Nouns Attributively Modifying Adjectives in English
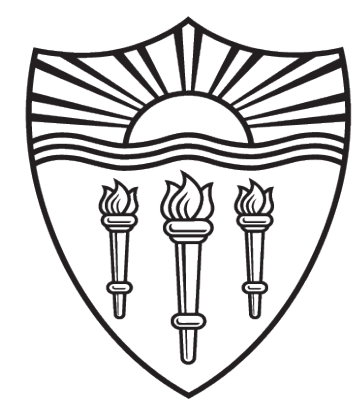
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The Fix

Hillary Clinton is rich. She is not Mitt Romney rich.

By Aaron Blake July 8, 2014

1. Overview

What does it mean to be *Mitt Romney rich*?

- Two readings are available,
  - the *degree reading* (as rich as Mitt Romney)
  - the *dimension reading* (rich in the same way as Mitt Romney)

What range of nouns and adjectives can appear in this construction?

- As long as the referent of the noun satisfies the adjective in a familiar way, this construction is available.
  - Common nouns must not have indefinite articles.
  - Certain definites and pronouns fail.

2. NP-modifiers

- All sorts of NPs can appear as a modifier of an adjective.
  - Proper Nouns
  (1) Mary is *Usain Bolt fast*.
  - Determinerless common nouns
  (2) Mary is *cheetah fast*.
  - Strong Definites (a la Schwarz 2009)
  (3) Mike is *the Prime Minister of Canada hot*. (c.f. Mike is *Prime Minister of Canada hot*.)
    - More Complex DPs
  (4) Her ID was suspicious, but not *three little boys in one big trenchcoat sneaking into an R-rated movie suspicious*.
- Similarly, all sorts of adjectives (Kennedy and Mcnally 2005) can appear with either meaning:
  - Even nonscalar adjectives :
  (5) Degree: *George Washington dead*
  (6) Dimension: *Tupac dead*
- What is critical is that this construction is **evaluative** (in the sense of Rett 2008) or **positive-entailing.**
  (7) *Mary is *Danny Devito tall*.

NOTE: not all Noun-Adjective compounds of this sort are evaluative, but those that are not have different meanings.
i.e. He's not short, but he's NBA Player short.
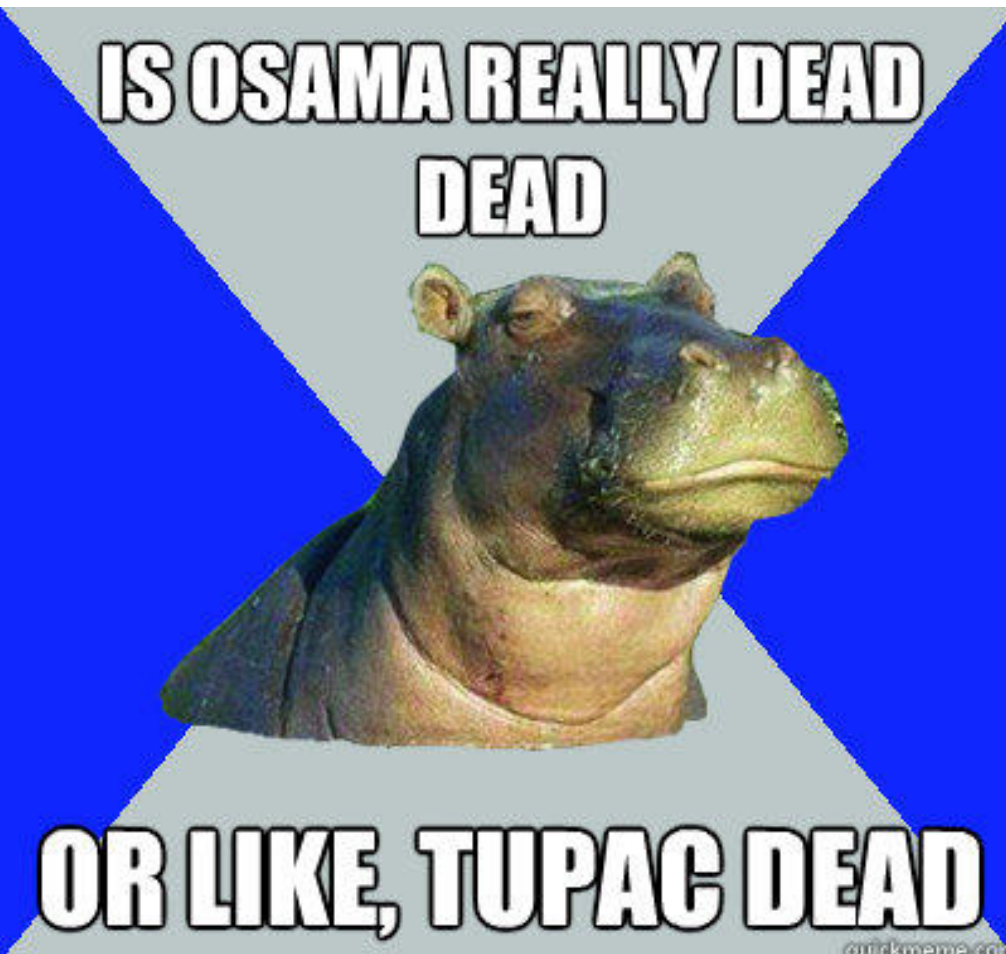
3. Degree Reading

