

The Eventive Predicator *-gaa* in Telugu

RAHUL BALUSU
EFL University, Hyderabad

ABSTRACT¹

Based on its distribution, we propose that the morpheme *-gaa* in Telugu is actually the instantiation of Pred^0 , and shows up as a phrasal affix on all non-verbal predicates, not just adverbs and adjectives. It occurs in small clause complements of stative and dynamic raising verbs and ECM verbs—including nomination verbs. Besides argument small clauses, *-gaa* always occurs in adjunct small clauses—depictive and resultative secondary predicates. In small clauses of primary predication, *-gaa*'s adjectival use, it gives a temporary state or stage-level meaning, whereas without it, the meaning is individual-level or permanent. We analyze this difference with and without *-gaa* as eventive vs. non-eventive predication, following Higginbotham & Ramchand (1997), Roy (2005), and Adger & Ramchand (2003), with *-gaa* as the [+eventive] Pred^0 of non-verbal predicates, whereas without *-gaa*, the predicate is [-eventive] Pred^0 . As for adverbs formed with *-gaa*, we propose that they have the internal structure of a small clause, with an event-controlled PRO as the implicit argument subject of the small clause, since we know by now that *-gaa* diagnoses a small clause in the sentence. After all, adverbs are treated in semantics as predicates of the event argument, as a form of non-verbal predication. The manner adverb is similar to the depictive—an adjunct small clause, co-temporal with the event, only it is predicating of the event, via an event controlled PRO. This PredP occurs in the Specifier position of the Asp Phrase (Cinque 1999).

KEYWORDS: stage-level meaning; predicator; resultative; depictive; small clause; adverb; adjective; dravidian; telugu

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1. Introduction

The morpheme *-gaa* in Telugu has been labelled the adverbial suffix (Krishnamurti & Gwynn 1985: 285), as it is similar to English *-ly*, and forms adverbs, as shown in (1).

- (1) raamu andam-gaa / nunna-gaa parigeteeDu
 Ramu beauty-gaa / $\sqrt{\text{smooth}}$ -gaa run.PST.3MSG
 ‘Ramu ran beautifully/smoothly.’

Manner adverbs are formed by affixing *-gaa* to nouns or “bound adjectival roots” (Krishnamurti & Gwynn 1985:126) as given in (2)–(3).

- (2) balam-gaa andam-gaa sukham-gaa aakali-gaa baruvu-gaa
 strength-gaa beauty-gaa happiness-gaa hunger-gaa weight-gaa
 ‘strongly’ ‘beautifully’ ‘happily’ ‘hungrily’ ‘heavily’
- (3) ceDDa-gaa pedda-gaa metta-gaa tiyya-gaa kotta-gaa
 $\sqrt{\text{bad}}$ -gaa $\sqrt{\text{big}}$ -gaa $\sqrt{\text{soft}}$ -gaa $\sqrt{\text{sweet}}$ -gaa $\sqrt{\text{new}}$ -gaa
 ‘badly’ ‘loudly’ ‘softly’ ‘sweetly’ ‘newly’

According to Katz (2008) “Manner adverbs are taken to be event predicates in the guise of predicate modifiers—with predicational meaning essentially identical to that of the corresponding adjective.” But how does *-gaa* take a Property Concept (PC) (Dixon 1982) noun/ root and predicate it of an event? If *-gaa* paralleled English *-ly* in its semantics, it would be interpreted as in (4)–(5).

- (4) siita andam-gaa parigettindi
 Sita beauty-gaa run.PST.3MSG
 ‘Sita ran beautifully.’
 $\exists e [\text{run}(e, \text{Sita}) \wedge \text{beauty}(e) \wedge \text{past}(e)]$

- (5) andam-gaa = $\lambda P \lambda e [P(e) \wedge \text{beauty}(e)]$

This is uninterpretable—beauty cannot compose with an event argument, it would make the event a portion of beauty. The semantics of *-gaa* has to be different from English *-ly*, and enable it to compose with the PC noun/root and then predicate of an event.

-gaa has also been labelled an adjectivalizer, by Subbarao & Bhas-kararao (2004): “Nouns form adjectives when *-gaa*, the adjectivalizer, is suffixed. Recall that *-gaa* is a derivational suffix and functions as an adjectivalizer that ‘adjectivalizes’ a noun into an adjective. The occurrence of verb *unDu*-‘be’ is obligatory when denominal predicate adjectives occur,” because *-gaa* suffixed to a PC noun or root also occurs in adjectival constructions, along with the existential copula *unn*, to predicatively modify entities as shown in (6)–(7).² Here again *-gaa* is behaving like English *-ly* in *man–manly*, etc.

- (6) ii pustakam kaSTam-gaa undi
 this book difficulty-gaa EX-3FSG
 ‘This book is difficult.’

- (7) ii raayi nunna-gaa undi
 this stone √smooth-gaa EX-3FSG
 ‘This stone is smooth.’

Attributively, the adjectival items occur in the form of a relative clause, again with the existential copula *unn*, as shown in (8)–(9).

- (8) kaSTam-gaa unn-a pustakam
 difficulty-gaa EX-REL book
 ‘The difficult book.’

- (9) nunna-gaa unn-a raayi
 √smooth-gaa EX-REL stone
 ‘The smooth stone.’

In this paper I take a closer look at *-gaa*, and show that it doesn’t just occur in adverbs and adjectives. It occurs in small-clause complements of stative and dynamic raising verbs and ECM verbs—including intensional, causative and nomination verbs. Besides argument small clauses, *-gaa* always occurs in adjunct small clauses—depictive and resultative secondary predicates. The environment of a non-verbal predicate in Telugu reveals that *-gaa* is always found with small clauses, as shown in (10). Following Stowell (1981) *et seq.* I take

² These examples, and those in (8)–(9) have a transient/subjective flavor, which we will get to examine closely in the next section.

all these examples to involve a constituent consisting of a subject and a nonverbal predicate. Based on its distribution, I propose that *-gaa* is actually the instantiation of Pred⁰ in Telugu, and shows up as a phrasal affix on the non-verbal predicate.

- (10) a. kukka balam-gaa undi *Copular Small Clause*
 dog strength-gaa ex.PRES.3FSG
 ‘The dog is strong(ish)’
- b. kukka balam-gaa anipistaandi *Raising verb*
 dog strength-gaa seems.3.FSG
 ‘The dog seems strong’
- c. neenu kukka-ni balam-gaa uuhinceenu *ECM verb*
 I dog-ACC strength-gaa imagined-3.FSG
 ‘I imagined the dog strong’
- d. meemu kukka-ni hero-gaa ennukunnaamu *Nomination verb*
 We dog-ACC hero-gaa elected-1.PL
 ‘We elected the dog the hero’
- e. neenu kukka-ni balam-gaa penceenu *Resultative*
 I dog-ACC strength-gaa raised-1.SG
 ‘I raised the dog strong’
- f. neenu_i kukka_j-ni koopam_{i/j}-gaa kaDigeenu *Depictive*
 I dog-ACC anger-gaa washed-1.SG
 ‘I washed the dog angry’

Its distribution is thus cross-linguistically parallel to the distribution of Essive and Translative cases in Finno-Ugric languages like Finnish and Estonian (Matushansky 2012, de Groot 2013) and predicate Instrumental case in Russian (Bailyn 2012). In small-clauses of primary predication (*-gaa*’s adjectival use), it gives the interpretation of a temporary state, or stage-level meaning. Without *-gaa*, primary predication is individual-level or permanent. This is similar to the time-stable vs. transient interpretation of copular predicates marked with nominative vs. essive case in Finnish and nominative vs. instrumental case in Russian (Matushansky 2012). It also patterns with the absence or presence of lifetime effects in predicate nominals, without

the indefinite article vs. with the indefinite article, in French and German (Roy 2005). I analyze this difference with and without *-gaa* as eventive vs. non-eventive predication. *-gaa* type-shifts the NP it composes with into a propositional function.

