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A semantic comparison of *hari* in Sinhala with *very* in English

Dr. Tharanga Weerasooriya

Senior Lecturer
Department of English and Linguistics
University of Sri Jayewardenepura
tharanga@sjp.ac.lk

Abstract

Interface between scalarity and degree modification of adjectives in natural languages instigates a cross linguistic analysis of them to examine how they interact with each other within and across languages. This paper, thus, attempts to conduct a semantic analysis of the Sinhala degree modifiers *hari* and *harima* in comparison to *very* in English and addresses the questions; whether *harima* in Sinhala requires a lexical denotation different from *hari* in Sinhala or *very* in English, and how we can account for the incongruity of *hari* with closed scale adjectives in Sinhala as opposed to the behaviour of its counterpart in English. The analysis, while referring to seminal papers on the topic, basically builds on Heim's (2000) and Kennedy & McNally's (2005) analysis of degree modifiers and scale structure. In conclusion, given its semantic properties, a different lexical denotation for [[**harima**]], which is meant to be cross linguistically applicable to "*very very*" in English, is proposed.

Key Words: semantics, adjectives, degree adverbs, modifiers, scale structure

1. Introduction

In Sinhala, the degree modifiers; *hari, ithaa ,maara, boho, godak, hungak, sehenda and nosehenda* in their usage in different contexts and registers have equivalents such as *very, quite, pretty, fairly, rather and extremely* in English. Out of them, *hari* seems to have semantic properties similar to those of *very* as shown in (1).

(1) Saman hari dakshay.
Saman very clever.
"Saman is very clever."

It is also compatible with open scale adjectives that *very* in English agrees with. For instance, as in the case of *very* in English, gradable relative adjectives in Sinhala such as *lassana* 'beautiful', *honda* 'good', *rasawath* 'interesting', *parana* 'old' and *usa* 'tall' agree with *hari* as shown in (2).

(2) hari honday "very good"
hari rasawath "very interesting"
hari paranay "very old"

However, as opposed to *very*, it is not compatible with closed scale adjectives in Sinhala such as *pirunu* 'full', *erunu* 'open', *nopenena* 'invisible', *eherunu* 'awake', and *nemunu*, 'bent' as shown in (3).

(3) *hari pirunu "very full"
*hari erunu "very open"
*hari *nopenena* "very invisible"

At the same time, unlike with the degree modifier *very* in English, the emphatic suffix -*ma* in Sinhala can be used with *hari* to form *harima* (*hari+ma)* which increases the degree quality (higher than the level indicated by *hari*) of *hari* as the degree modifier (The meaning is translated by doubling of the adverb *very* as *very very* as shown in (4)).

(4) harima honday "very very good"
harima rasawath "very very interesting"
harima paranay "very very old"

Besides, as pointed out above unlike *very* in English, *hari* in Sinhala is not compatible with closed scale adjectives. In view of these, two questions arise as to whether *harima* in Sinhala requires a lexical denotation different from *very* or *hari* and how we can account for the incongruity of *hari* with closed scale adjectives in Sinhala as opposed to its counterpart's behaviour in English. Accordingly, this paper aims to address these questions and propose a new lexical denotation for *harima* in Sinhala while exploring its scalar compatibility and possibilities of cross linguistic application.

The paper is organized as follows. Section 2 discusses the theoretical background to the study. Section 3 deals with the semantics of the degree adverb *hari* in Sinhala in light of Scale Structure and

Gradable Adjectives. Section 4 is the discussion section that proposes the new denotation for *hari.* Section 5 offers the conclusions.

2. Empirical and theoretical background

2.1 Degree Modifiers.

A degree adverb is a word used with adjectives or adverbs to pre-modify them and indicate the extent in the increase or decrease of the degree of the meaning of the adjective/adverb. For example, the adverb *very* in English is a very common degree adverb in English. As shown in the examples in (5)b, the degree adverb *very* is used to increase the degree of interest, age, and beauty as the meanings of the adjectives in (5)a respectively.

(5) a. interesting, old, beautiful
    b. very Interesting, very old, very beautiful

In the same manner, the counterpart degree modifier *hari* in Sinhala is used to increase the degree of interest, age, and beauty as the meanings of the counterpart adjectives as shown in (6).

(6) a. rasawath, parana, lassana
    b. hari rasawath, hari parana, hari lassana

Some other words that function as degree adverbs in English are: *quite, rather, fairly, and extremely*. Some other words that function as degree adverbs in Sinhala are: *ithaa, maara, boho, godak, hunkak, sehenda and nosehenda*.

