphəw **ʔəoj** Bill (RECIPIENT/DATIVE)
 1SG buy book give Bill
 'I bought a book for Bill.' (Spruiell 1988:252)
- c. **baək** bəŋʔuəc **ʔəoj** kɲompha:ŋ (BENEFICIARY)
 open window give 1SG also
 'Open the window for me, will you?' (Huffman, Promchan & Lambert 1970:139)
- d. kɲom**caol** ba:l **təw** la:n (DIRECTION, GOAL OF MOTION)
 1SG throw ball go car
 'I throw the ball at the car.' (Spruiell 1988:252)
- e. kɲom**wiej** ckae **slap** (RESULTATIVE)
 1SG beat dog die
 'I struck the dog dead' (Mikami 1981:110)
- f. koət **təw** Waikiki **roəm** ciəmuəj jə:ŋ (PURPOSE)
 3SG go Waikiki dancewith 1PL
 'He goes to Waikiki to dance with us.' (Sak-Humphry 1995:181)
- g. viə ba:n mək lau:p sdap niw kra:om pteəh (MANNER)
 1SG PST come sneaklisten be.at beneath house
 'He came and listened secretly from beneath the house.' (Haiman 2011:217)

(4) [IGBO]

- a. O. zu.-ru. o.ku.ko. gbu-o. si-e (MULTI-EVENT, OBJECT SHARING)
 3SG buy-pst chicken kill-sfx cook-sfx
 'He bought the chicken, killed and cooked it.'
- b. O si-ri ji ri-cha *(ya) (SEQUENCE, NO OBJECT SHARING)
 3SG cook-pst yam eat-compl it
 'S/he cooked the yam and ate it all.'
- c. O ji mma e-be anu. (INSTRUMENTAL)
 3SG use knife pfx-cut meat
 'S/he cuts/is cutting the meat with a knife.'
- d. O ji ukwu bia (MANNER)
 3SG use leg come
 'He comes on foot.'
- e. O. zu.-ta-ra akwu.kwo. nye m (RECIPIENT/DATIVE)
 3SG buy-dir-pst book give 1SG
 'S/he bought a book for me.'
- f. O bu nku a-ga ahia (DIRECTION/GOAL)
 3SG carry firewood pfx-go market
 'S/he carries/is carrying firewood to the market.'
-
- g. Uche **ku.-wa-ra** efere. (RESULTATIVE)
 Uche hit-break-pst plate
 'Uche broke the plate.'

h. Uche me-re [m chi.a o.chi.] (CAUSATIVE)
 Uche do-pst me laugh.ICV laugh
 ‘Uche made me laugh.’

i. O to-ro kari.-a Ada (COMPARATIVE)
 3SG tall-pst exceed Ada
 ‘S/he is taller than Ada.’

- **Reduction to fewer sub-types:**

- i. Adopting the more abstract classification into state- and event-denoting verbs of (Awóyalé 1988), Déchaine (1993) reduces 7 SVC-subtypes (instrumental/manner/comitative/ multi-event/dative/ benefactive/ resultative) in Yoruba and Igbo into 4 more basic ones:

DATIVE, INSTRUMENTAL, RESULTATIVE, AND MULTI-EVENT SERIAL

- ii. Veenstra & Muysken (2018) also come up with four sub-types based on the parameters [+/-lexically constrained] and [less/more independence of subevents]
- (5) Type1: Lexically constrained, less independence (DIRECTION, DAT, BENEFACTIVE, COMP)
 Type2: Lexically constrained, more independence (CAUSATIVE, INSTRUMENT, COMITATIVE)
 Type3: Lexically free, less independence (RESULTATIVE)
 Type4: Lexically free, more independence (MULTI-EVENT)

- **Form-based distinctions: Wide and narrow definitions of SVC**

Wide definition (Veenstra & Muysken 2018): see criteria in (1)

Narrow definition (Stewart 1998: 15,30): ARG sharing

- (6) i. RESULTATIVE SVC (7a): S V1_{TR} NP V2_{RES,ITR} (ARG sharing)
 ii. CONSEQUENTIAL SVC (7b): S V1_{TR} NP_i V2_{TR} ____i OBJ sharing) vs
 iii. CONVERT CONJUNCTION (7c): S V1_{TR} NP V2_{TR} NP (no ARG sharing)

- (7) a. Òzó sùà ágá dé b. Òzó gbé úzò_i khién ____i [Edo]
 Ozo push chair fall Ozo kill antelope sell
 ‘Ozo pushed the chair down.’ ‘Ozo killed the antelope and sold it.’
 c. Òzó (gié!gié)gbó!ó ívìn bòlò ókà
 Ozo quickly plant coconut peel corn
 ‘Ozo quickly planted the coconut and [he] peeled the corn.’

BUT: Narrow definition fails to account for contrast between (8a) and (8b) (Manfredi 2005):

- (8) IGBO YORUBA (Abraham 1958, Bamgbósé 1974)
 a. M rè-re jí (wè-é) bia. b.*Mo ta iṣu wá.
 1SG sell-pst yam take-AFF come 1SG sell yam come
 ‘I sold [the] yams and (then) came’

⇒ (8ab) both involve covert conjunction in Stewart’s analysis (1998) (no ARG sharing!): This does not account for ungrammaticality of (8b), as there should be no structural constraints on covert conjunction, as long as conjunction is interpretable and pragmatically plausible

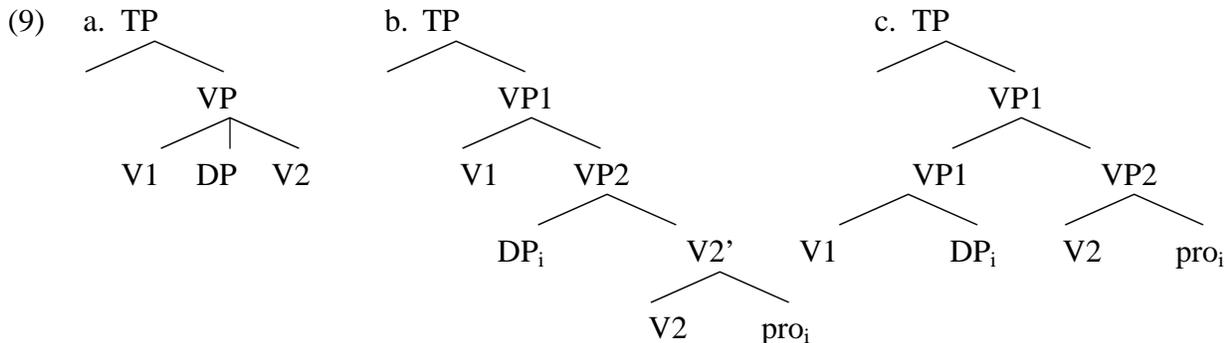
- **Meaning, structure, and compositionality**

Q1 Structural Differences ⇒ **Semantic Differences?**

[+/- OBJ sharing], inflection, word order, functional architecture [+/-AspP, +/- V_{CAUS}]

Q2 Semantic Subtypes ⇒ **Structural Differences?**

⇒ COMPLEMENTATION (9ab) (Baker 1989, Collins 1997) vs ADJUNCTION (9c) (Déchaine 1993)



⇒ Déchaine (1993) allows for two subtypes of SVC depending on whether V1 or V2 in (9c) projects: Same word order, different underlying structure, **different semantic construal**:

(10) Yoruba [Déchaine 1993:283]: Igbo

- | | |
|---|---|
| <p>a. Jímò ó wè lò
 J. agr bathe/swim go
 i. 'Jimo swam away.'
 ii. 'Jimo bathed before going.'</p> | <p>b. Uche gwu-ru mmiri je-waa
 Uche swim-pst water go-away
 i. Uche swam away
 ii. Uche swam before leaving)</p> |
|---|---|

Q3 How many different structural sub-types of SVCs satisfy the criteria in (1), and to what extent do the structural differences correspond to semantic differences?

