Comparatives and differential measure phrases without *-er* in Gitksan

Yurika Aonuki

aonuki_y@mit.edu, Massachusetts Institute of Technology

Background

- Gradable adjectives (GAs) usually receive context-independent denotations (Heim 2000).

(1) ⟦tall⟧= λd. λx. Tall(x) ≥ d

- Context sensitivity comes from *pos* (2) (Cresswell 1976), which (i) supplies the contextual standard and (ii) existentially closes the degree argument of a GA (Rett 2007).

(2) Analysis of positive constructions (Kennedy and McNally (2005):350(13))

a. ⟦pos⟧=λ$G_{dét}$. λx. ∃d[STANDARD(d)(G)(C) & G(d)(x)]

b. ⟦Kim is tall⟧=⟦pos⟧(⟦tall⟧)(Kim) = ∃d[standard(d)(⟦tall⟧)(C) & Tall(Kim) ≥ d]

- However, there are challenges for this approach. E.g.,
  - Evaluativity is more widely observed than *pos* predicts (Rett 2007; Sassoon 2011; Breakstone 2012).
  - Cannot capture the observation that GAs that seem to share a scale (3a) can have different contextual standards (3b) (Cariani et al. 2023b).

(3) a. Miami is warmer than Barcelona. ↔ Miami is hotter than Barcelona.

b. Miami is warm. ↛ Miami is hot.

Inherent context sensitivity

There are proposals for inherently context-sensitive GA denotations (4) (Oda 2008; Krasikova 2008; Breakstone 2012; Cariani et al. 2023a,b; Wellwood 2024; Aonuki 2024)..

(4) ⟦ $tall_1$ ⟧^{g} = λs: s ∈ $D_{\succcurlyeq height}$. s $\succcurlyeq_{height}$ g(1) (Cariani et al. 2023a,b; Wellwood 2024)

Predicitions of inherent context sensitivity

❶Implicit comparison (Kennedy 2007) without a standard phrase in degreeful languages.

❷Measure phrases (MPs) being able to co-occur with any bare GA.

Both are borne out in Gitksan.

Prediction 1: Implicit comparatives/superlatives without an overt standard

Relative GAs receive a comparative/superlative reading without any degree operator. A standard phrase is optional.

(5) [crisp judgement comparative] *Anne and Ben are almost the same height.*
(K'aa) 'wii 'nakw=t Anne (a[-t]=s Ben)
(k'aa) big long=PN Anne (PREP[-3.II]=PN Ben)
'Anne is taller (than Ben).' (HH-v.)

(6) [crisp judgement superlative] *Four children. Chris is the tallest by a tiny bit.*
(K'aa) 'wii 'nakw=t Chris
(k'aa) big long=PN Chris
'Chris is the tallest.' (✓HH, ?VG)

(7) [non-evaluativity]
Hn'iiluxw dip Lisa gan[-t]=s Michael, ii dulpxw[-t]=s Lisa.
tall.PL ASSOC Lisa PCNJ[-3.II]=PN Michael CCNJ small[-3.II]=PN Lisa
'Michael and Lisa are both tall, but Lisa is shorter.' (VG-v.)

In contrast, minimum-standard GAs require an operator *k'aa* for comparative (8)/superlative (9) readings.

(8) [comparative with a minimum-standard GA]
#(K'aa) k'ak=hl aats'ip tun a[-t]=hl aats'ip tust
k'aa open=CN door this PREP[-3.II]=CN door that
'This door is more open than that door.' (VG)

(9) [superlative with a minimum-standard GA] *There are many branches, all bent.*
Nde=hl anist #(k'aa) hlag-it?
WH=CN branch k'aa bent-SX
'Which branch is the most bent?' (VG)

Alternatives aid comparative/superlative readings

Comparative/superlative readings without *k'aa* (5-7) are facilitated by consideration of alternatives. There are two pieces of evidence.

1. Focus extraction (Davis and Brown 2011) aids comparative/superlative readings for VG.

(10) *Discussing the world's mountains.*
#'Wii gephls[-t](=s) sganist Everest big high[-3.II](=PN) mountain Everest
intended: 'Mt. Everest is the tallest.'

(11) *Context as in (10).*
Sganist Everest 'wii gephls-it mountain Everest big tall-SX
'Mt. Everest is the tallest.' (VG-v.)