2.2 Scale Structure

The notion of *scale* (Cresswell, 1976, Bierwisch ,1989, Kennedy & McNally, 2005, Kennedy, 2007) makes use of the parameters *structure of scale* (open vs. closed) and *standard of comparison* to determine the ordering relations and distribution of adjectives. Kennedy & McNally (2005) assert that adjectival scales have three crucial parameters, “each of which must be specified in the lexical entry of any particular gradable adjective: a set of degrees, which represent measurement values; a dimension, which indicates the kind of measurement (cost, temperature, speed, volume, height, and so forth); and an ordering relation” (Kennedy & McNally, 2005, p. 351). They also maintain that

"scales may in principle be distinguished from each other—with linguistic consequences—in three different ways: in terms of properties of the set of degrees, in terms of the dimensional parameter, or in terms of the ordering relation" (Kennedy & McNally, 2005, p. 351).

Kennedy & McNally (2005) building on discussions, models and constructs brought forth by Klein (1991), Cresswell, (1977) and Bierwisch, (1989) and applying the parameters; open vs closed, represent four hypothesized scale structures as in (7) where *R* and Δ represent the ordering relation and dimension for the scale, respectively.

(7) Typology of Scale Structures

a. <**D**(1,0),**R**Δ>Totally (fully) open scale

b. <**D**[1,0),**R**Δ>Lower (minimally) closed scale

c. <**D**(1,0],**R**Δ>Upper (maximally) closed scale

d. <**D**[1,0],**R**Δ>Totally (fully) open scale

The significance of the typology of the scale structure here is that these different parameters, related to the scales of adjectives, determine the distribution of adjectives with degree modifiers.

2.3 Scale Structure and Gradable (Relative and Absolute) Adjectives.

Gradable adjectives are adjectives that can appear in comparative constructions as well as with adverbial degree modifiers. Kennedy & McNally (2005) has provided empirical evidence showing that gradable adjectives come in different varieties. According to them adjectives such as *beautiful, closed, bent, straight* and *full* are gradable and they can all occur in the comparative form and with degree modifiers, which distinguishes them from non-gradable adjectives such as *dead* or *alive.* They also claim that gradable adjectives map their arguments onto abstract representations of measurement, or DEGREES, which are formalized as points or intervals partially ordered along some DIMENSION (e.g. height, cost, weight, and so forth). The set of ordered degrees relates to a SCALE, and propositions composed out of gradable adjectives determine relations between degrees with truth conditions.

The semantic type of gradable adjectives (Seuren 1973, Cresswell 1977, Hellan 1981, Heim 1985, Bierwisch 1989, Klein 1991, Kennedy & McNally, 2005) indicates relations between individuals and degrees as explained in the following.

(8) [[**good**]]= λ*d*. λy. the quality of y is *d*

Here, *good* represents a measure function that takes an entity and returns its quality, a degree on the scale associated with the adjective. So, the adjective *good* denotes a relation between degrees of quality *d* and objects y such that the quality of y equals *d*.

Another phenomenon associated with gradable adjectives is context dependency and standard relation. Kennedy & McNally (2005), following on Cresswell (1977), Stechow, (1984), Bierwisch (1989), and Kennedy (1999b) argue that unmodified gradable adjectives contain a null degree morpheme *pos* (for POSITIVE FORM) whose function is to relate the degree argument of the adjective to an appropriate standard of comparison. They assume that *pos* encodes the relation **standard**, which holds of a degree *d* just in case it meets a standard of comparison for an adjective *G* with respect to a comparison class determined by **C**, a variable over properties of individuals whose value is determined contextually.

(9) [[*pos*]]c= λG.λx.∃*d*[**standard** (*d*) (G) (**C**) & *G*(*d*)(*x*)]

Heim (2000) claims that gradable adjectives denote relations between individuals and degrees. Gradable adjectives, thus, have truth conditions given in terms of a contextually defined standard of comparison and indicate relations between individuals and degrees and they are said to be of the semantic type <d,<e, t>>. This is further supported by Beck et al. (2009) who have analysed parallel sets of data on comparison constructions from 14 languages. They show that adjectives are given lexical entries according to which they relate a degree and an individual as in (10). (10b) is an abbreviation for (10a).