Returning to adverbs formed with *-gaa*, I propose that they have the internal structure of a small clause, with an event-controlled PRO as the implicit argument subject of the small clause. This is a robust generalization cross-linguistically as a number of languages (Russian, Welsh, Hungarian, Maithili, Basque) employ the same morphosyntactic device for adverb formation and non-verbal predication.

In sum, *-gaa* is Pre^{d0} of an eventive, stage-level predicate structure, not an adverbial or adjectival suffix as analysed in previous literature. The analysis extends over copular and non-copular structures and allows us to draw a unified account of several properties of the morpheme. The event argument introduced by *-gaa* must be licensed by a non-defective Asp (of existential copula or matrix verb). The small clauses with *-gaa* in non-adjectival structures are not interpreted as transient because there is no comparison, and no blocking. The transient, eventive nature of the predication becomes apparent only when there is another structure in the comparison class. Cross-linguistically, *-gaa* parallels Welsh *yn*, Russian Instrumental case, Finnish *Essive/Translative* case, and bare predicate nominals in French and German.

2. Adjectival *-gaa*: a closer look

Besides affixing to PC nouns/roots to form adjectival structures as in (6)–(7), seen in the previous section, *-gaa* also forms adjectival structures out of mass and count nouns. In English, mass and count nouns form corresponding adjectives via the adjectival suffix *-y*, as in *pebble*–*pebbly*, *water*–*watery*, etc. In Telugu, count and mass nouns form corresponding adjectives by reduplication before suffixation by *-gaa*. The count nouns occur in the plural in the reduplicated form. This is shown in (11).

- (11) a. *naala niillu-niillu-gaa undi*
 floor water-water-gaa EX.PRES.3FSG
 ‘The floor is watery’

- b. naala isaka-isaka-gaa undi
 floor sand-sand-gaa EX.PRES.3FSG
 ‘The floor is sandy’
- c. roada akulu-aakulu-gaa undi
 road leaves-leaves-gaa EX.PRES.3FSG
 ‘The road is leafy’
- d. road raallu-raallu-gaa undi
 road stones-stones-gaa EX.PRES.3FSG
 ‘The road is pebbly’

The adjectival construction with *-gaa* is stage-level, temporary, changeable or approximate. Without *-gaa*, it is individual-level, permanent, inalienable or inherent. This is shown in (12)–(13) with a PC noun expressing dimension.

- (12) ii soofaa veDalpu-gaa undi
 this sofa width-gaa EX.PRES.3FSG
 ‘This sofa is sort of wide (widish).’
- (13) ii soofaa veDalpu undi
 this sofa width EX.PRES.3FSG
 ‘This sofa is wide.’

With psych/somatic predicates, a dative experiencer construction obtains, a paradigm of Dravidian (Amritavalli & Jayaseelan 2003), and the difference with and without *-gaa* in meaning, transient/subjective property vs. permanent/objective property, again appears, as shown in (14)–(17), with a psych PC noun, and in (18)–(19) with a somatic predicate.

- (14) naaku koopam-gaa undi
 I-DAT anger-gaa EX.PRES.3FSG
 ‘I am angry (now)’
- (15) naaku koopam undi
 I-DAT anger EX.PRES.3FSG
 ‘I’m an angry person’

- (16) naaku balam-gaa undi
 I-DAT strength-gaa EX.PRES.3FSG
 ‘I am feeling strong’
- (17) naaku balam undi
 I-DAT strength EX.PRES.3FSG
 ‘I have strength’
- (18) naaku jwaram-gaa undi
 I-DAT fever-gaa EX.PRES.3FSG
 ‘I am feverish’
- (19) naaku jwaram undi
 I-DAT fever EX.PRES.3FSG
 ‘I have fever’

In (20)–(23) the transient vs. permanent meaning difference with and without *-gaa* is illustrated with adjectival roots, both stage-level and individual-level. For an analysis of the structures in (21) and (23) involving a genitive marker and a pronominal morpheme refer to Balusu (2014).³

- (20) pustakam kotta-gaa undi
 book $\sqrt{\text{new}}$ -gaa EX.PRES.3FSG
 ‘The book appears new.’
- (21) pustakam kott-a-di
 book $\sqrt{\text{new}}$ -GEN-PRON.3FSG
 ‘The book is new’
- (22) pustakam erra-gaa undi
 book $\sqrt{\text{red}}$ -gaa EX.PRES.3FSG
 ‘The book appears red/is reddish.’

3 Balusu (2014) finds that there is evidence for three *-a* suffixes in Telugu: relativiser, genitive, and locative. The question is which of these three suffixes is at work here. As the same suffixes that show up in possessive split also show up on the adjectival roots in these pronominal structures, our conclusion is that in the adjectival structures it is the possessive *-a*. The analysis is that the pronominal morpheme is the possessor, and the PC adjectival root composes with it through possessive syntax and semantics. Like the adjectival constructions with PC nouns—(15), (17) and (19) above—this is also a possessive strategy. Except, with PC nouns the possessive strategy is copular (using the possessive copula), whereas with PC roots the possessive strategy is genitive with a pronominal possessor.

- (23) pustakam err-a-di
 book $\sqrt{\text{red}}$ -GEN-PRON.3FSG
 ‘The book is red.’

This difference is also seen with “function/life-stage/role” nouns, what Jäger (2001) calls “individual guises,” as shown in (24)–(27).

- (24) neenu president-gaa unnaanu
 I-NOM president-gaa EX.PRES.1SG
 ‘I am (temporarily) president.’
- (25) neenu president-ni
 I-NOM president-1.SG
 ‘I am president.’
- (26) vaaDu teacher-gaa unnaaDu
 He-NOM teacher-gaa EX.PRES.3MSG
 ‘He is right now as a teacher.’
- (27) vaaDu teacheru
 He-NOM teacher
 ‘He is a teacher.’

2.1. Cross-linguistic parallel

This stable vs. transient interpretation is also seen in Finnish (Matushansky 2012) and Russian (Markman 2008). In Finnish *essive* case marked adjectival predicates with copula *be* express temporary predication – “The predication is then interpreted as a temporary state or function (Karlsson 1999) or a ‘contingent’ state of affairs (Stassen 2001, Fong 2003)” – Matushansky (2012). This is shown in (28).

- (28) *Essive temporary state in Finnish* (Fong 2003)
 Toini ol-i sairaa-na (kolme viikko-a).
 Toini.NOM be-PAST.3FSG ill-ESS three week-PART
 ‘Toini was ill (for three weeks).’

In Russian, *instrumental* case in primary predication expresses the perception of transience (Nichols 1981, Bailyn & Rubin 1991, Geist 1999), as shown in (29)–(30).

- (29)
- Nominative permanent state in Russian*
- (Markman, 2008)

Dima byl pisatel

Dima was writer-NOM

‘Dima was a writer (now dead).’

- (30)
- Instrumental temporary state in Russian*
- (Markman, 2008)

Dima byl pisatelem

Dima was writer-INST

‘Dima was a writer (for a while).’

Predicate Nominals in French and German (Roy 2005) also show a transient vs. stable interpretation difference, when they appear with or without the indefinite article: “The interpretational difference between the two variants has been argued to relate to a contrast between transitory vs. permanent properties...only the variant without the article can appear in constructions that admit exclusively transitory properties” (Roy 2005). This is shown in (31)–(32), with the differences between the two constructions given in (33).

- (31) Absence of lifetime effects

Paul était médecin

Paul be.PAST doctor

‘Paul was a doctor’

- (32) Lifetime effects

Paul était un médecin.