⇒ **How to employ standard diagnostics from event semantics and event composition?**

Scarce discussion in literature, with notable exception of Stewart (1998)

!!!CENTRAL AIM OF THIS TALK!!!

- §2 Event Composition I: General conceptual issues
- §3 Event Composition II: Formal modelling and empirical diagnostics for SVCs
- §4 Case Study Igbo I: Applying the diagnostics to multi-event and sequence SVCs (4ab)
- §5 Case Study igbo II: Extending the analysis to other SVC-subtypes

2. Event composition I: Conceptual preliminaries

- **Observation I: Internal vs External Arguments** (Kratzer 1995, 2003)

Kratzer (2003: ch.3): Different verbalized actions can be cumulated over a plurality of subject AGENTS, but not over a plurality of object THEMES:

(11) CONTEXT: Alan digs a hole; Brian buys a rose bush, loosens the soil and places the bush in the hole, Campbell adds manure and compost, Dunn covers the roots of the bush with subsoil and topsoil.

a. \Rightarrow The four young man planted the rose bush. OK

b. NOT \Rightarrow : The rose bush, the soil, the hole, the manure, the compost ... were planted.

“Themes lack the conceptual independence of agents. Theme arguments seem to be tightly linked to their verbs. Agents are different. Actions seem to have agents independently of how we describe them.” [Kratzer 2003: 4]

(12) Event unification: $[[\text{John } v \text{ VP }]] = \lambda e. \text{AG}(\text{john}, e) \wedge [[\text{VP}]](e)$

\Rightarrow Different status of Subjects and Internal Arguments in SVC: Agentive subjects are unaffected by core event composition, internal arguments contribute to event composition:

SVCs: Event composition at VP/AspP-level?

- **Observation 2: No 1:1-correlation between structural complexity of event description and complexity of the event denotation.**

i. Complex sequences of chains of events with temporal and eventive sub-structure can be coded as one lexical unit (Klein 2009, Ramchand 2008, Embick 2009)

(13) Eva mowed the lawn. [Klein 2009:74]

“Here we have only one verb form in the past – *mowed*. It merges a finiteness marking [...] and a non-finite component (*mow*), which, by virtue of its lexical meaning, provides certain temporal and descriptive properties [...]”

i. There must be a time t_1 at which Eva is somehow active (eg. swinging a scythe)

ii. There must be a time t_2 at which the grass is upright.

iii. There must be a time t_3 at which the grass is on the ground.

iv. Various temporal relations obtain between those times, eg. $t_3 > t_2$, $t_1 \infty t_2$ etc.

Same for Igbo (14): \Rightarrow **Not all conceptually complex events must be coded as SVCs!**

(14) Uche su.-ru. ahi.hi.a.

U. mow-pst grass

‘Uche mowed the grass/the lawn.’

ii. Conversely: structurally complex event descriptions (= predicates) need not refer to a plurality of events or a group of events with atomic sub-structure (eg. $e_1 \oplus e_2$)

(15) John was singing in the garden. Event Predicate Modification: $P_1(e) \wedge P_2(e)$.

\Rightarrow **Consequence:** SVCs can, but need not express pluralities or groups of events!

- **Observation 3: Different subtypes of causal event chaining**

“An **event of causing the student** to leave, then, is an event that includes the student’s leaving. On the other hand, an **event that causes the student to leave** is the initial link of

some causal chain whose final link is the student's leaving. Such an event, then, does not include the student's leaving." (Kratzer 2003:4)

⇒ Periphrastic causative constructions describe **events that** cause the student to leave:

(16) a. John made the student leave.

b. $\exists e_1 [AG(\text{john}, e_1) \wedge \exists e_2 \wedge \text{CAUSE}(e_1, e_2) \wedge AG(\text{1z.student}(z), e_2) \wedge \text{leaving}(e_2)]$

c. NOT: $\exists e [AG(\text{john}, e) \wedge \exists e_1 [e_1 < e \wedge AG(\text{1z.student}(z), e_1) \wedge \text{leaving}(e_1)]]$

In (16ab), the subevents are structurally independent and chained by CAUSE-relation

In (16b), the two events stand in a part-whole relation: <

⇒ No group or plural formation from independent subevents with CAUSATIVE SVCs:

(17) Uche me-re m chi.a o.chi.

Uche do-pst me laugh.ICV.sfx laugh

'Uche made me laugh.' (NOT: 'Uche actively engaged in event that included my laughing')

⇒ **Consequence:** SVCs do not necessarily denote mereological subparts of event pluralities / plural event groups: the events can also stand in causal (or other) relations.

3. Event composition II: Variability in complex event formation

3.1 Formal modelling of complex events

- Four ways of semantically combining event descriptions (cf. Stewart (1998) for (18i-iii)):

(18) i. **Event Predicate Modification:** $\exists e [P_1(e) \wedge P_2(e)]$ (19) V/VP?
1 event; symmetric (Stewart 1998: resultative SVC)

ii. **\exists -conjunction:** $\exists e_1 [P_1(e_1)] \wedge \exists e_2 [P_2(e_2)]$ (20) vP?
2 independent events; symmetric (Stewart 1998: covert conjunction)

iii. **Event Cumulation:** $\exists e, e_1, e_2 [e = e_1 \oplus e_2 \wedge P_1(e_1) \wedge P_2(e_2)]$ (21) VP?
2 subevents; symmetric (Stewart 1998: consecutive SVC)

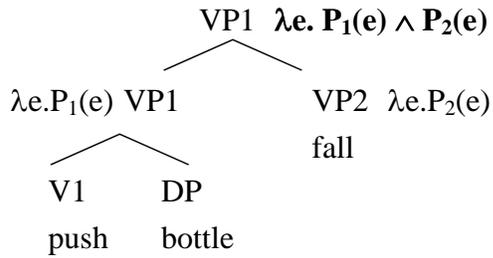
iv. **Event Extension:** $\exists e_1 e_2 [P_1(e_1) \wedge e_1 < e_2 \wedge P_2(e_2)]$ (22) V?
2 events; **asymmetrically related in mereological part-whole structure**

cf. von Stechow (1995) on event extension with adverbial quantifiers

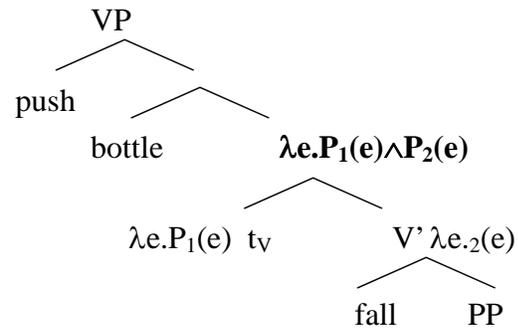
- **Event Predicate Modification:** Compatible with different structures!