(10) a. [[tall]] = λd: d ∈ Dd. λx: x ∈ De. Height (x) ≥ d

b. [[tall]]= λd.λx. x is d-tall

Thus, degrees are abstract entities (type <d>) that form a scale (i.e. a set ordered by an ordering relation). One of the strengths of Kennedy & McNally's (2005) paper is the empirical evidence to show that closed scale (absolute) adjectives with maximum and minimum standards are also gradable. They argue that closed scale adjectives such as awake, visible, open, bent (with minimum standards) and full, flat, closed, straight (with maximum standards) are similar in not introducing a context-dependent standard, but can appear in comparative constructions.

2.4 The Mechanics of Degree Modification.

It follows from our argument that adjectives both relative and absolute denote relations between individuals and degrees (type <d,<e,t>>) with interpretations such as that given in (11), where **mA**(*x*) represents the projection of *x* onto the scale associated with the adjective *A*.

(11) [[A]] λ*d*.λx.**mA**(*x*) = *d*

Kenedy and Mcnally (2005) further claim and verify that degree morphemes denote functions from (gradable) adjective meanings to properties of individuals (type <d,<e,t>,<e,t>>) whose role is to saturate the degree argument of the adjective, and they characterize the meanings of degree morphemes in terms of the 'template' in (12), where **R** is some restriction on the degree argument of the adjective.

(12) [[Deg(P)]] λG.λx. ∃*d* [**R**(*d*) & *G*(*d*)(*x*)]

What distinguishes different degree morphemes from each other is the value of **R,** the specific restrictions they impose on the adjective's degree argument (Kenedy and Mcnally, 2005).

It is this formula that is utilised in the formation of lexical denotations for different degree morphemes. For example, the denotations or the lexical entries for degree modifiers and measure phrases such as *pos*, *two meters*, *more than, less than, as as*, *completely*, *very, much, well*, have all been designed based on (12).

(13) a. [[***pos***]] λG.λx.∃d[**standard** (d) (G) (C) and *G*(*d*)(*x*)]
b. [[**very**]]c = λG.λx.∃d[**standard** (d) (G) (λ*y*. [[*pos* (*G*)(*y*)]]c=1) and *G*(*d*)(*x*)=1]
c. [[**completely**]] = λG.λx.∃d[d = **max**' (SG)& *G*(*d*)(*x*)=1]
d. [[**half**]] = λG.λx.∃d[**diff**'(**max**' (SG)) (*d*)= diff' (*d*) (**min** (SG)) and *G*(*d*)(*x*)=1]
e. [[**two meters**]]= λG.λx.∃d [d≥ **two meters** and *G*(*d*)(*x*)]

This theory, thus, makes it possible to formulate a new denotation for [[**harima**]] on account of the different semantic properties that it denotes.

2.5 Existing cross linguistic literature

Analyses of degree modifiers of similar nature have been done in relation to other languages such as Japanese degree modifier, *totemo* by Tsujimura, (2001) who has discussed a range of verbs that *totemo* can modify. For example, he discusses psych verbs, verbs of emission, and verbs of change as verbs that are compatible with *totemo*. Kubota (2010) has discussed the Japanese degree expression *kanari* that occurs with both open scale and closed scale adjectives and proposed an analysis.

However, the present study goes a few steps further by attempting to compose a new denotation for the Sinhala degree modifier *harima* and by proposing a cross linguistic application of the denotation.

3. *hari* with Scale Structure and Gradable Adjectives

It is intriguing to examine how ordering relation and dimension of the scale structure can be applied to *hari* in Sinhala. This necessitates an analysis of the distribution and compatibility of Sinhala adjectives with *hari* in relation to the scale structure.

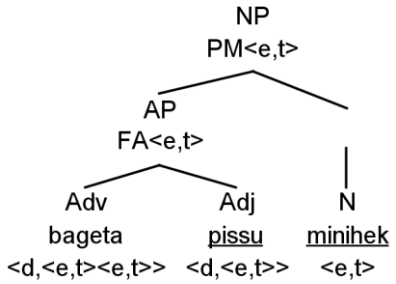
3.1 Open Scale (Gradable/Relative) Adjectives in Sinhala.

The semantic properties of gradable adjectives discussed in Section 2.3 are also true for relative gradable adjectives in Sinhala. Some examples of relative gradable adjectives in Sinhala are given in (14).