Paul be.past a doctor

‘Paul was a doctor’

- | Property | without article | with article |
|---------------------------------|-----------------|--------------|
| a) Identificational reading | no | yes |
| b) Lifetime-effects | no | yes |
| c) Spatio-temporal modification | yes | no |
| d) Activity reading | yes | no |
| e) Small clause predicate | yes | no |

2.2. How does the stage-level meaning come about with -*gaa*?

For Carlson (1977), and Kratzer (1995), the difference between temporary and permanent properties is at the level of the lexicon. Stage-

level predicates have an additional argument position for events that is absent in individual-level predicates: $P_{stage}(x, e)$ vs. $P_{individual}(x)$

Higginbotham (1985) showed that any predicate can get a stage-level interpretation: “John came to college dumb and left it intelligent.” Higginbotham and Ramchand (1997) propose that the distinction is not lexical but syntactic. Stage-level predication involves predication over events, while individual-level predication involves predication over individuals. This is shown in (34).

(34) Stage-level:

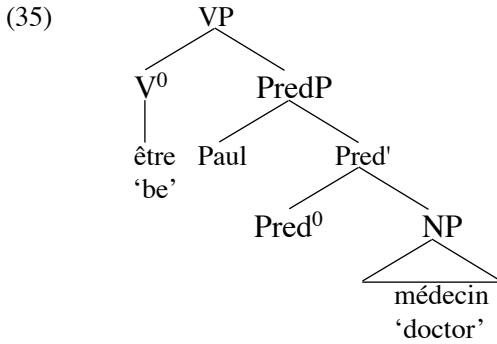
$\exists s[\lambda e[...](s)]$

there exists a situation s , such that s has the property of being an event of a particular kind. Individual-level:

$\exists x[\lambda x[...](x)]$

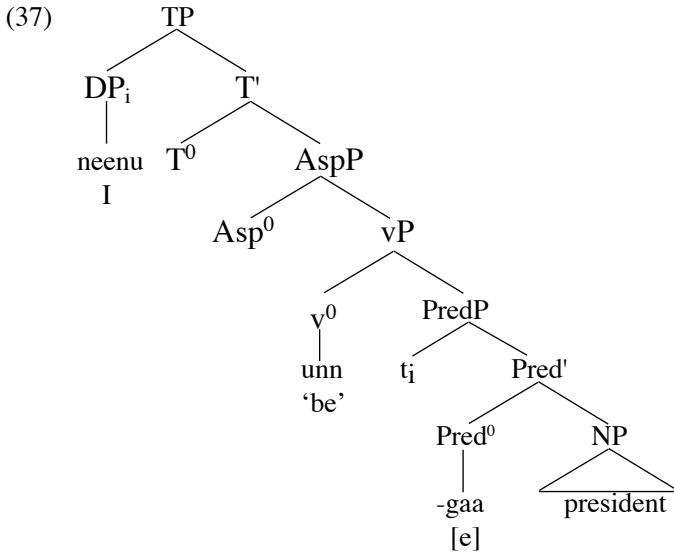
there exists an individual x , such that x has a particular property.

Adger and Ramchand (2003) locate this eventive vs. non-eventive predication difference in PredP: “In Scottish Gaelic, the differences arise because of the particular semantic specification of the predication head (whether it is eventive or not).” This neo-davidsonian extension of the event argument to non-verbal predication explains the transient meaning: Markman (2008) notes that “The presence vs. absence of e accounts for the meaning difference between Nom-Inst and Nom-Nom constructions (in Russian).” The presence of e in Nom-Inst constructions is responsible for the intuition that instrumental predicates denote non-inherent properties. Roy (2005) notes that “stage-level properties, i.e., spatio-temporally dependent properties, correspond to events and are constructed in eventive predications. On the other hand, individual-level properties are fundamentally properties predicated of an individual and are constructed in non-eventive predications.” The structure that Roy proposes for French is given in (35).



I propose that *-gaa* is the [+eventive] Pred⁰ of non-verbal predicates. The structure for the sentence in (36) is shown in (37).

- (36) neenu president-gaa unnaanu
 I-NOM president-gaa EX.PRES.1SG
 'I am (temporarily) president'



The semantics of (37), following Adger & Ramchand (2003), Markman (2008), is given in (38).

- (38) $TP \rightarrow \exists t \exists e [[holds(president, e) \wedge Holder(e, I) \& \tau(e) \circ t \& t \circ n]$
 $AspP \rightarrow \lambda t \exists e [[holds(president, e) \wedge Holder(e, I) \& \tau(e) \circ t]$
 $Asp \rightarrow \lambda Q \lambda t \exists e [Q(e) \& \tau(e) \circ t]$
 $PredP \rightarrow \lambda e [holds(president, e) \wedge Holder(e, I)] DP(neenu) \rightarrow I$
 $Pred' \rightarrow \lambda x \lambda e [holds(president, e) \wedge Holder(e, x)]$
 $Pred^0(-gaa) \rightarrow \lambda \pi \lambda x \lambda e [holds(\pi, e) \wedge Holder(e, x)]$
 $NP(president) \rightarrow \lambda x [president(x)]$

Here, π is the semantic type of simple properties. The role of $Pred$ is to turn the property expression in its complement position into a propositional function with an unsaturated argument. Since this is an eventive $Pred$ head, it does this via mediation by an eventuality variable, by expressing that the property holds of some eventuality and that this eventuality has a Holder argument. So, if the property is, for example, the property of *anger*, the eventive $Pred$ will allow the grammar to take that property and express that it holds of a particular eventuality, composing an eventuality of being angry, of which a certain individual would then be considered the Holder.

In this eventive predicative structure, the properties (of being angry, of being president, of being red, of being wide, etc.) do not hold directly of an individual, but instead, they hold of an eventuality of which an individual is then the Holder. Following Rothstein (1999), the run-time introduced by *Asp* serves the purpose of individuating the event. *Asp* introduces existential closure over the event variable, and provides a run-time for this event via the temporal trace function τ , and introduces a referential time interval, which can precede, follow or overlap with the run-time of e . The exact relation between the two is the viewpoint that *Asp* denotes.

Tense provides existential closure over the interval t and locates it in relation to the utterance time n . The reference time may precede, follow or overlap with the run-time for e . Thus, $t > n$ denotes past, $n < t$ denotes future, $t \circ n$ denotes present.

In sum, *gaa* introduces an event argument into the predicative structure. As a result, the predicate does not hold of the individual *per se*, but only of the individual with respect to an eventuality, which can be long lasting or short lived. This event mediated predication is what gives rise to the stage-level interpretation. For example, the property of being a president or being red does not hold inherently of the entity, but instead is true of the individual as intermediated by an eventuality, a stage. This explains why the entailment that the entity

has the property expressed by the predicate does not go through, as shown in (39)–(40). The non-verbal predicate with *-gaa* does not entail the same property without *-gaa* is predicated of the individual.

(39)

a. naaku balam-gaa undi
 I-DAT strength-gaa EX.PRES.3FSG
 ‘I am feeling strong’

(40)

a. naaku balam undi
 I-DAT strength EX.PRES.3FSG
 ‘I have strength’

⇒

b. naaku jwaram-gaa undi
 I-dat fever-gaa EX.PRES.3FSG
 ‘I am feverish’

b. naaku jwaram undi
 I-dat fever EX.PRES.3FSG
 ‘I have fever’

⇒

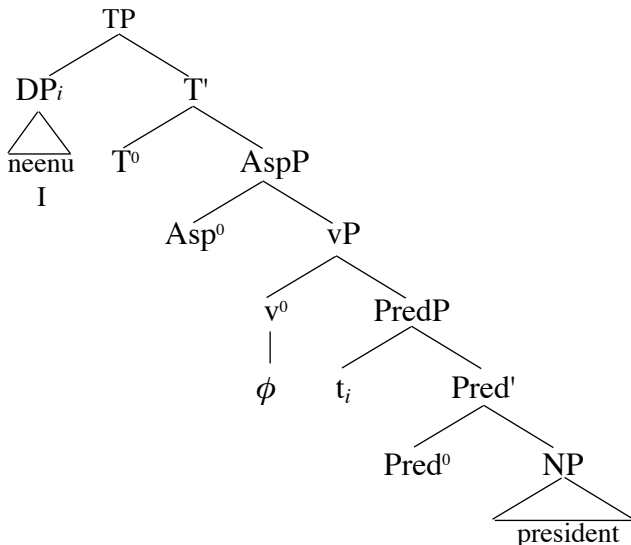
c. pustakam erra-gaa undi
 book $\sqrt{\text{red}}$ -gaa EX.PRES.3FSG
 ‘The book appears red.’

c. pustakam err-a-di
 book $\sqrt{\text{red}}$ -GEN-PRON.3FSG
 ‘The book is red.’