(19) a. Òzó sùà ògó dé [Edo] b. Resultative SVC Stewart 1998):
Ozo push bottle fall $\exists e [\text{Push-Fall}(e) \wedge \text{Theme}(e, \text{bottle})]$.
'Ozo pushed bottle down.'

(20) a. Adjunction (Déchaine 1993)



b. Complementation (Stewart 1998)



- **(Propositional) \exists -Conjunction:** *possibly* attested with phrasal SVCs (Veenstra & Muysken 2016) or with multi-event covert conjunction (Stewart 1998)

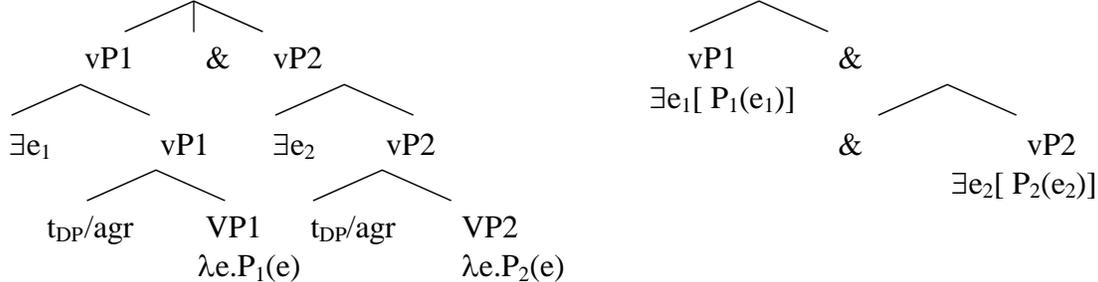
(21) a. Li inn ranpe li inn al lakaz. [Mauritian Creole, VM2018]

3SG ASP crawl 3SG ASP go house
 'He crawled to the house.'

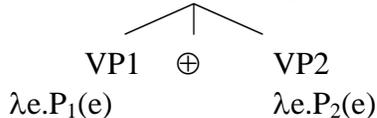
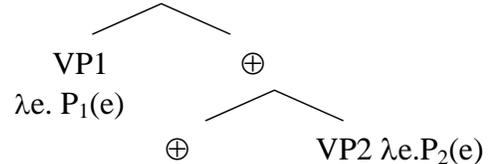
b. Òzó gbóló ívìn bòló ókà [Edo, Stewart 1998]

Ozo plant coconut peel corn
 'Ozo planted the coconut and [he] peeled the corn.'

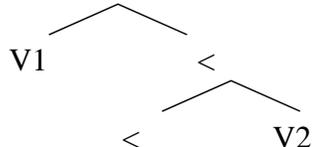
\Rightarrow \exists -CONJUNCTION must take place higher than \exists -event closure, i.e. at vP or AspP, plus ATB-extraction of Subject DP to SpecTP (symmetric &) or pro/arg in SpecvP (asymmetric &)

(22) a. $\lambda s. \exists e_1[P_1(e_1)] \wedge \exists e_2[P_2(e_2)]$ b. $\&P \lambda s. \exists e_1[P_1(e_1)] \wedge \exists e_2[P_2(e_2)]$ 

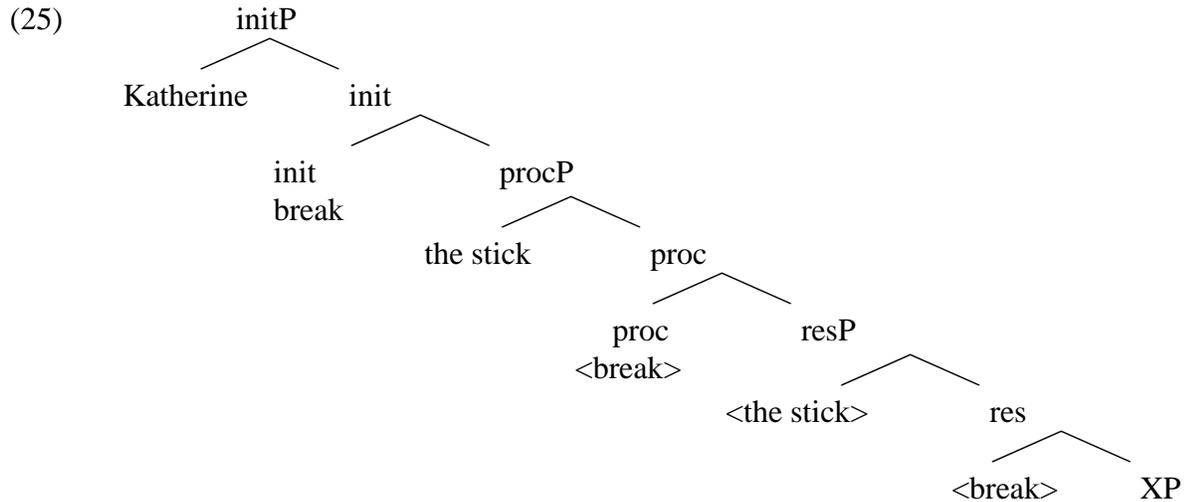
- **Event Cumulation:** Possible application at VP-level,

(23) a. $\lambda e. [e=e_1 \oplus e_2 \wedge P_1(e_1) \wedge P_2(e_2)]$ b. $\oplus P$ 

- **Event Extension:** Possible application at V-level

(24) a. $\langle P$ b. $\llbracket \langle \rrbracket = \lambda P_{2\langle v,t \rangle} \lambda P_{1\langle v,t \rangle} \lambda e_1 \lambda e_2. P_1(e_1) \wedge e_1 < e_2 \wedge P_2(e_2)$ 

⇒ Possibility of lexicalizing extension structures in verbal roots (Ramchand 2008, Embick 2009, Kratzer 2003): e.g. with (lexicalized) resultative, causative, temporal ordering.



- i. *init*: initial state that causally implicates another eventuality
- ii. *proc*: dynamic event, its subject is an undergoer of the process
- iii. *res*: final state that is causally implicated by process event; its subject is a resultee,

⇒ **Different ways of combining atomic events into more complex event descriptions make different predictions regarding various empirical diagnostics:**

ADVERBIAL MODIFICATION, ADVERBIAL QUANTIFICATION & ASPECT, CUMULATIVITY, (NEGATION, WORD ORDER)

3.2 Event semantic diagnostics

3.2.1 Modification with Contradictory Adverbs (Eckardt 1998, Stewart 1998):

Assumption: A single (super-) event cannot be subject to modification with contradictory adverbs (eg. fast-slow), as this would entail that the event has contradictory properties.

(26) The sphere rotated **quickly, slowly** heating up. ⇒ two *independent* events!

⇒ **Prediction for SVCs:** Contradictory adverbs licit with independent plural event construals of SVCs, i.e. with \exists -CONJUNCTION and EVENT CUMULATION,

but **NOT** with EVENT MODIFICATION: only one event!

and **NOT** with EVENT EXTENSION: not two **independent** events!