(14) *lassana* " beautiful"
honda "good"
rasawath " interesting"
parana " old"
usa " tall"

They are context dependant. They have truth conditions given in terms of a contextually defined standard of comparison. They also take the type, <d,<e, t>>. They are compatible with degree modifiers such as those equal to *very* and proportional modifiers such as *bageta* "half*", mulumaninma* "*completely",* etc. The composition of *bageta pissu minihek "* half mad man*"* shown in (15) denotes a property that is true of a man if his degree of madness corresponds to the midpoint of the scale. Deriving truth conditions for *bageta pissu minihek "* half mad man*"* is as in the following.

(15) [[**half**]] = λG.λx.∃*d*[**diff'**(**max**' (SG)) (*d*)= **diff'** (*d*) (**min** (SG)) and *G*(*d*)(*x*)=1]
[[**mad**]] = λdd. λje. J is mad to the degree d
[[**man**]] = λhe. h is a man



=1 iff (PM)

λme.[[[[**half**]]([[**mad**]])] (m) =1 and [[**man**]] (m) =1]=1 iff – (FA)

λme.[λG.λx.∃*d*[**diff'**(**max**' (SG)) (*d*)= **diff**' (*d*) (**min** (SG)) and *G*(*d*)(*x*)=1] (λdd. λje. J is mad to the degree d) (m) =1 and [[**man**]] (m) =1]=1 iff

λme.[λx.∃*d*[**diff**'(**max**' (SG)) (*d*)= **diff**' (*d*) (**min** (SG)) and [λdd. λje. J is mad to the degree d](*d*)(*x*)=1] (m) =1 and [[**man**]] (m) =1]=1 iff

λme.[λx.∃*d*[**diff**'(**max**' (SG)) (*d*)= **diff**' (*d*) (**min** (SG)) and [λje. J is mad to the degree d](*x*)=1] (m) =1 and [[**man**]] (m) =1]=1 iff

λme.[λx.∃*d*[**diff**'(**max**' (SG)) (*d*)= **diff**' (*d*) (**min** (SG)) and x is mad to the degree d] (m) =1 and [[**man**]] (m) =1]=1 iff

λme.[∃*d* **diff**'(**max**' (SG)) (*d*)= **diff**' (*d*) (**min** (SG)) and m is mad to the degree d and [[**man**]] (m) =1]]=1 iff

λme.[∃*d* **diff**'(**max**' (SG)) (*d*)= **diff**' (*d*) (**min** (SG)) and m is mad to the degree d and [λhe. h is a man] (m) =1]=1 iff

λme.[∃*d* **diff**'(**max**' (SG)) (*d*)= **diff**' (*d*) (**min** (SG)) and m is mad to the degree d and m is a man]

3.2 Closed Scale (Absolute) Adjectives in Sinhala.

Some of the examples of closed scale adjectives in Sinhala include those in (16).

(16) *pirunu "* full"
his "empty"
erapu " open"
*vahapu "*closed"
*penena "*visible"
nopenena " invisible"
eherunu " awake"
nemunu " bent"

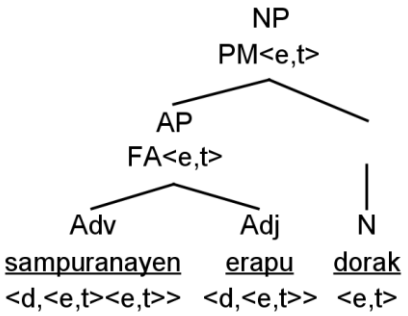
They have semantic properties similar and different to those associated with their English counterparts. They also take the type <d,<e, t>>, but are compatible only with proportional modifiers such as *bageta* "half*", mulumaninma* "completely*",* etc.

(17) a. mulimaninma erapu dorak
completely open door
" a completely open door"

b. bageta wahapu dorak
half closed door
" a half closed door"

Deriving truth conditions of the phrase shows that *sampuranyen erapu dorak "*completely open door*"* denotes a property that is true of a door if there is a degree of openness that corresponds to the maximally end point of a scale.