2. For both HH and VG, a morpheme *gay* 'instead' (12) optionally appears in comparative/superlative sentences (13).

(12) [*gay* 'instead'] *John was supposed to make a cake, but he was too busy.*
Gay=t Mary an=t jap[-t]=hl ixsta-m anaax
instead=PN Mary AX=3.I make[-3.II]=CN sweet-ATTR bread
'Mary made a cake instead.' (VG-v.)

(13) [*gay* 'instead' in comparative]
(Gay) k'aa sdin=hl xbiist tun
instead k'aa heavy=CN box this
'This box is heavier.' (HH-v.)

Prediction 2: Measure phrases with bare GAs

Measure phrases (MPs) can occur with bare GAs. They receive differential readings with relative GAs (14) and absolute readings with minimum-standard GAs (15).

(14) [differential MP with a relative GA]
K'i'y=hl t'im k'aax win 'wii 'nakw[-t]=hl ha'niitxookxw tun.
one=CN whole arm COMP big long[-3.II]=CN table this
'This table is one fathom longer.' *'.. one fathom long' (VG)

(15) [absolute MP with a minimum-standard GA]
(K'i'y=hl) hlek moos win k'aak[-t]=hl aats'ip
one=CN crook thumb COMP open[-3.II]=CN door
'The door is open by one inch.' (VG, HH)

⇒ I propose that 1) the availability of implicit comparison without an overt standard and 2) differential interpretations of MPs occurring with bare relative GAs in Gitksan are due to inherent context dependency of these GAs.

Analysis

Relative GAs have an index over a non-zero salient degree.

(16) ⟦ 'wii 'nakw$_1$ 'tall' ⟧^{g,c,i} = λx λd: d∈D_{height} & g(1)∈D_{height} & g(1)≠zero. Height(x)(w_i) ≥ g(1) + d

A comparative reading arises in (5) if g(1) is mapped to Ben's height (17).

(17) ⟦ (5) without the PP ⟧^{g,c,i} = ⟦ 'wii 'nakw$_1$ Anne ⟧^{g,c,i}
= ∃d:d,g(1)∈D_{height} & g(1)≠zero [Height(Anne)(w_i) ≥ g(1) + d]

I assume that an optional *a*-PP specifies the domain of salient individuals to only consist of its complement and the subject (18) (Kennedy 2007 on *compared to*).

(18) ⟦ a ⟧^{g,c,i} = λx. λP_{edt}. λy. λd. P(y)(d) Defined only if C = {x, y}

An MP fills in the degree argument of a GA.

(19) ⟦ (14) ⟧^{g,c,i} = ⟦ k'i'y t'im k'aax 'long' 'wii 'nakw$_1$ 'long' 'this table' ⟧^{g,c,i}
= Length(this table)(w_i) ≥ g(1) + 1 fathom
Defined only if C={this table, that table}

Minimum-standard GAs have an index that maps to the minimum degree.

(20) ⟦ k'ak$_1$ 'open' ⟧^{g,c,i} = λx. λd: d∈$D_{openness}$ & g(1)∈$D_{openness}$.
Openness(x)(w_i) ≥ g(1) + d , where g(1) maps to MIN($D_{openness}$) by default

Without the operator *k'aa*, (8) only states that "this door" is open to some degree.

(21) ⟦ (8) without *k'aa* ⟧^{g,c,i}=∃d:d,g(1)∈$D_{openness}$[Openness(this door)(w_i)≥g(1) + d]
Defined only if C = {this door, that door}

K'aa binds the standard degree index of a GA and plugs in the maximum degree held by another member of the comparison class (22). To compute such a degree, I assume that *k'aa* is indexed with a measure function (see Cariani et al. 2023a,b; Wellwood 2024).

(22) ⟦ k'aa$_\mu$ ⟧^{g,c,i} = λP_{dedt}. λx. λd_2.
P(MAX[λd_3. ∃y[y∈C & y≠x & g(μ)(y)≥d_3]])(x)(d_2)

(23) ⟦ (8) with *k'aa* ⟧^{g,c,i} = ⟦ k'aa 1 k'ak$_1$ 'this door' a 'that door' ⟧^{g,c,i}
= ∃d[Openness(this door)(w_i) ≥ MAX[λd'.∃y[y∈C & y≠x & g(μ)(y)≥ d']] + d]
Defined only if C = {this door, that door}

Conclusion

- Gitksan shows patterns that are predicted by the proposals for inherently context-sensitive denotations of relative GAs (Oda 2008; Krasikova 2008; Breakstone 2012; Cariani et al. 2023a,b; Wellwood 2024; Aonuki 2024).
  - Implicit comparison without an overt standard.
  - Consistent compatibility of MPs with bare GAs.
- Role of alternatives in implicit comparison.