⇒

In primary predication without *-gaa*, the non-verbal predicate has [-eventive] Pred^0 , and this gives rise to the ‘individual’ reading. This is shown in (41). Following Bowers (1993), this Pred^0 is a lambda-operator, that provides the non-verbal predicate with an argument and introduces an entity in its specifier position, that saturates the argument position. Also, following Hale & Keyser (2002), Pred^0 denotes an unbounded state, a simple central coincidence preposition that puts two elements in a containment relation.

(41)



The semantics of the non-eventive predication in (41) is shown in (42).

- (42) $PredP \rightarrow president(I)$
 $DP(neenu) \rightarrow I$
 $Pred' \rightarrow \lambda x[president(x)]$
 $Pred^0 \rightarrow \lambda P.P$
 $NP(president) \rightarrow \lambda x[president(x)]$

The non-eventive $PredP$ does not introduce an event argument. *Asp* and *T* then locate this nominal predicate on a time-line. Here $Pred^0$ passes up the denotation of the NP, without introducing an event argument. The combination of the present-tense features, the default/defective aspect features, and the verb ‘be’ is realized as the copula *aina* or its null counterpart, in Telugu.

2.3. Negation reveals differences among copulas’ ability to license **-gaa**

Negation shows that copulas with and without *-gaa* in the nominative constructions are different. The *-gaa* predicated constructions take the existential copula *unn*, as shown in (43)–(46).⁴

- (43) neenu president-gaa **unnaanu**
 I-NOM president-gaa EX-PRES-1SG
 ‘I am (temporarily) president’
- (44) neenu president-gaa **leenu**
 I-NOM president-gaa EX.PRES.NEG-1SG
 ‘I am not president now’
- (45) pustakam kotta-gaa **undi**
 book \sqrt{new} -gaa EX.PRES-3FSG
 ‘The book appears new.’
- (46) pustakam kotta-gaa **leedu**
 book \sqrt{new} -gaa EX.PRES.NEG-3FSG
 ‘The book does not appears new.’

⁴ *lee* is the suppletive form of *unn* in negative constructions.

The non *-gaa* predicative constructions take the equative copula, which is overt in its negative form, but otherwise covert, as shown in (47)–(50).

- (47) neenu president-ni
 I-NOM president-1.SG
 ‘I am president’

- (48) eenu president-ni kaadu
 I-NOM president-1.SG EQ.NEG
 ‘I am not president’

- (49) pustakam kott-a-di
 book $\sqrt{\text{new}}$ -GEN-PRON.3FSG
 ‘The book is new’

- (50) pustakam kott-a-di kaadu
 book $\sqrt{\text{new}}$ -GEN-PRON.3FSG EQ.NEG
 ‘The book is not new’

-gaa is not possible in the construction with the equative copula, with the overt or null counterpart, as shown in (51)–(52).

- (51) *neenu president-gaa
 I-NOM president-gaa
 ‘I am president (temporarily)’

- (52) *neenu president-gaa **kaadu**
 I-NOM president-gaa EQ.NEG
 ‘I am not president now’

Defective copulas don’t license eventive predicates. This has been noted for various languages. Adger & Ramchand (2003) observe that “With the defective copula [is] the predicate holds inherently, and with the substantive auxilliary [bith] the predicate holds transiently, in Scottish Gaelic.” Markman (2008) notes that “The defective copula [est’] in Russian does not license instrumental case. It lacks aspect and phi features.” The reason why these defective copulas do not license eventive predicates is because the *Asp* of defective copulas does not provide a run-time for *e*.

In Telugu, the bundle of the present-tense feature, the default aspect feature (without a run-time), and ‘be’ without phi features is realized as the negative equative copula *kaadu* or its null positive counterpart.

2.4. Experiencing vs. Expressing a property with *-gaa*

There are differences between ‘dative+*gaa*’ and ‘nominative+*gaa*’ constructions with psychological and physical state PCs.⁵ In the nominative sentence in (54), the speaker is in a state of hotness, showing signs of heat like temperature, radiating heat, etc., but it doesn’t necessarily mean that (s)he is experiencing the hotness. In the dative experiencer sentence in (53) on the other hand, the speaker is experiencing the state of hotness (and may or may not be displaying the signs of hotness).⁶

- | | |
|--|---|
| (55) <i>Dative+gaa</i>
naaku veeDi-gaa undi
I-DAT heat-gaa EX-3FSG
‘I am feeling hot’ | (56) <i>Nominative+gaa</i>
neenu veeDi-gaa unn-aanu
I heat-gaa EX-1SG
‘I am hot’ |
|--|---|

How the dative makes the difference between experiencing a certain property and being in a state with a certain property is not explained by this analysis, and is left as an open question, but I tentatively propose the structures for these sentences as shown in (55)–(56).

The same is true of psychological PCs, as shown in (57)–(58), though the difference here is less obvious as the signs of a psychological state are less manifest than the signs of a physical state, and it is less likely that one can be manifesting the signs of a psychological state without experiencing it.

- | | |
|---|---|
| (57) <i>Dative+gaa</i>
naaku koopam-gaa undi
I-DAT anger-gaa EX-3FS
‘I am feeling anger’ | (58) <i>Nominative+gaa</i>
neenu koopam-gaa unn-aanu
I anger-gaa EX-1MS
‘I am showing anger’ |
|---|---|

Now we can explain why a construction with a PC noun modified by *-gaa* has an attributive meaning as in (59), and when it occurs with a PC noun unmodified by *-gaa* it has a possessive meaning as in (60).

⁵ A reviewer points out that German and Russian present similar contrasts like that of Telugu.

⁶ How the dative makes the difference between experiencing a certain property and being in a state with a certain property is not explained by this analysis, and is left as an open question, but I tentatively propose the structures for these sentences

- (59) kaSTam-gaa unna maniSi (60) kaSTam unna maniSi
 difficulty-gaa ex-rel man difficulty ex-rel man
 ‘The man that is (being) difficult.’ ‘The man that has a difficulty.’

These attributive forms are derived from the predicative forms in (61)–(62), respectively. In the nominative in (61), the individual has the property of difficulty mediated via an eventuality, thus a stage-level property. In the dative in (62), the individual possesses a difficulty, as that is the meaning that is straightforwardly built up from the composition of a dative possessive construction.

- (61) *Nominative+gaa*
 [maniSi kaSTam]-gaa unnaaDu
 man difficulty-gaa EX-3MS
 ‘The man is being difficult.’
- (62) *Dative possessor without gaa*
 maniSi-ki kaSTam undi
 man-dat difficulty EX-3FS
 ‘The man has a difficulty.’

Having examined the syntax and semantics of *-gaa* in copular sentences, we now move on to examining the syntax and semantics of *-gaa* in non-copular sentences.