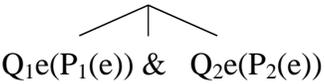
cf. the inacceptability/deviance of contradictory part-whole specifications with nominals:

- (27)
- a. #I like that beautiful table with its ugly legs
 - b. #the fast racing course with slow tarmac
 - c. #this quick dancing with its slow movements
 - d. BUT: When a sphere rotates quickly, it heats up slowly ✓

⇒ **Disclaimer:** Test may not always be applicable for syntactic reasons, as adverb placement is dependent on the availability of a given amount of syntactic/functional structure!

3.2.2 Adverbial quantification (Asp-marking) on subevents:

A-quantification (and Asp-marking) saturate event argument positions (Fintel 1995, Klein 1994, Kratzer 1998, Stewart 1998): compatible only with event compositional mechanisms that conjoin quantified events at the propositional (vP- or AspP-) level.

- (28) a.  b. 

With A-quantification or Asp-marking on V2, the event introduced by V2 may be bound by existential \exists -closure

⇒ **Prediction for SVCs:**

A-quantification possible (on V2) ⇒ \exists -CONJUNCTION (proposition level)
 A-quantification impossible ⇒ MODIFICATION, CUMULATION, EXTENSION

NB Iterativity markers NOT a reliable diagnostic, pace Stewart (1998). They do not necessarily denote Asp-marking or A-quantifiers, but can also be analyzed as modifiers on cumulative verb denotations (Kratzer 2008); same for other ASP-markers?

- (29) $\{e_1, e_2, e_3, e_4, e_1 \oplus e_2 \oplus e_3, e_1 \oplus e_2 \oplus e_4, e_2 \oplus e_3 \oplus e_4\}$ ITER ⇒ $\{e_1 \oplus e_2 \oplus e_3, e_1 \oplus e_2 \oplus e_4, e_2 \oplus e_3 \oplus e_4\}$

3.3.3 Cumulativity: EVENT CUMULATION should license agent cumulativity over subevents.

i. Agent cumulation over theme-based subevents (standard).

- (30) Uche and Obi read ‘Half of a Yellow Sun’ and ‘Sunset at Dawn’
true eg. if Uche read HYS and Obi read SaD.

ii. *Agent cumulation over serial verbal subevents?*

- (31) Uche and Obi killed chicken cook. *true if Uche killed a chicken and Obi cooked it?*

⇒ **Prediction for SVCs: Cumulation over V-subevents**

possible ⇒ EVENT CUMULATION (cumulative semantics)
 impossible ⇒ MODIFICATION, EXTENSION, \exists -CONJUNCTION

3.2.4 Additional Diagnostics

- **Negation** (cf. also Bámgbosé 1986, Déchaine 1993, pace Jansen et al. 1978):

Assuming sentential negation applies higher than vP/AspP/ \exists event-closure (Zeijlstra 2004), we predict the following NEG-patterns for complex event construals:

- (32) \exists -CONJUNCTION:

- a. $\text{NEG} [\exists e_1 [P_1(e_1)] \wedge \exists e_2 [P_2(e_2)]] \Leftrightarrow \text{NEG} [\exists e_1 [P_1(e_1)] \vee \text{NEG} [\exists e_2 [P_2(e_2)]]$
 b. It is not the case that Mary danced and that Mary sang. is true iff
 i. Mary didn’t dance, OR ii. Mary didn’t sing, OR iii. Mary did neither

(33) EVENT CUMULATION:

a. NEG $[\exists e, e_1, e_2 [e = e_1 \oplus e_2 \wedge P_1(e_1) \wedge P_2(e_2)]] \Rightarrow$ there is no group event $e = e_1 \oplus e_2$

b. It is not the case (that Mary danced and SANG) is true iff

Mary didn't engage in a joint singing+dancing (cf. Kratzer 2011 on joint striding \oplus flying), but she may well have either sung or danced on different occasions, or neither.

(34) EVENT MODIFICATION and EVENT EXTENSION:

a. Negation of unique modified event, or negation of extended event entails that there is no complex event/state at all.

b. John didn't break the stick. is true if

i. there is no breaking process initialized by John at all (Event Modification) OR

ii. John's efforts were not successful (no complex super-event) (Event Extension)

\Rightarrow **Prediction for SVCs:** In principle, negation should be able to target V1 or V2 with all event compositional modes

BUT: V1 or V2-related readings may be ruled out by additional factors: (a.) syntactic construal and scope of NEG; (b.) association with focus and constraints on focusing in SVCs...

NEG-diagnostic instructive for identifying different syntactic structures!

- **Word Order Reversal:** Expected to be possible with symmetric semantic construals, modulo pragmatic constraints on iconic temporal or causal ordering, eg. with SVCs expressing temporal overlap or simultaneity of events:

(35) a. He killed a chicken and cooked it \Rightarrow He cooked a chicken and killed it. #
 b. He sat and ate yam. \Rightarrow He ate yam and sat/ He ate yam sitting. OK

\Rightarrow **Prediction for SVCs:** Word order reversal in principle possible with \exists -CONJUNCTION, EVENT CUMULATION, EVENT MODIFICATION,

but NOT with *inherently asymmetric* EVENT EXTENSION!

licit reversal \Rightarrow no event extension

3.3 Overview Event Semantic Diagnostics

	*-Adverbs	A-quant.	Cumulation	NEG	Reversal
Event Modification	*	*	*	V1 and/or V2	YES/NO
\exists -Conjunction	YES	YES	*	V1 and/or V2	YES/NO
Event Cumulation	YES	*	YES	V1 and/or V2	YES/NO
Event Extension	*	*	*	V1 and/ or V2	*

3.4 Structural Diagnostics

i. Ideophone placement (VM2018):

The licit occurrence of (event-modifying) ideophones on V1 shows (i.) that V1 has lexical (eventive) content; (ii.) that the shared argument belongs to the first verb (ideophone demarcates right VP-boundary):

(36) a. a [naki hen gboo-gboo] kii. Saramaccan (VM16)
 3SG hit 3SG IDEO kill
 ‘She struck him dead with really hard blows.’

b. A téi dí páu [náki hen gbóó] túe káá. Saramaccan
 3SG take DET stick hit 3SG IDEO throw finish (Veenstra 1996: 86)
 ‘He already had taken a stick and beaten him down with it.’

ii. Other structural diagnostics (for the most part ignored in this talk...)

- [+/-] Q-Binding with shared arguments SVCs (c-command)

(37) a. V1 Q_i V2 pro_i /PRON_i

- [+/-] overt pronoun with V2 in shared argument SVCs (Binding principle B & c-command)

b. V1 DP_i V2 pro_i /PRON_i

- [+/-] Reflexivization of complement of V2 (mono- or biclausal, Principle A, Self 2014)

c. SUBJ_i V1 V2 Refl_i

- [+/-] subVP-preposing (Self 2014): Constituency; no conjunction (CSC)

d. [V2 (DP)] SUBJ_i V1 DP t_i

3.5 Additional complicating factor: SVCs with more than two verbs can have heterogeneous structures consisting of more than one strategy: e.g. EVENT EXTENSION+ \exists -CONJUNCTION or EVENT MODIFICATION + \exists -CONJUNCTION.