(18) [[**completely**]] = λG.λx.∃d[d = **max**' (SG)& *G*(*d*)(*x*)=1]
[[**open**]] = λdd. λke. k is open to the degree d
[[**door**]] = λce. c is a door



=1 iff- (PM)

λme.[[[[**completely**]]([[**open**]])] (m) =1 and [[**door**]] (m) =1]=1 iff – (FA)

λme.[λG.λx.∃d[d = **max'** (SG)& *G*(*d*)(*x*)=1] (λdd. λke. k is open to the degree d) (m) =1 and [[**door**]] (m) =1]=1 iff

λme.[λx.∃d[d = **max'** (SG)& [λdd. λke. k is open to the degree d](*d*)(*x*)=1] (m) =1 and [[**door**]] (m) =1]=1 iff

λme.[λx.∃d[d = **max**' (SG)& [λke. k is open to the degree d](*x*)=1] (m) =1 and [[**door**]] (m) =1]=1 iff

λme.[λx.∃d[d = **max**' (SG)& x is open to the degree d] (m) =1 and [[**door**]] (m) =1]]=1 iff

λme.[∃d d = **max**' (SG)& m is open to the degree d and [[**door**]] (m) =1]]=1 iff

λme.[∃d d = **max**' (SG)& m is open to the degree d and [λce. c is a door] (m) =1]=1 iff

λme.[∃d d = **max**' (SG)& m is open to the degree d and m is a door]

3. 3 Distribution of Sinhala Adjectives with *hari*.

As it was discussed in Section 1, the lexical denotation for *hari* is similar to that of *very*.

(19) [[**hari**]]c = λG.λx.∃d[**standard** (d) (G) (λ*y*. [[*pos* (*G*)(*y*)]]c=1) & *G*(*d*)(*x*)=1]

This can be read as " let *d'* be the **standard** to stand out and qualify as G when compared against the set of objects y all of which satisfy the predicate 'y is (pos) G'; then, 'x is *hari* G' is true if and only if x has a degree d of G-ness that is at least as large as *d'*. At the same time, like *very, hari* also has the effect of restricting the comparison class to the set of objects that already qualify as G. In order to stand out against this selective comparison class, whose members all satisfy the general **standard**, the object in question needs to have a significantly higher degree of G- ness than one that would (barely) satisfy the positive form.

However, as opposed to *very* in English, the degree modifier *hari* takes only (open scale) gradable relative adjectives such as *lassana* "beautiful*"*, *honda* "good*",* etc in Sinhala (20).

(20) a. hari lassana kellek
very beautiful girl
"a very beautiful girl"

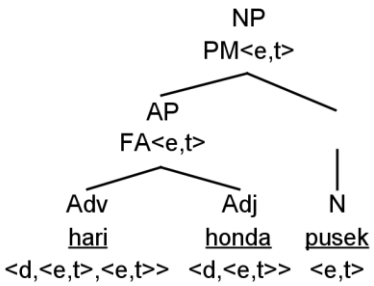
b. hari honda pusek
very good cat
"a very good cat"

In this account, the phrase *hari honda pusek* " a very good cat" is true just in case the cat in question stands out on the scale of goodness when compared against the set of objects that all qualify as being good. Thus, this analysis properly accounts for the function of *hari* as an intensifier for open scale adjectives. Deriving truth conditions for *hari honda pusek "*very good cat*"* is as in (21).

(21) [[**hari**]]c = λG.λx.∃d[**standard** (d) (G) (λ*y*. [[*pos* (*G*)(*y*)]]c=1) and *G*(*d*)(*x*)=1]

[[**honda**]] = λdd. λpe. p is good to the degree d

[[**pusek**]] = λwe. w is a cat



= 1 iff – (PM)

λme.[[[[**very**]]([[**good**]])] (m) =1 and [[**cat**]] (m) =1]=1 iff – (FA)

λme.[[λG.λx.∃d[**standard** (d) (G) (λ*y*. [[*pos* (*G*)(*y*)]]c=1) and *G*(*d*)(*x*)=1] [λdd. λpe. p is good to the degree d]] (m) =1 and [[**cat**]] (m) =1]=1 iff

λme.[λx.∃d[**standard** (d) [λdd. λpe. p is good to the degree d] (λ*y*. [[*pos* [λdd. λpe. p is good to the degree d](*y*)]]c=1) and [λdd. λpe. p is good to the degree d] (*d*)(*x*)=1] (m) =1 and [[**cat**]] (m) =1]=1 iff

λme.[λx.∃d[**standard** (d) [λdd. λpe. p is good to the degree d] (λ*y*. [[*pos* [λdd. λpe. p is good to the degree d](*y*)]]c=1) and [λpe. p is good to the degree d] (*x*)=1] (m) =1 and [[**cat**]] (m) =1]=1 iff

λme.[λx.∃d[**standard** (d) [λdd. λpe. p is good to the degree d] (λ*y*. [[*pos* [λdd. λpe. p is good to the degree d](*y*)]]c=1] and x is good to the degree d] (m) =1 and [[**cat**]] (m) =1]=1 iff