Acknowledgement: I am grateful to Vincent Gogag and Hector Hill for educating me about Gitksan.

References: Aonuki, Y. (2024). Inherently context-sensitive gradable adjectives. to appear in Proceedings of Sinn und Bedeutung 28. Breakstone, M. Y. (2012). Inherent evaluativity. In Proceedings of Sinn und Bedeutung 16, pp. 113–126. Cariani, F., P. Santorio, and A. Wellwood (2023a). Confidence reports. accepted in Semantics and Pragmatics. Cariani, F., P. Santorio, and A. Wellwood (2023b). Positive gradable adjective ascriptions without positive morphemes. In Proceedings of Sinn und Bedeutung 27, pp. 96–113. Cresswell, M. J. (1976). The semantics of degree. In Montague grammar, pp. 261–292. Elsevier. Davis, H. and J. Brown (2011). On A'-dependencies in gitksan. In 46th International Conference on Salish and Neighbouring Languages, pp. 43–80. University of British Columbia Working Papers in Linguistics. Heim, I. (2000). Degree operators and scope. In Semantics and linguistic theory 10, pp. 40–64. Kennedy, C. (2007). Modes of comparison. In Proceedings Chicago Linguistic Society 43, pp. 141–165. Kennedy, C. and L. McNally (2005). Scale structure and the semantic typology of gradable predicates. Language 81(2), 1–37. Krasikova, S. (2008). Comparison in chinese. Empirical issues in syntax and semantics 7, 263–281. Oda, T. (2008). Degree constructions in Japanese. Doctoral Dissertation. University of Connecticut. Wellwood, A. (2024). Packaging comparative thoughts. Talk at MIT Linguistics Philosophy Colloquium, 1 March.

Comparatives and differential measure phrases without *-er* in Gitksan

Yurika Aonuki

aonuki_y@mit.edu, Massachusetts Institute of Technology

References

Aonuki, Y. (2024). Inherently context-sensitive gradable adjectives. to appear in Proceedings of Sinn und Bedeutung 28.

Breakstone, M. Y. (2012). Inherent evaluativity. In *Proceedings of Sinn und Bedeutung*, Volume 16, pp. 113–126.

Cariani, F., P. Santorio, and A. Wellwood (2023a). Confidence reports. accepted in *Semantics and Pragmatics*.

Cariani, F., P. Santorio, and A. Wellwood (2023b). Positive gradable adjective ascriptions without positive morphemes. In *Proceedings of Sinn und Bedeutung*, Volume 27, pp. 96–113.

Cresswell, M. J. (1976). The semantics of degree. In *Montague grammar*, pp. 261–292. Elsevier.

Davis, H. and J. Brown (2011). On a -dependencies in Gitksan. In *46th international conference on Salish and neighbouring languages*, pp. 43–80. University of British Columbia Working Papers in Linguistics.

Heim, I. (2000). Degree operators and scope. In *Semantics and linguistic theory*, Volume 10, pp. 40–64.

Kennedy, C. (2007). Modes of comparison. In *Proceedings from the annual meeting of the Chicago Linguistic Society*, Volume 43, pp. 141–165. Chicago Linguistic Society.

Kennedy, C. and L. McNally (2005). Scale structure and the semantic typology of gradable predicates. *Language 81*(2), 1–37.

Krasikova, S. (2008). Comparison in chinese. *Empirical issues in syntax and semantics 7*, 263–281.

Oda, T. (2008). *Degree constructions in Japanese*. University of Connecticut.

Rett, J. (2007). Antonymy and evaluativity. In *Semantics and Linguistic Theory*, Volume 17, pp. 210–227.

Sassoon, G. W. (2011). Be positive! norm-related implications and beyond. In *Proceedings of Sinn und Bedeutung*, Volume 15, pp. 531–546.

Wellwood, A. (2024). Packaging comparative thoughts. Talk at MIT Linguistics Philosophy Colloquium, 1 March.