4. Applying the diagnostics to Igbo SVCs

4.1 Introducing Igbo

- Benue-Kwa language, spoken in Southeastern Nigeria (Biafra)
- 3 tones: H, L, downstep
- Rigidly SVO
- Rich verbal morphology (tense, aspect, NEG), no agreement
- External argument in SpecTP
- Lower Verbs in SVC nominal: assign GEN case (tone marking) to DP complement

4.2 Event semantic diagnostics for Igbo Multi-Event and Sequence SVCs

DISCLAIMER: **This is work in progress!** We do not have comprehensive overview or analysis of all informal subtypes of Igbo SVCs. In addition, a principled structural analysis of negation and association with focus is lacking so far. The NEG-diagnostic will be handled with care.

⇒ **More modest claims of this section:**

i. Multi-Event and Sequence SVCs in (38ab) have different semantic properties, and, hence, different underlying structures – despite superficial similarities!

(38) a. Uche gbu-ru o.ku.ko._i si-e ya_i (Multi-event, - OBJ-Sharing)
 Uche kill-pst chicken cook-sfx 3sg V1 NP1 V2 NP2
 ‘Uche killed a chicken and cooked it’.

b. Uche gbu-ru o.ku.ko._i si-e ____i (Sequence, + OBJ-Sharing)
 Uche kill-pst chicken cook-sfx
 ‘Uche killed ‘n cooked a/the chicken.

ii. Interpretation of Multi-event SVCs in (38a): \exists -CONJUNCTION (\approx Stewart 1998)

iii. Interpretation of Sequence SVCs with OBJ-Sharing in (38b): EVENT EXTENSION; pace Stewart’s (1998), analysis in terms of EVENT CUMULATION

4.2.1 Diagnostic I: Contradictory adverbs

- **General Pattern:**

(39) i. * V1 OBJ_i **quickly** V2 ____i **slowly** (Sequence, + OBJ sharing)
 ii. ✓ V1 OBJ_i **quickly** V2 ya_i/OBJ2 **slowly** (Multi Event, - OBJ sharing)

⇒ Multi-event SVCs involve semantically independent subevents (\exists -CONJUNCTION, EVENT CUMULATION no), Sequence SVCs do not (EVENT MODIFICATION or EVENT EXTENSION)

(40) a. Uche gbu-ru o.ku.ko._i **o.si.i.so. sie** ____i (High Adv: both events quick)
 Uche kill-pst chicken quickly cook
 ‘Uche killed and cooked the chicken quickly.’

b.*Uche gbu-ru o.ku.ko._i **o.si.i.so. sie** ____i **nwayo.o. nwayo.o.** *Sequence
 Uche kill-pst chicken quickly cook slowly
 intended: ‘Uche killed the chicken quickly and cooked it slowly.’

c. Uche gbu-ru o.ku.ko._i **o.si.i.so. sie** ya_i **nwayo.o. nwayo.o.** ✓Multi-Event
 Uche kill-pst chicken quickly cook 3SG slowly
 ‘Uche killed the chicken quickly and cooked it slowly.’

d. Uche gbu-ru o.ku.ko. **o.si.i.so. sie** **ji** **nwayo.o. nwayo.o.** ✓Multi-Event
 Uche kill-pst chicken quickly cook yam slowly
 ‘Uche killed the chicken quickly and cooked the yam slowly.’

e. Uche de-re leta nwayo.o. nwayo.o. ziga ya o.si.i.so. ✓Multi-Event
 Uche write-pst letter slowly send 3SG quickly
 ‘Uche wrote a/the letter slowly and sent it quickly

4.2.2 Diagnostic II: A-quantification

- **General Pattern:**

(41) i. * V1 OBJ_i **Q** V2 ____i (Sequence, + OBJ sharing)
 ii. ✓ V1 OBJ_i **Q** V2 ya_i (Multi Event, - OBJ sharing)

Multi-event SVCs allow for quantification over V2-event:

⇒ ∃-CONJUNCTION (compatible with results for ✕-ADVERBS)

Sequence SVCs (OBJ-sharing) do NOT allow for quantification over V2-event:

⇒ EVENT EXTENSION, EVENT MODIFICATION, (EVENT CUMULATION)

(42) a. *Uche na-egbu o.ku.ko._i **sie** ____i **oge u.fo.du.**
 Uche HAB-kill chicken cook sometimes
 intended: ‘Uche regularly kills chicken, sometimes cooking them.’

b. ✓Uche na-egbu o.ku.ko._i **oge u.fo.du. sie** **ya**_i
 Uche HAB-kill chicken sometimes cook 3SG
 ‘Uche regularly kills chicken, sometimes cooking them.’

⇒ Difference in ADV-placement!

c. ??Uche na-egbu o.ku.ko. **oge u.fo.du. sie** **ji.** (pragmatically blocked?)
 Uche HAB-kill chicken sometimes cook yam
 Intended: ‘Uche regularly kills chicken, sometimes cooking yam.’

- Same for temporally overlapping multi-event SVCs with intransitives:

(43) Uche na-agba-wa egwu , **oge u.fo.du. o. gu.o.**
 Uche HAB-ICV-WA dance pause time some 3SG sing
 ‘Uche often dances, and sometimes he sings.’

- **Final observation:** PFV/IPFV/INCHO- aspect marking on V2 readily available in Multi-Event with no OBJ sharing, where it has semantic import (Emenanjo 2015):

(44) a. O. ba-ta-ra **na-agu.** egwu (simultaneous)
 3SG enter-DIR-pst ipfv-sing song
 ‘S/he arrived singing.’

b. O. ba-ta-ra **gu.-wa** egwu (temporally sequenced)
 3SG enter-DIR-pst sing-incho song
 ‘S/he entered and then he sang.’

c. O ba-ta-ra **gu.-o.** egwu. (sequential)
 3SG enter-DIR-pst sing-sfx song
 ‘S/he entered, and then sang immediately (as a result?)’

⇒ No embedded ASP-marking with Sequence SVCs (+OBJ-sharing):

(45) a. Nne ku-ru nwa ahu._i **na-arahu.kwa** **ya**_i (multi-event, -OBJ sharing)
 mother carry-pst child the ipfv-soothe 3SG
 ‘Mother held the child soothing it.’

b. ?*Nne ku-ru nwa ahu._i **na-arahu.kwa** ____i (sequence, +OBJ sharing)
 mother carry-pst child the ipfv-soothe
 intended: ‘Mother held the child soothing it.’

4.2.3 Diagnostic III: Cumulativity

- **General Pattern:**
- i. Agent-cumulation available with theme-based subevents.
 - ii. Agent-cumulation NOT available with SVC-based subevents
- ⇒ Sequence SVCs do not compose by EVENT CUMULATION, but by Event Extension

- **Cumulation over theme-based subevents: ✓**

- (46) a U.mu.nwoke **gba-gbu-ru** mgbada iri
 men shoot-kill-pst antelope ten
 'The men shot a total of 10 antelopes.'
- b. u.mu.aka ahu. **ko.-ta-ra azu._i iri sie** ___i
 children the catch-dir-pst fish ten cook
 'The children caught a total of 10 fish and cooked them.'
- c. u.mu.nwoke iri **ko.-ta-ra azu._i iri sie.** ___i
 men ten catch-dir-pst fish ten cook
 '10 men caught and cooked a total of 10 fish.'