λme.[∃d[**standard** (d) [λdd. λpe. p is good to the degree d] (λ*y*. [[*pos* [λdd. λpe. p is good to the degree d](*y*)]]c=1) and m is good to the degree d and [[**cat**]] (m) =1]=1 iff

λme.[∃d[**standard** (d) [λdd. λpe. p is good to the degree d] (λ*y*. [[*pos* [λdd. λpe. p is good to the degree d](*y*)]]c=1) and m is good to the degree d and [[**cat**]] (m) =1]=1 iff

λme.[∃d[**standard** (d) [λdd. λpe. p is good to the degree d] (λ*y*. [[*pos* [λdd. λpe. p is good to the degree d](*y*)]]c=1) and m is good to the degree d and [λwe. w is a cat] (m) =1]=1 iff

λme.[∃d **standard** (d) [λdd. λpe. p is good to the degree d] (λ*y*. [[*pos* [λdd. λpe. p is good to the degree d](*y*)]]c=1) and m is good to the degree d and m is a cat]

4. Discussion: *hari* differs from *very*

Kenedy and Mcnally (2005) argue that *very* in English, can be used with closed scale adjectives in special contexts. They argue that there are counterexamples to the generalization that *very* is infelicitous with absolute adjectives. For example, they show that (22) might be used by a waiter to describe a restaurant that has a small/large number of customers in it (depending on the choice of adjective).

(22) *The restaurant is very empty/full tonight*.

However, they claim that "absolute adjectives permit relative-like, imprecise interpretations, and there is evidence that this is what is going on here" (Kenedy and Mcnally, 2005, P. 371). Their conclusion of this kind of use is " *very empty/full* strongly implies *not empty/full* (*a very empty restaurant* is one with just a few diners, not *one with no diners*), indicating that whatever standard is being raised, it is not the absolute one" (Kenedy and Mcnally, 2005, P. 371)..

However, a contrasting and interesting phenomenon observed in relation to *hari* is its incompatibility with closed scale adjectives in Sinhala as shown in (23). It is not possible to compose phrases like the following in Sinhala.

(23)	# hari pirunu kalaya	# hari erapu dora
	very full pot	very open door
	#" very full pot"	#" very open door"

hari in Sinhala remaining true to its denotation; [[hari]] c = λG.λx.∃d[(standard (d) (G) (λ*y*. [[*pos* (*G*)(*y*)c]]=1)) & (*G*(*d*)(*x*)=1)] and its standard raising feature does not allow the minimal and maximal standard closed scale adjectives to be associated with it. What semantically happens here is that the semantic properties of *hari* which are set to calculate the standard of comparison with respect to a comparison class based on the property denoted by the positive form of the adjectival predicate are meant to raise the standard of the adjective. But standard relation of absolute adjectives in Sinhala are always set to an appropriate endpoint of the scale so that modification by *hari* has no semantic effect at all. This gives an obvious account for the incompatibility of *hari* with closed scale adjectives in Sinhala.

4.1 Proposal for a New Denotation for *harima.*

Unlike with the degree modifier *very* in English, the suffix *-ma* in Sinhala can be used with *hari* to increase the degree quality of *hari* (higher than the level indicated by *hari*) as the degree modifier.

(24)	a. eya hari lassanai	b. ohu hari hondai
	she very beautiful[is]	he very good[is]
	"She is very beautiful"	" He is very good"

(25)	a. eya	harima lassanai	b. ohu harima hondai

she very(d+) beautiful[is]	he very(d+) good[is]
"She is very (very) beautiful"	" He is very (very) good".

The meaning of (24) a can be paraphrased as something along the lines of "the degree to which the girl is beautiful is significantly high" whereas (25) a can be paraphrased as "the degree to which the girl is beautiful is extraordinarily high".

4.2 Proposed New Denotation and Its Implications.

Building on Kennedy and McNally's (2005) analysis of *very* and drawing on attempts made with Japanese degree modifiers Tsujimura, (2001) and Kubota (2010), I propose an analysis of *harima* in terms of the increase in the level of degree of the modifier. The proposed new denotation should have the semantics: 'x is *harima* G' meaning that x has a degree of G-ness that is **extraordinary** as opposed to **standard** *d* of G-ness indicated by *very* or *hari* of objects that qualify as G.