3. *-gaa* in non copular small clauses

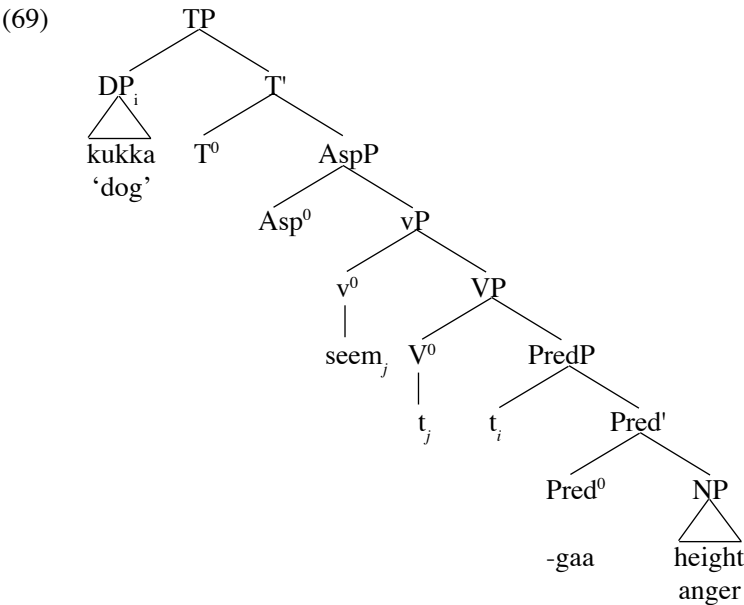
3.1. Raising and ECM constructions

-gaa is found with stative raising verbs, as shown in (63)–(68).

- (63) kukka koopam-gaa anipistaandi
 dog anger-gaa seem.PRES.3FSG
 ‘The dog seems angry.’
- (64) kukka koopam-gaa kanipistaandi
 dog anger-gaa look.PRES.3FSG
 ‘The dog looks/appears angry.’

- (65) kukka ettu-gaa anipistaandi
dog height-gaa seem.PRES.3FSG
‘The dog seems tall.’
- (66) kukka ettu-gaa kanipistaandi
dog height-gaa look.PRES.3FSG
‘The dog looks/appears tall.’
- (67) kukka erra-gaa anipistaandi
dog $\sqrt{\text{red}}$ -gaa seem.PRES.3FSG
‘The dog seems red.’
- (68) kukka erra-gaa kanipistaandi
dog $\sqrt{\text{red}}$ -gaa look.PRES.3FSG
‘The dog looks/appears red.’

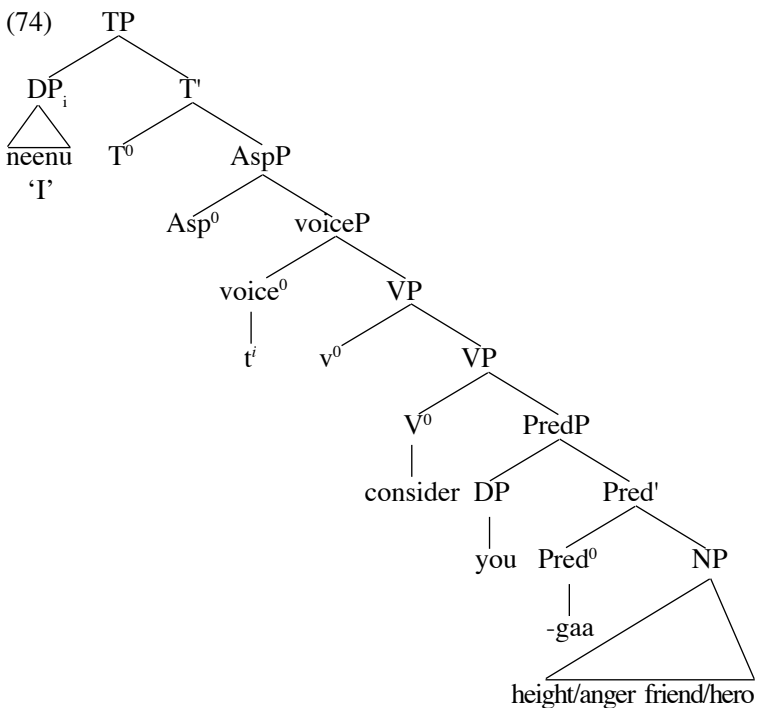
Here again, there is a small clause predicate, with *-gaa* as Pred^0 , as in (69).



-gaa obligatorily occurs with stative ECM verbs, as shown in (70)–(73):

- (70) neenu ninnu koopam-gaa baavinceenu
 I-NOM you-ACC anger-gaa consider.PST.1SG
 'I considered you angry.'
- (71) neenu ninnu ettu-gaa baavinceenu
 I-NOM you-ACC height-gaa consider.PST.1SG
 'I considered you tall.'
- (72) neenu ninnu you-acc tella-gaa
 I-NOM $\sqrt{\text{white}}$ -gaa baavinceenu consider.PST.1SG
 'I considered you white(fair).'
- (73) neenu ninnu friend-gaa baavinceenu
 I-NOM you-acc friend-gaa consider.PST.1SG
 'I considered you a friend.'

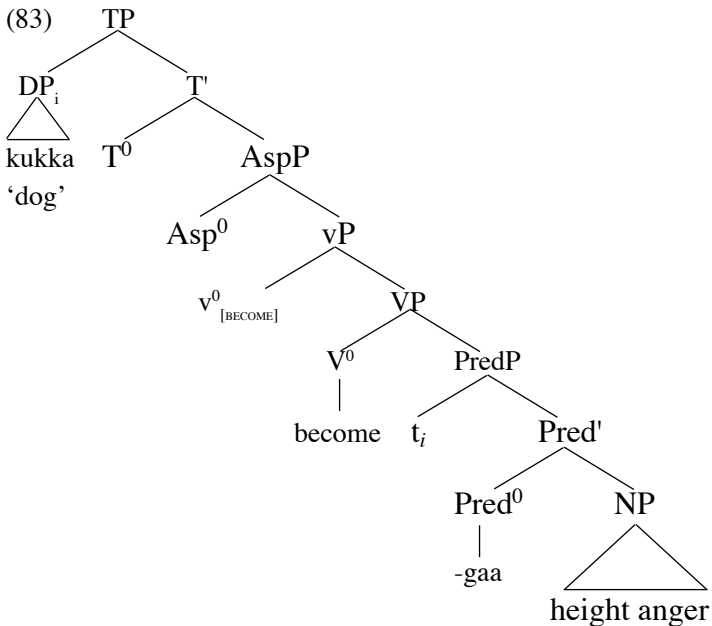
Here too, there is a small clause predicate, as shown in (74).



With dynamic raising/ECM verbs *-gaa* shows up again, as shown in (75)–(82).

- (75) kukka koopam-gaa ayyindi
 dog anger-gaa become.PST.3FSG
 ‘The dog became angry.’
- (76) neenu kukka-ni koopam-gaa ceeseenu
 I dog-ACC anger-gaa make.PST.1SG
 ‘I made the dog angry.’
- (77) kukka ettu-gaa ayyindi
 dog height-gaa become.PST.3FSG
 ‘The dog became tall.’
- (78) neenu kukka-ni ettu-gaa ceeseenu
 I dog-ACC height-gaa make.PST.1SG
 ‘I made the dog tall.’
- (79) kukka erra-gaa ayyindi
 dog $\sqrt{\text{red}}$ -gaa become.PST.3FSG
 ‘The dog became red.’
- (80) neenu kukka-ni erra-gaa ceeseenu
 I dog-acc $\sqrt{\text{red}}$ -gaa make.pst.1sg
 ‘I made the dog red.’
- (81) kukka hero-gaa ayyindi
 dog hero-gaa become.PST.3FSG
 ‘The dog became a hero.’
- (82) neenu kukka-ni hero-gaa ceeseenu
 I dog-acc hero-gaa make.pst.1sg
 ‘I made the dog a hero.’

Here too, there is a small clause predicate, as shown in (83).



Taking stock, what we know so far about *-gaa* after having examined argument small clauses till now is that *-gaa* morphologically realizes an eventive Pred⁰ that shows up as a phrasal affix on the predicate.