- **No cumulation over verbal (sub)events with Sequence SVCs: ***

(46c) infelicitous in a scenario in which 5 men caught 10 fish and the other 5 cooked them.

- ⇒ **This is NOT a case of pragmatic blocking!** Providing appropriate plural covers (Schwarzschild 1996) does not help:

- (47) **oku azu. na osi nri** ko.-ta-ra azu. (iri) sie. __ (+OBJ-sharing)
 fisherman and cook catch-dir-pst fish ten cook
 NOT: 'The fisherman caught a fish/10 fish, and the cook cooked the fish'.
 ⇒ both participate in the act of catching and cooking the fish

- (48) Context: At school, there is a cooperation challenge: all the children must engage in joint activities consisting of more than one independent sub-actions. It is mandatory that the children coordinate on who does which sub-action, and that they do not jointly carry out any sub-action. Uche and Obi sign up for the fish-catching- and cooking challenge, and - as required by the rules - one of them catches the fish, whereas the other cooks the fish.

a. # Uche na Obi ko.-ta-ra azu._i sie ___i (+OBJ-sharing)
 U & O catch-dir-pst fish cook

b. Uche ko.-ta-ra azu._i Obi sie ya_i.
 U catch-dir-pst fish Obi cook 3SG

- ⇒ **Conclusion:** Verb-based event cumulations over agents ruled out: no EVENT CUMULATION with Sequence SVCs (+OBJ-sharing), pace Stewart (1998) for Edo.

4.2.4 Additional Diagnostics: Negation and Word Order

- **NEG:** Negation in Igbo expressed by morphological suffix *-ghi* on finite/tensed verb (on V1 in SVCs): (potential repercussions for NEG-interpretation of SVCs...)

- (49) a. Uche gbu-ru o.ku.ko._i si-e _i b. Uche e-**gbu-ghi** o.ku.ko._i sie _i
 Uche kill-pst chicken cook-sfx Uche pfx-kill-NEG chicken cook
 ‘Uche killed ‘n cooked the chicken.’

- **General Pattern:**

- i. Sequence SVCs (+OBJ-sharing): ✓NEG-V1, ✓NEG-V1+V2, #NEG-V2
 ii. Multi-event SVCs (-OBJ-sharing): ✓NEG-V1. ?#NEG-V1+V2, #NEG-V2
 ⇒ Different structures: different c-command relations?

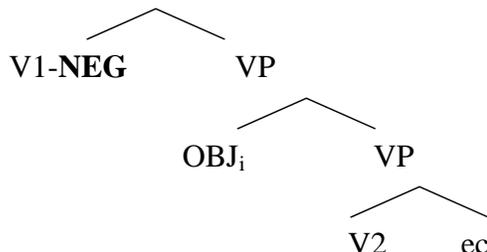
- (50) Uche **e-gbu-ghi** o.ku.ko._i **sie** _i
 Uche pfx-kill-NEG chicken cook
 ‘Uche didn’t killed ‘n cook the chicken.’
- i. #NEG-V2: He killed, but didn’t cook the chicken. He fried it. (cf. (54))
 ii. ✓NEG-V1: He bought it. (see also (51a))
 iii. ✓NEG-V1+V2: He didn’t kill ‘n cook the chicken. It’s still alive. (see also (51b))

- (51) a. Uche **ako.ta-ghi** azu._i **sie** _i, o.**zu.zu.** ka o. zu.-ru. ya (**sie**) Neg-V1
 Uche fish-NEG fish cook, buying C 3SG buy-pst 3SG cook Sequence
 ‘Uche didn’t catch the fish and cook it. He BOUGHT it (and cooked it).’
- b. Uche **ako.ta-ghi** azu._i **sie** _i, o dowe ya n’ite. Neg-V1+V2
 Uche fish-NEG fish cook 3SG keep 3SG P pot Sequence
 ‘Uche didn’t catch and cook the fish. He kept it in the tank/pot.’

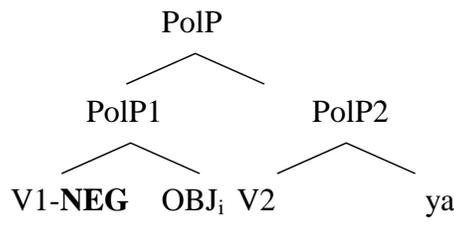
⇒ With Multi-event SVCs (-OBJ-share): **Only Neg-V1!**

- (52) a. Uche **ako.ta-ghi** azu._i **sie ya**_i, o.zu.zu. ka o. zu.-ru. ya OK Neg-V1
 Uche fish-NEG fish cook 3SG buying C 3SG buy-pst 3SG Multi-event
 ‘Uche didn’t catch the fish and cook it. He BOUGHT it and cooked it.’
- b. #Uche ako.ta-ghi azu._i **sie ya**_i, o dowe ya n’ite. #Neg-V1+V2
 Uche fish-NEG fish cook 3SG 3SG keep 3SG P pot Multi-event
 ‘#Uche didn’t CATCH the fish and cook it. He **kept** it in the tank/pot.’

⇒ Difference between (51b) (+OBJ-sharing) and (52b) (with proform) possibly indicative of structural differences between SVCs with and without structural OBJ sharing (see below):

- (53) a. 

```

      graph TD
      A[V1-NEG VP] --- B[VP]
      B --- C[OBJi]
      B --- D[VP]
      D --- E[V2]
      D --- F[ec_i]
    
```
- b. 

```

      graph TD
      A[PolP] --- B[PolP1]
      A --- C[PolP2]
      B --- D[V1-NEG]
      B --- E[OBJi]
      B --- F[V2]
      C --- G[ya_i]
    
```

- Constraints on association with focus: NEG-V2 only possible with morphological focus reduplication of V2 (with preform) and two independent (tense-marked) clauses:

(54) Uche **egbu**-ghi o.ku.ko. **sie** ?#(ya esi), oghighe ka o ghe-re ya
 Uche kill-NEG chicken cook 3SG cook frying C 3SG fry-pst 3SG
 ‘Uche didn’t kill the chicken and COOK it, he fried it.’

- Puzzle: Temporally overlapping Multi-event SVCs DO seem to allow for Neg-V1+V2:

(55) Uche ano.-ghi ana rie ji
 Uche sit-NEG down eat yam

- #Neg-V2: Uche was sitting, but didn’t eat yam.
- ✓NEG-V1: Uche ate yam, but wasn’t sitting
- ✓Neg-V1+V2: Uche didn’t eat yam, he didn’t sit: He did something totally different.

Preliminary Summary NEG & SVC

Most subtypes: NEG V1 or NEG V1+V2, but not NEG-V2 in isolation

⇒ Bias for V1-negation because of morphological marking of NEG on V1?

⇒ Differences between Multi-event and Sequence SVCs re availability of NEG-V1+V2

• Temporal Construal and Word Order Reversal

General Pattern: Difference between Multi-Event and Sequence SVCs

i. Multi-event SVCs (-OBJsharing):

- with temporally overlapping events, verb reversal is (sometimes) possible (56).
- with causally & temporally serialized events, verb reversal is *implausible* (57a)

ii. Sequence SVCs (+OBJ-sharing): Verb reversal illicit (57b) ⇒ Event Extension?