The proposed denotation for [[**harima**]] is built upon the denotation for [[**very**]] (adopted for [[**hari**]] in Sinhala as in (19) and the implications from the mechanics and restrictions on degree morphemes. The truth conditions for 'x is *harima* G' can be derived as follows: "let *d* be the standard degree of G-ness of objects y that satisfy the predicate 'y is (*pos*) G'; then, 'x is *harima* G' is true if and only if x has a degree *d* of G-ness such that *d* is above the **Standard** degree". This can be converted to a denotation as follows.

(26) [[**harima**]]c = λG.λx.∃*d*[*d* > **standard**(*d*)(G) (λ*y*. [[*pos* (*G*)(*y*)]]c=1) & *G*(*d*)(*x*)=1]

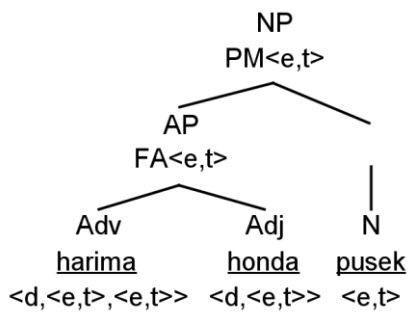
This lexical meaning for *harima*, '*harima* G' is applicable to cases where G is an open scale adjective only. This follows from our argument in Section 4.1.

Composition and derivation of denotations for *harima honda pusek* "very very good cat" denote that *harima honda pusek* is true of a cat if the degree to which the cat is good exceeds standard *d* level on the quality-scale for a comparison class based on cats that have the property (*pos(good)*) in the context of utterance.

(27) [[**harima**]]c= λG.λx.∃*d*[*d* > **standard**(*d*)(G)(λ*y*. [[*pos* (*G*)(*y*)]]c=1) & *G*(*d*)(*x*)=1]

[[**honda**]] = λdd. λpe. p is good to the degree d

[[**pusek**]] = λwe. w is a cat



= 1 iff – (PM)

λme.[[[[**harima**]]([[**honda**]])] (m) =1 and [[**pusek**]] (m) =1]=1 iff – (FA)

λme.[λG.λx.∃d [d > **standard** (d) (G) (λ*y*. [[*pos* (*G*)(*y*)]]c=1) and *G*(*d*)(*x*)=1] (λdd. λpe. p is good to the degree d) (m) =1 and [[**cat**]] (m) =1]=1 iff

λme.[λx.∃d [d > **standard** (d) [λdd. λpe. p is good to the degree d] (λ*y*. [[*pos* [λdd. λpe. p is good to the degree d] (*y*)]]c=1) & [λdd. λpe. p is good to the degree d] (*d*)(*x*)=1] (m) =1 and [[**cat**]] (m) =1]=1 iff

λme.[λx. ∃d [d > **standard** (d) [λdd. λpe. p is good to the degree d] (λ*y*. [[*pos* [λdd. λpe. p is good to the degree d] (*y*)]]c=1) & [λpe. p is good to the degree d] (*x*)=1] (m) =1 and [[**cat**]] (m) =1]=1 iff

λme.[λx. ∃d [d > **standard** (d) [λdd. λpe. p is good to the degree d] (λ*y*. [[*pos* [λdd. λpe. p is good to the degree d] (*y*)]]c=1) & [x is good to the degree d] (m) =1 and [[**cat**]] (m) =1]=1 iff

λme.[∃d [d > **standard** (d) [λdd. λpe. p is good to the degree d] (λ*y*. [[*pos* [λdd. λpe. p is good to the degree d] (*y*)]]c=1) & m is good to the degree d and [[**cat**]] (m) =1]=1 iff

λme.[∃d [d > **standard** (d) [λdd. λpe. p is good to the degree d] (λ*y*. [[*pos* [λdd. λpe. p is good to the degree d] (*y*)]]c=1) & m is good to the degree d and [λwe. w is a cat] (m) =1]=1 iff

λme.[∃d d > **standard** (d) [λdd. λpe. p is good to the degree d] (λ*y*. [[*pos* [λdd. λpe. p is good to the degree d] (*y*)]]c=1) & m is good to the degree d and m is a cat]

4.3 Possibilities of Cross Linguistic Application

It is obvious that English in today's contexts allow the double use of the degree modifier *very*, i.e "*very very"* to increase the degree quality of the modifier and it has been observed that use of "*very very"* in English as in (28)

(28) He is very very educated.

The construction is (28) is equal to use of *harima* in Sinhala. An equivalent of the Sinhala expression in English would be as in (29).