3.2. Depictives

A depictive secondary predicate describes a state that one of the arguments of the verb is in during the event described by the verb. *-gaa* is always seen in depictive predicates, whether subject oriented or object oriented, as shown in (84)–(85). This is in line with the constraint that depictives are always stage-level predicates that express a transitory property of the argument they qualify in the main clause (Bresnan 1982, Rothstein 1983).

(84) *Subject-oriented depictive*

- a. neenu gadi-loo-nunci dukham-gaa velleenu
 I room-in-from sad-gaa go.PST.1SG
 'I left the room sad'

- b. kukka gadi-loo-nunci erra-gaa vellindi
 dog room-in-from $\sqrt{\text{red}}$ -gaa go.PST.3FSG
 'The dog left the room red'
- c. alice gadi-loo-nunci ettu-gaa vellindi
 Alice room-in-from height-gaa go.PST.3FSG
 'Alice left the room tall.'
- d. neenu gadi-loo-nunci doctor-gaa velleenu
 I room-in-from doctor-gaa go.PST.1SG
 'I left the room a doctor'

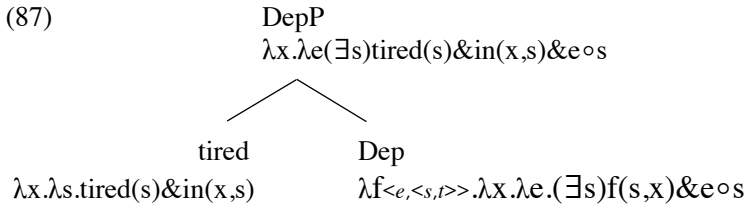
(85) *Object-oriented depictive*

- a. neenu ullipaai pacci-gaa tinnaanu
 I onion $\sqrt{\text{raw}}$ -gaa eat.pst.1sg
 'I ate the onion raw'
- b. naaku beer calla-gaa isTam
 I beer $\sqrt{\text{cold}}$ -gaa like
 'I like beer cold'
- c. neenu kukka_j-ni koopam_j-gaa kaDigeenu
 I dog-acc anger-gaa washed-1.sg
 'I washed the dog angry'
- d. neenu Dabbulu biyyam-gaa icceenu
 I money rice-gaa give.pst.1sg
 'I gave the money as rice (in the form of rice)'

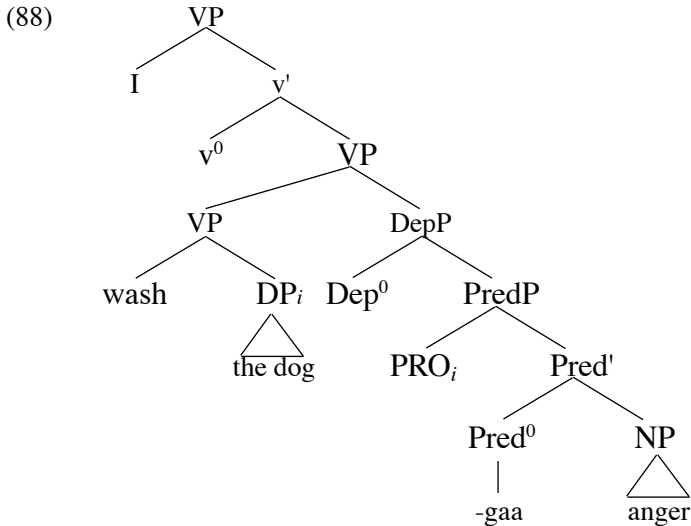
There are two types of analyses in the literature about the syntax and semantics of depictives. The first, an adjunct small clause analysis involving control (Williams 1980, Roberts 1988, Rothstein 1983), as shown in (86a). The second, a complex predicate analysis where the depictive phrase combines directly with the verb (Cormack and Smith 1999; Yatsushiro 1999, Rothstein 2004), as shown in (86b).

- (86) a. [VP [V' [V ate] [NP meat]] [SC [DP PRO] [AP raw]]]
 [VP [VP left the room] [SC [DP PRO] [AP angry]]]
- b. John [VP [V' ate the meat] raw]
 Mary [VP [V' left the room angry]]

But depictives are not just predicates. In addition to ascribing a property to an individual, they also mean that the state described by the predicate holds during the event that is described by the verb. In this sense, they are similar to adverbs which ascribe a property to the event that is described by the verb. An adjunct small clause or a complex predicate does not capture this co-temporal predication of depictives. Pylkkänen (2008) proposes that there is depictive head (*Dep*) that temporally links the state denoted by the depictive predicate to the event described by the verb. This is shown in (87).



Taking the *Dep* head that provides the co-temporal semantics from Pylkkänen's proposal, I analyze the depictives with *-gaa* as adjunct small clauses that are in the complement position of this *Dep* head, as shown in (88).



$$\text{DepP} \rightarrow \lambda e' \exists e [[\text{holds}(\text{anger}, e) \wedge \text{Holder}(e, \text{PRO})] \& \tau(e) \circ e']$$

3.3. Resultatives

-gaa is always found in resultative secondary predicates as well, as shown in (89).

(89) a. neenu pinDi metta-gaa pisikeenu
 I dough *√soft*-gaa knead.PST.1SG
 'I kneaded the dough soft.'

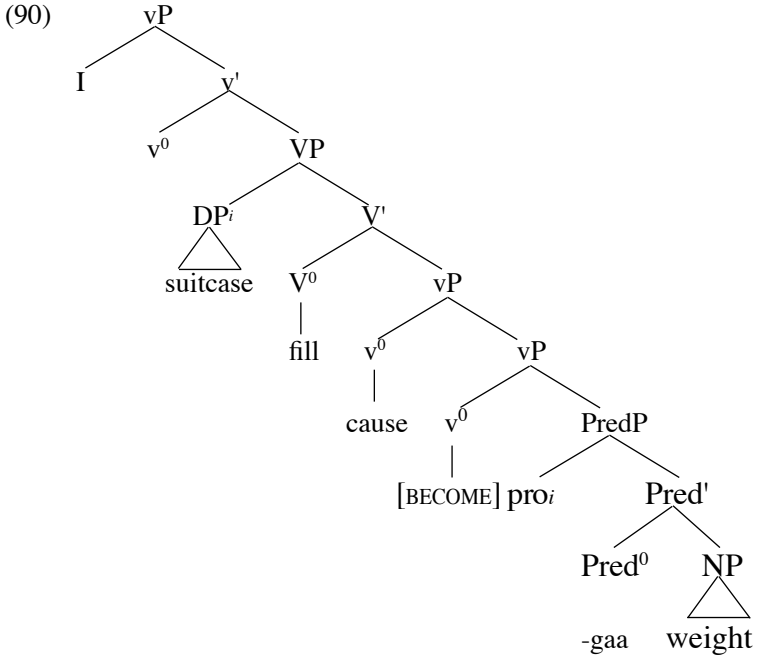
b. neenu suitcase baruvu-gaa nimpeenu
 I suitcase weight-gaa fill.PST.1SG
 'I filled the suitcase heavy'

c. neenu cake gunDram-gaa kooseenu
 I cake round-gaa cut.PST.1SG
 'I cut the cake as a round (in the form of a round)'

Resultatives are analyzed either as complex predicates (Marantz 1989; Embick 2004) or as small clauses (Hoekstra 1988; Kratzer, 2005). Resultative small clauses have to be temporally linked to the matrix event, so that they are immediately/directly obtained at the culmination of the matrix event. Kratzer (2005) employs a "direct causation" null suffix. Under the small clause analysis, the relation between the direct object and the verb is semantically and syntactically very different from their relation in regular transitive sentences. The direct object does not directly compose with the verb; instead, it is sister to an adjective and functions as the subject of a small clause.