(56) O. na-agu. e-gwu ba-ta (ime u.lo.) (cf. (44a))
 3SG ipfv-sing pfx-song enter-DIR inside house
 ‘He sang on arrival in the house.’

(57) a.#Uche **ri-ri** o.ku.ko.i **gbuo ya**_i b.*Uche **ri-ri** o.ku.ko.i **gbuo** ____i
 Uche eat-pst chicken kill 3SG Uche eat-pst chicken kill
 ‘Uche ate the chicken and killed it.’ Intended: ‘Uche ate the chicken and killed it.’

⇒ Sequence SVC (+OBJ-sharing): compatible with *asymmetric* EVENT COMPOSITION

⇒ Multi-event (-OBJ-sharing): compatible with *symmetric* ∃-CONJUNCTION

4.3 Sequence vs Multi-Event SVCs: Summary & Analysis (IN PROGRESS!):

Application of the empirical diagnostics to Multi-event and Sequence SVCs provides evidence for (at least) two semantically distinct SVC-subtypes!

i. **Multi-event (-OBJ sharing):** $V1_{TRANS} OBJ_i V2_{TRANS} ya_i; V1_{TRANS} OBJ_1 V2_{TRANS} OBJ_2$

	*-Adverbs	A-quant	Cumulation	NEG	Reversal
Observations	YES	YES	*	V1 (? V1+V2); *V2	YES
∃-Conjunction	YES	YES	*	V1 or V2	YES

⇒ **Multi-event SVCs without structural object sharing can be modelled by means of ∃-CONJUNCTION** (modulo some syntactic and/or pragmatic quirks with negation)

⇒ They seem to come with a looser syntactic construal: covert coordination of vP-unit; cf. Stewart (1998)

ii. **Sequence (+OBJ-sharing):** $V1_{TRANS} OBJ_i V2_{TRANS} _i$

	*-Adverbs	A-quant	Cumulation	NEG	Reversal
Observations	*	*	*	V1, V1+V2; *V2	*
Event Extension	*	*	*	V1 or V2	*

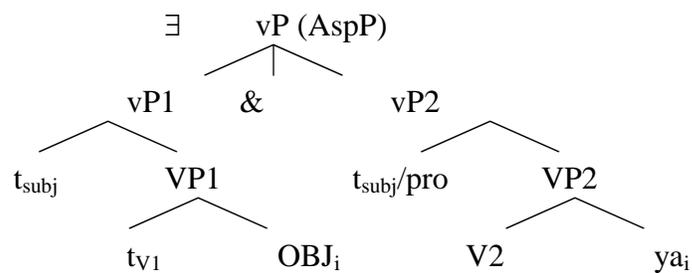
⇒ **Sequence SVCs with OBJ-sharing can be modelled by means of EVENT EXTENSION** (modulo some quirks with negation)

⇒ Sequence SVCs do not allow for cumulative interpretation; No Cumulative Event Composition; pace Stewart (1998)

⇒ Event extension seems to come with a tighter syntactic construal: COMPLEMENTATION

4.3.1 Analysis Multi-Event SVCs

i. **Syntax:**



pro's:

- Satisfaction of Binding Principle B: Pronoun *ya* is free.
- Ideophone placement after first VP; impossible with Sequence SVCs without *ya*.

- (58) a. Uche ku-ru [t_{v1} o.ku.ko._i osisi **gbim**] gbuo *(ya_i)
 Uche hit-pst chicken stick IDEO kill 3SG
 'Uche hit the chicken with a stick 'gbim' and killed it.'
- b. Uche pi.a-ra [t_{v1} Obi_i utali **fiam**] kuja *(ya_i)
 Uche cane-pst Obi cane IDEO startle 3SG
 'Uche caned Obi 'fiam' and startled him.'

Questions/problems:

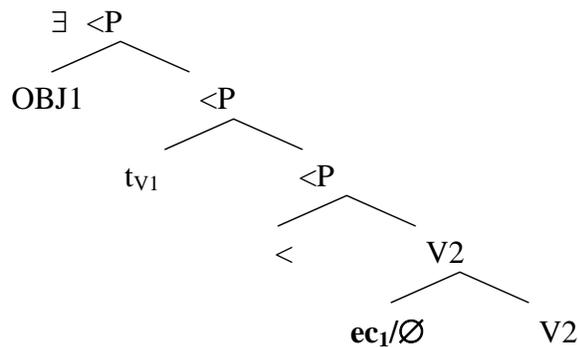
- vP/AspP-conjunction?; ATB-movement of subject or extraction from first conjunct+pro?
- Q-Binding of *ya* possible with quantified OBJ, in the absence of c-command (E-type?)

(59) Uche gbu-ru **o.ku.ko.** **obula**₁ (o. hu.ru.) sie **ya**_i / ____i
 Uche kill-pst chicken every (3SG see-pst) cook 3SG
 ‘Uche killed every chicken (that he saw) and (then he) cooked it.’

ii. **Semantics**

(60) a. $\llbracket \text{Uche gbu-ru o.ku.ko.}_i \text{si-e ya}_i \rrbracket^{\text{S}}$
 ‘Uche killed a/the chicken and cooked it.’
 = 1 iff $\exists e_1 [\text{kill}(e_1, \text{chicken}') \wedge \text{AG}(\text{Uche}, e_1)] \wedge \exists e_2 [\text{cook}(e_2, \text{g}(i)) \wedge \text{AG}(\text{Uche}, e_2)]$

b. $\llbracket \text{Uche gbu-ru o.ku.ko. si-e ji} \rrbracket^{\text{S}}$
 ‘Uche killed a/the chicken and cooked yam.’
 = 1 iff $\exists e_1 [\text{kill}(e_1, \text{chicken}') \wedge \text{AG}(\text{Uche}, e_1)] \wedge \exists e_2 [\text{cook}(e_2, \text{yam}') \wedge \text{AG}(\text{Uche}, e_2)]$

4.3.2 Analysis Sequence SVCsi. **Syntax:***pro's:*

- No ideophone placement possible after OBJ-NP (58ab): ✓
- Binding from quantified OBJ possible (59): ✓
- No ellipsis of second object NP under givenness (60): ✓

(60) O painti-ri u.do. icha #(ya)
 3SG paint-pst house clean 3SG
 ‘He painted the house (from the outside) and cleaned it (from the inside).’

⇒ Sequence construal without *ya* non-sensical for *u.do* ‘house’ must be interpreted under identical perspective with both verbs! Cf. (61):

(61) #The school was renovated last year and is a venerable educational institution.