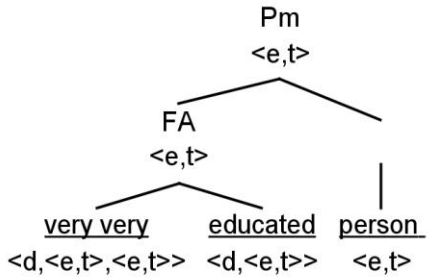
(29) ohu harima ugath.
he very very educated[is]
"He is very very educated."

In view of this, it is intuitively and semantically credible to apply the same denotation of [[**harima**]] for [[**very very**]] (taken as one DP) in English.

(30) [[**very very**]]c=λG.λx.∃d[d>**standard**(d)(G)(λ*y*.[[*pos*(*G*)(*y*)]]c=1) & *G*(*d*)(*x*)=1]

The composition of *very very educated man* bears the following truth conditions.

(31) [[**very very**]]c=λG.λx.∃d[d>**standard**(d)(G)(λ*y*.[[*pos*(*G*)(*y*)]]c=1) & *G*(*d*)(*x*)=1]
[[**educated**]] = λdd. λpe. p is educated to the degree d2
[[**person**]] = λwe. w is a person



= 1 iff – (PM)

λme.[[[[**very very**]]([[**educated**]])] (m) =1 and [[**person**]] (m) =1]=1 iff – (FA)

λme.[[[λG.λx.∃d [d > **standard** (d) (G) (λ*y*. [[*pos* (*G*)(*y*)]]c=1) and *G*(*d*)(*x*)=1] (λdd. λpe. p is educated to the degree d)] (m) =1 and [[**person**]] (m) =1]=1 iff

λme.[λx.∃d [d > **standard** (d) [λdd. λpe. p is educated to the degree d] (λ*y*. [[*pos* [λdd. λpe. p is educated to the degree d] (*y*)]]c=1) & [λdd. λpe. p is educated to the degree d] (*d*)(*x*)=1] (m) =1 and [[**person**]] (m) =1]=1 iff

λme.[λx. ∃d [d > **standard** (d) [λdd. λpe. p is educated to the degree d] (λ*y*. [[*pos* [λdd. λpe. p is educated to the degree d] (*y*)]]c=1) & [λpe. p is educated to the degree d] (*x*)=1] (m) =1 and [[**person**]] (m) =1]=1 iff

λme.[λx. ∃d [d > **standard** (d) [λdd. λpe. p is educated to the degree d] (λ*y*. [[*pos* [λdd. λpe. p is educated to the degree d] (*y*)]]c=1) & [x is educated to the degree d] (m) =1 and [[**person**]] (m) =1]=1 iff

λme.[∃d [d > **standard** (d) [λdd. λpe. p is educated to the degree d] (λ*y*. [[*pos* [λdd. λpe. p is educated to the degree d] (*y*)]]c=1) & m is educated to the degree d and [[**person**]] (m) =1]=1 iff

λme. [∃d [d > **standard** (d) [λdd. λpe. p is educated to the degree d] (λ*y*. [[*pos* [λdd. λpe. p is educated to the degree d] (*y*)]]c=1) & m is educated to the degree d and [λwe. w is a person] (m) =1]=1 iff

λme.[∃d d > **standard** (d) [λdd. λpe. p is educated to the degree d] (λ*y*. [[*pos* [λdd. λpe. p is educated to the degree d] (*y*)]]c=1) & m is educated to the degree d and m is a person]

5. Conclusion

It was observed that the degree modifier *hari* in Sinhala is semantically similar to its counterpart in English in the sense that, like *very*, it modifies open scale gradable adjectives in Sinhala. *hari* is different from *very* in terms of its incompatibility with closed scale adjectives in Sinhala. It was argued that *hari* with the inflectional suffix [-ma] together forms the degree modifier *harima*, which increases the degree of the quality of the adjective it modifies and in view of that a different lexical denotation for [[**harima**]] was proposed and formulated. It was claimed that the 'double' degree modifier [[**very very**]] in English has semantic properties similar to those of [[**harima**]] in Sinhala and a cross linguistic application of the lexical denotation of [[**harima**]] was suggested for [[**very very**]] in English. Also, given the different degrees and semantic properties that degree words such as *quite, pretty, fairly, rather and extremely*, which are "similar" to *very*, hold, the question whether they require similar or different interpretations/denotations provides implications for further research.

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