The structure I propose for the *-gaa* resultatives is a small clause structure, as shown in (90). Resultative small clauses project an additional *vP* introducing the resultant state (Winkler 1997, Ramchand 2008) and are therefore specified for the [become] feature. The benefit of this analysis is that in this structure it is the suitcase that becomes heavy rather than the proposition.

-gaa is obligatory in resultative constructions, as this provides the run-time for the eventive small clause that can then be temporally linked with the culmination of the matrix event.



3.4. Cross-linguistic Patterns

The distribution of *-gaa* is cross-linguistically parallel to the distribution of Essive and Translative cases in Finno-Ugric languages like Finnish and Estonian (Matushansky 2012, de Groot 2013) and predicate Instrumental case in Russian (Bailyn 2012). These cross-linguistic patterns of non-verbal predication are shown in (91).⁷ From the table it is clear that *-gaa* is the most general case, encompassing all the conditions, and is quite close to the distribution of instrumental case in Russian. Essive and Translative cases on the other hand show up in only a subset of these contexts. We leave the exploration of these cross-linguistic differences to future research.

⁷ As a reviewer points out, Russian does not have resultatives, and object depictives are marked *accusative* rather than *nominative* (exhibiting case-agreement inside depictives).

(91)

Predication	Telugu	Finnish	Estonian	Russian
Copular	<i>gaa/non-gaa</i>	ESS/NOM	NOM/TRANS	INST/NOM
Raising stative	<i>gaa</i>	ESS	NOM	INST
ECM stative	<i>gaa</i>	ESS	TRANS	INST
Subject depictive	<i>gaa</i>	ESS	ESS	INST/NOM
Object depictive	<i>gaa</i>	ESS	ESS	INST/NOM
Raising dynamic	<i>gaa</i>	TRANS	TRANS	INST
ECM dynamic	<i>gaa</i>	TRANS	TRANS	INST
nomination	<i>gaa</i>	TRANS	TRANS	INST
resultative	<i>gaa</i>	TRANS	TRANS	INST/NOM

ess=Essive; trans=Translative; inst=Instrumental; nom=Nominative

4. Adverbs with *-gaa*

-gaa suffixed to PC nouns and roots also forms adverbs, as discussed in the introduction, and as repeated again in (92)–(93).

(92) *balam-gaa andam-gaa sukham-gaa aakali-gaa baruvu-gaa*
strength-gaa beauty-gaa happiness-gaa hunger-gaa weight-gaa
 ‘strongly’ ‘beautifully’ ‘happily’ ‘hungrily’ ‘heavily’

(93) *ceDDa-gaa pedda-gaa metta-gaa tiyya-gaa kotta-gaa*
√bad-gaa √big-gaa √soft-gaa √sweet-gaa √new-gaa
 ‘badly’ ‘loudly’ ‘softly’ ‘sweetly’ ‘newly’

The adverbs formed with *-gaa* are both manner and Speaker/Subject oriented adverbs, as shown in (94)–(99). The high and low position of the adverb seems to correspond with the high and low interpretation of the adverb.

(94) *neenu telivi-gaa maaTlaaDeenu*
 I intelligence-gaa speak.PST.1SG
 ‘I spoke intelligently.’

(95) *telivi-gaa neenu parigetteenu*
 Intelligence-gaa I run.PST.1SG
 ‘Intelligently, I ran.’

- (96) neenu vinta-gaa parigetteenu
 I strange-gaa run.PST.1SG
 ‘I ran strangely.’
- (97) vinta-gaa neenu parigetteenu
 strange-gaa I run.PST.1SG
 ‘Strangely, I ran.’
- (98) neenu nijam-gaa maaTlaaDeenu
 I truth-gaa speak.pst.1sg
 ‘I spoke honestly.’
- (99) nijam-gaa neenu maaTlaaDeenu
 truth-gaa I speak.pst.1sg
 ‘Honestly, I spoke.’

One can question whether the adverbial *-gaa* is the same morpheme as the small clause *-gaa*, since we know that small clauses take DP subjects, whereas adverbs modify processes, events, propositions, or frames. But a more general account is superior to one in which two *-gaa* morphemes are required, and we will strive for such a unified account, and in the end show that a unified account is possible. Indeed, as noted by Matushansky (2012) “The fact that languages often use the same morphosyntactic means for adverbs and (a subset of secondary) predicates is unlikely to be incidental” (Himmelman & Schultze-Berndt 2005, van der Auwera & Malchukov 2005).

In Russian, for example, AP/NP predicates usually bear Instrumental case, which also derives some adverbs (Matushansky 2010), as shown in (100).

- (100) a. Alik streloj pomčalsja domoj.
 Alik-NOM arrow-INST PRF-rush-PAST-MSG homewards
 ‘Alik rushed home like an arrow.’
- b. Edik peškom došel do stancii.
 Edik-nom on foot.inst prf-walk-past-msg till.station
 ‘Edik reached the station on foot.’

In Welsh the same marker introduces predicates and converts adjectives to adverbs (Rouveret 1996; Jones 2009), as shown in (101)–(102).

(101) Mae Siôn *(yn) ddedwydd.

is Sion PRT happy
‘Sion is happy.’

(102) Fedrith o redeg yn gyflym.

can.PRES.3FSG he run in quick
‘He can run quickly.’

In Hungarian, the same case is used for adverbs and depictives (de Groot 2008), as shown in (103)–(104).⁸

(103) Tamás szép-en énekel.

Tom beautiful-SPE sings
‘Tom sings beautifully.’

(104) Mari nyers-en ette meg a hal-at.

Mary raw-SPE ate ASP the fish-ACC
‘Mary ate the fish raw.’

The maps of convergence of van der Auwera & Malchukov (2005) show that this is true of many more languages, as illustrated in (105).

(105)

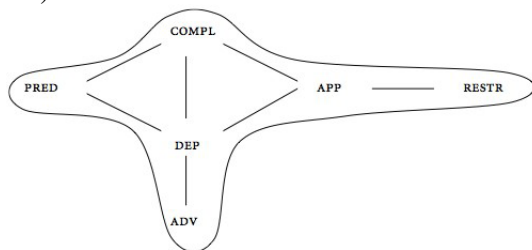


FIGURE 13.28 The present participles in Maithili

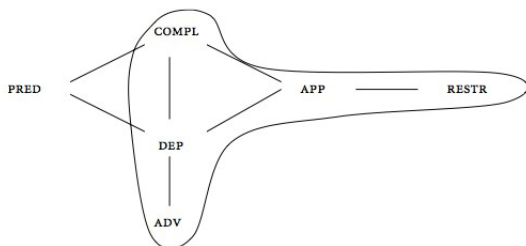


FIGURE 13.24 The ‘generalized subordinate clause’ in Mangarayi

⁸ SPE = suppressive

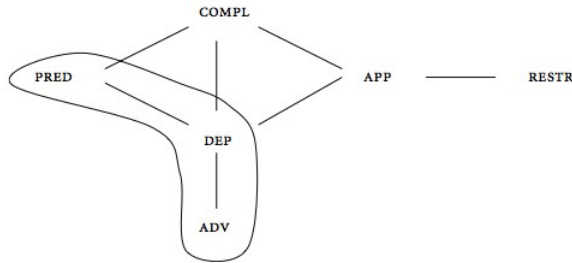
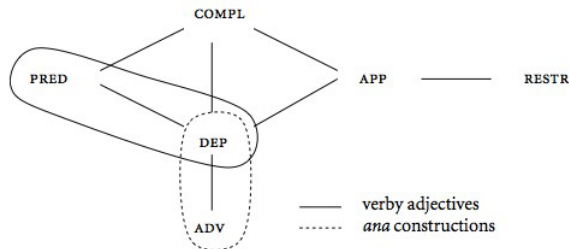
FIGURE 13.26 The *-ta* participle in Basque

FIGURE 13.25 Depictives in Nunggubuyu

Essentially, adverbs are treated in semantics as predicates of the event argument, i.e., they are also a form of non-verbal predication. This is shown in (106). On a standard event semantic approach both manner adverbs and verbs are treated as predicates of events which are then simply conjoined.