Questions/problems:

- Presence/Nature of ec_1 : trace/bound reflexive/*absent*?
- Relation of V1 and V2 to nominal argument? Selection properties?
- Compositionality issues: How to interpret <-structures without THEME theta-roles?

ii. Semantics:

- with theta-THEME and event unification:

(61) $\llbracket \text{Uche gbu-ru o.ku.ko.} \cdot \text{si-e } _i \rrbracket^g$
 ‘Uche killed a/the chicken and cooked it.’

$$= 1 \text{ iff } \exists e_1, e_2 [\text{kill}(e_1) \wedge \text{AG}(\text{Uche}, e_1) \wedge \text{TH}(\text{chicken}, e_2) \wedge \mathbf{e}_1 < \mathbf{e}_2 \wedge \text{cook}(e_2) \wedge \underline{\text{TH}(\text{chicken}, e_2)}]$$

- with OBJ as semantic argument of the verb:

(62) a. $\llbracket \langle \text{TRANS} \rangle \rrbracket = \lambda P_{2 \langle v, t \rangle} . \lambda P_{1 \langle v, e \rangle} . \lambda \mathbf{x} . \lambda e_1 . \lambda e_2 . \mathbf{P}_1(\mathbf{e}_1)(\mathbf{x}) \wedge e_1 < e_2 \wedge P_2(e_2)$

b. $\llbracket (61) \rrbracket = 1 \text{ iff } \exists e_1, e_2 [\text{kill}(e_1, \text{chicken}') \wedge \text{AG}(\text{Uche}, e_1) \wedge \mathbf{e}_1 < \mathbf{e}_2 \wedge \text{cook}(e_2, \text{chicken}')]$

5. Extending the analysis to other SVC-types

This section addresses the question of how many structurally and semantically distinct subtypes of SVCs are observed in Igbo: Do the other informal subtypes of SVCs in (4) fall under one of the two subtypes from §4, i.e. Multi-event and Sequence, or are there additional patters, as postulated in Veenstra & Muysken (2018) and Dechaine (1993)?

- **Preliminary Findings:**

- i. **Instrumentals** and some kinds of **Directionals** behave like multi-event SVCs
- ii. **Directionals** may not form a structurally unified subtype (= informal label)
- iii. **Benefactives** are lexically constrained (to V2 *nye* ‘give’) and seem structurally more integrated: lexicalized event extension?
- iv. **Resultatives** are structurally most integrated (V+V-compounding) and differ from multi-event /sequence SVCs in interpretation.
- v. **Causative** SVCs do not involve event extension, but a special causative event relation between a V and a proposition (not at V-level).

5.1 Instrumentals with V1 *ji* ‘hold, use’ ≈ Multi-event/∃-conjunction?

Pro multi-event: A-quantifier (63) & ASP-marking on V2 (64), NEG (65)

Contra: *Contradictory adverbials (66)

(63) O. na-agba moto **a-ga** Port Harcourt **oge u.fo.du.** / **mgbe niile** (A-Quant)
 3SG HAB-ICV motor pfx-go PH time some time all
 ‘He takes the car, sometimes/always going to PH’

- (70) a. ..., o. gwu-ru mmiri bi.a ebe anyi. no.
 3sg swim-past water come place 1Pl stay
 ‘..., he swam hither.’
 b. ..., o. no.-ro. ebe a
 3SG stay-pst place DEM
 ‘..., he stayed here’

⇒ Additional Readings: ✓NEG-V1 (...but ran away); ✓NEG-V1+V2 (... he didn’t swim)
 ⇒ no V1-bias: ✓NEG-V2 also available!

5.3 Benefactives: Lexicalized Event Extension?

Pro event extension: no A-quantifiers (71), no ✖-adverbs (72ab)

- (71) uche na-esi nri [mgbe obula / oge ufodo o nye (*ya) Ada]
 Uche hab-cook food time every time some 3sg give 3SG Ada
 ‘Uche cooks food. Always/sometimes he gives it to Ada.’ (2 clauses!)

- (72) a. Uche **si-ri** nri (osiiso) [**ji*(ri)** nwayoo nye **ya** Ada]
 Uche cook-pst food quickly use-pst gently give it Ada
 ‘Uche cooked the food quickly and then gently/slowly gave it to Ada.’
 Lit.: ‘Uche cooked the food quickly and with slowness gave it to Ada.’
 b. Uche **ji-ri** nwayo.o. [nata nku nye Ada o.si.i.so.]
 U. use slowly collect firewood give A. quickly
 ‘Uche slowly collected firewood and gave it to Ada quickly.’
 Lit.: ‘Uche was slow to collect firewood ‘n give it to Ada.’

5.4 Resultatives: No event extension, event modification at V-level (= compounding)?

No general event extension semantics, but specific resultative interpretation (73ab); possibly triggered by empty resultative head?

- (73) a. O gbu-da-ra osiisi b. O gbu-ru osiisi daa
 3sg chop-fall-pst tree 3sg chop-pst tree fall-csc
 ‘He felled the tree’ ‘He chopped (at) the tree, then it fell.’
 ⇒ obligatory resultative ⇒ temporal event extension

⇒ A-Quant and ✖-Adverbs not applicable for structural reasons: single VP unit

5.5 Causatives involve causal relations, not event extension

Specific causative event relation CAUSE(e,p) between the meaning of V1 *me* ‘do’ and a proposition (not at V-level)!!!

(74) Context I with negation targeting causal relation CAUSE(e,p): OK

Uche played a silly prank on Ada, as always, and immediately afterwards Ada burst out laughing. However, his prank was not the cause of her laughing, as Mary is generally not

fond of Uche's pranks. Rather, the reason for her amusement was the fact that she was thinking about how she would tell her girlfriends about the poor soul Uche. So,

Uche me-re-ghi [Ada chi.a o.chi.]
 Uche do-pst-NEG Ada laugh laugh
 'Uche's doing was not the cause of her laughtr.'

(75) **Context II with negation targeting event homogeneity (under event extension): #**

On Monday, Uche leaves a note with a joke on Ada's desktop before going on vacation. On Friday, Ada enters the office, finds the note and reads it. She finds Uche's joke so funny, that she laughs out loud. Still,

Uche me-re-ghi [Ada chi.a o.chi.]
 Uche do-pst-NEG Ada laugh laugh
 'Uche's doing was not the cause of her laughtr.'

as Uche's action formed no part of Ada's laughing

[COMMENT: For context II, I will say 'Uche made Mary laugh' because somehow I get the meaning that Uche's joke that he left for Mary which is the cause of her laughter is still connected to Uche.]

5. Conclusion and Outlook

- ◆ In the programmatic part of the talk, I have discussed four different ways in which complex events or event descriptions can be composed semantically: EVENT PREDICATE MODIFICATION, \exists -CONJUNCTION, EVENT CUMULATION, RELATIONAL EVENT COMPOSITION
- ◆ Particular focus on *event-semantic empirical diagnostics for different composition procedures*: contradictory adverbs, Q-adverbs & Asp-marking, verb-based agent cumulation, negation, word order reversal.
- ◆ Ideally, the combined diagnostics will allow for *a clear distinction between the four compositional procedures*.
- ◆ In addition, the diagnostics provide evidence regarding the underlying syntactic structure
- ◆ Application of these diagnostics to Multi-event and Sequence SVCs shows that there are *at least two semantic sub-types* (this finding is preliminary pending more careful investigation!): Multi-event/sequential SVCs with and without OBJ-sharing
- ◆ Observable semantic properties of the two SVC-types show strong correlation with theoretically predicted properties of \exists -CONJUNCTION (at vP-level) and EVENT EXTENSION (at V(P)-level), correlating with differences in syntactic structure (**more work required!**)
- ◆ Resultative and Causative SVCs seem to form instances of event modification and causal event relation, respectively.

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