- (106) a. I drank the beer cold; $\llbracket cold \rrbracket = \lambda x.cold(x)$; $[sc \text{ beer cold}]$
 b. I spoke coldly; $\llbracket cold-ly \rrbracket = \lambda e.cold(e)$; $cold(e) \wedge speak(e) \wedge agent(e, I)$

In spite of the large body of literature on adverbs (Alexiadou, 1997; Cinque, 1999, 2004; Ernst, 2002), there is very little work on their internal structure. The data so far points to a universal structure for adverbs as has been exemplified for in the clausal and nominal domains.

4.1 Internal Structure of the *-gaa* adverb

We know by now that *-gaa* is indicative of an eventive small clause in the sentence. So the internal structure of the Telugu adverb with *-gaa* must look like what is shown in (107). The subject of PredP is

a ‘gap’, that is then bound at the time of insertion of the adverb into the structure, at the appropriate level in the syntax.

(107) PredP

PRO	Pred'
Pred ⁰	NP
-gaa	koopam
[e]	tondari

This eventive small clause occupies the Specifier position of the *Asp* phrases that Cinque (1999) has for adverbs. Thus the manner adverb is similar to the depictive –an adjunct small clause, co-temporal with the event, only it is predicating of the event, with an event controlled pro.

The semantics of predication in adverbial small clauses like in (107) is shown in (108).

(108)

$\exists e' \exists e [\text{holds}(\text{haste}, e) \wedge \text{Holder}(e, e')]$
....
$\text{PredP} \rightarrow \lambda e [\text{holds}(\text{haste}, e) \wedge \text{Holder}(e, \text{PRO})]$
$\text{DP}(\text{PRO}) \rightarrow \text{PRO}$
$\text{Pred}' \rightarrow \lambda x \lambda e [\text{holds}(\text{haste}, e) \wedge \text{Holder}(e, x)]$
$\text{Pred}^0(-\text{gaa}) \rightarrow \lambda \pi \lambda x \lambda e [\text{holds}(\pi, e) \wedge \text{Holder}(e, x)]$
$\text{NP}(\text{tondari 'haste'}) \rightarrow \lambda x [\text{haste}(x)]$

5. Conclusion

Finally, looking for overt predicates cross-linguistically, we find from the literature that in some languages, a functional element appears between the subject and the predicate, considered an overt manifestation of Pred⁰, as shown in (109)-(114).

(109) *Welsh (Bowers 1993)*

Mae Siôn *(yn) ddedwydd
 is Siôn PRT happy
 ‘Siôn is happy.’

(110) *Swedish (Lundin 2003) vän.*

Jag sag honom som nim bäste vän
 I saw him PRT my best friend
 ‘I saw him as my best friend’

(111) *Scottish Gaelic (Adger and Ramchand 2003)*

Tha Calum ‘na thidsear.
 be-PRES Calum PRT=in-3MSG teacher
 ‘Calum is a teacher.’

(112) *Edo (Baker 2003)*

Èmèrí *(yé) mòsèmòsè.
 Mary PRT beautiful.A
 ‘Mary is beautiful’

(113) *Russian (Bailyn 2001)*

My sčitaem ego kak svoego.
 we consider him-ACC as self.POSS-ACC
 ‘We consider him as one of us.’

(114) *Chichewa (Baker 2003)*

M-kango *(ndì) w-a u-kali
 3-lion PRT 3-ASSOC 3-fierce
 ‘The lion is fierce.’

The “intrusive” *as* in South Asian English, in constructions like *It is called / named as Charminar* (Lange 2012), is also an overt predicator. As noted by Balazs (2012), the “Distribution of small clauses with overt vs. null Pr head [as] is conditioned by the matrix verb in British/American English.” The verbs *regard*, *think of*, and *honor* all select small clauses with the overt Pred⁰ head *as*. The verbs *think*, *make*, and *name* select small clauses with the null Pred⁰ head. But one English matrix verb, *consider*, appears to have variable selection properties. South Asian English is making the paradigm uniform, with an overt Pred⁰ [as] in all small clauses.

Looking across the Dravidian languages, in Kannada (Amritavalli 2008), Tamil (R. Amritavalli, p.c.), and Malayalam (K.A. Jayaseelan, p.c.), the morpheme roughly equivalent to the Telugu *-gaa* is the perfect participle of ‘become’. The Kannada *-aagi*, for example, is a productive derivational suffix that derives adjectives and adverbs from nouns (Amritavalli 2008). The perfect participle of *avv* ‘become’ in Telugu is *ayyi*. In Telugu, *-gaa* is derived from *kaa* ‘to become’, the infinitive of *avv*, by a phonological process of intervocalic voicing (Krishnamurti & Gwynn, 1985). There is another infinitival form of *avv* which is *avva*. Both infinitival forms are used in free variation, as shown in (115)–(116).

- (115) *aidu avv-a-nee ayyindi*
 5 become.INF-EMP became
 ‘Its already 5 o’ clock’

- (116) *aidu gaa-nee ayyindi*
 5 become.INF-EMP became
 ‘Its already 5 o’ clock’

The “main” verb *avvu* takes both eventive nouns and non-eventive nouns, as shown in (117)–(118), respectively (like in Kannada, Amritavalli 2014). The ‘happen’ reading has the event schema (in terms of a First Phase (Ramchand 2008) decomposition) shown in (119), and the ‘become’ reading is predicative and has an NP_{HEME-RESULT} schema—(120) (like in Kannada, Amritavalli 2014).

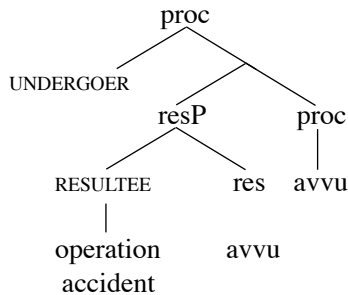
- (117) a. (*siita-ki*) operation *ayyi-ndi*
 Sita-DAT operation happened-3FSG
 ‘An operation happened (to Sita).’

- b. (*siita-ki*) accident *ayyi-ndi*
 Sita-DAT accident happened-3FSG
 ‘An accident happened (to Sita).’

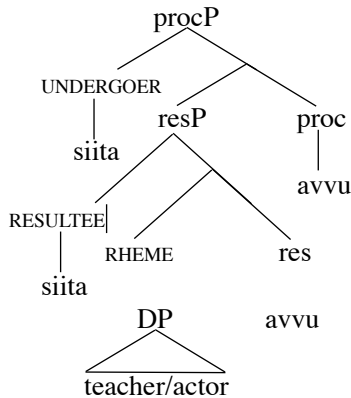
- (118) a. *siita Teacher ayyi-ndi*
 Sita Teacher became-3FSG
 ‘Sita became a teacher.’

- b. siita actor ayyi-ndi
 Sita actor became-3fsg
 ‘Sita became an actor.’

(119)



(120)



This parallels the behavior of *-gaa* which takes events and individuals as arguments.

To conclude, in this paper, we have shown that *-gaa* is not just an adverbializing or an adjectivalizing suffix. *-gaa* occurs in a variety of non-verbal predication environments. It is Pred^0 of an eventive, stage-level predicate structure. The event argument introduced by *-gaa* must be licensed by Asp (of existential copula or matrix verb). It composes with PC nouns/roots and “role” nouns, and type-shifts them into propositional functions. *-gaa* predicates of individuals and events. The internal structure of Adverbs with *-gaa* is a small clause, with an event-controlled PRO. Cross-linguistically, *-gaa* parallels Welsh *yn*, Russian Instrumental case, Finnish *Essive/Translative* case, and bare predicate nominals in French and German. Finally, *-gaa* can be considered a semi-lexical category that is eventive.

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