The first reading has been studied more than the dimension reading, often on of the only readings for N+A compounds considered (as in *grass green, paper thin, snow white*. (Marchand 1960, Ebeling 1978, Bauer 2011)

Two constructions worth comparing this to are (irregular) measure phrases and equatives (Bhatt & Pancheva 2007, Rett 2008).

- Degree Reading≠Measure Phrase
  - Measure phrases similarly involve nouns that modify the degree of the adjective by appearing in an attributive position
  (8) The board is (a foot/two feet) long.
  (9) The foot-long board is ready to be cut.
  (10) The doorway is (a Yao Ming/two Yao Mings) tall.
  (11) *The foot-tall doorway is too small.
  - However, note that unlike the Degree NP-Modifier, this reading requires count morphology (a, two, etc.), unless the adjective is attributively modifying a noun.
  - Further, measure phrases are restricted to certain sets of adjectives, on a language specific basis. (Schwarzschild 2005)
  (12) *Mary is 27 MPH fast.
  (13) Mary is Usain Bolt fast.
  - The way an irregular measure phrase determines the salient dimension of the comparison individual is different.
    - A sculpture that is *a Yao Ming tall*, and *a Yao Ming wide* can be 7'6" in both dimensions.
    - A sculpture that is *Yao Ming tall* and *Yao Ming wide* has dimensions similar to Yao Ming standing up.
  - Finally, unlike measure phrases, Degree NP-modifiers allow indirect comparisons.
    - If Mary is a middle schooler:
  (14) Mary is Yao Ming tall. = Mary is tall for a middle schooler, like Yao Ming is for the NBA or people in general.
  (15) *Mary is *a Yao Ming tall*. can only mean *Mary is 7'6"*.

Typically it is considered synonymous with the equative.

- *Yao Ming tall* = as tall as Yao Ming

However, this equivalence isn't completely true.

- Compare with the equative:
  - Indirect equatives are allowed.
  (16) Mary is as tall for a middle schooler as Yao Ming is for a NBA player.
  - However, there seems to be a difference between the two constructions.
  (17) Steph Curry is not as good as Jordan, but he is definitely *Jordan good*.
  (18) # Steph Curry is not *Jordan good*, but he is as good as Jordan.
    - Imagine that Maya is 20 feet tall:
  (19) Is Maya as tall as Yao Ming?   Yes she's taller
  (20) Is Maya *Yao Ming tall*?   #Yes she's taller
  - This data demonstrates that the range of degrees quantified over by the equative and the degree NP-modifier are disjunct.
  - While equatives are evaluated imprecisely enough to allow values that are barely smaller than the comparison; NP-modifiers require a wider range.
  - This range seems to be based on the structure of the comparison class of the modifier.
  - '15-'16 *Steph Curry good* allows a wider range than *Barry Bonds good*.

Rank	Player	3P	Season	Tm
1.	Stephen Curry	402	2015-16	GSW
2.	Stephen Curry	286	2014-15	GSW
3.	Klay Thompson	276	2015-16	GSW
4.	Stephen Curry	272	2012-13	GSW

Rank	Player (age that year)	Home Runs	Year	Bats	HR Log
1.	Barry Bonds (36)	73	2001	L	HR Log
2.	Mark McGwire (34)	70	1998	R	HR Log
3.	Sammy Sosa (29)	66	1998	R	HR Log

4. Dimension NP-modifier

Sanders's ground game isn't quite Obama-good

The Dimension NP-Modifier references some property of the NP's Adj-ness.

- This applies even for prototypical monodimensional adjectives like *tall*.
  - Yao Ming and Andre the Giant are similar heights, but their body types are different: Yao Ming is skinny, Andre the Giant is broad. Presume we have an elephant and giraffe of the same height.
  (21) The elephant is *Andre the Giant tall*. The giraffe is *Yao Ming tall*.
  - Here, *Andre the Giant/Yao Ming tall* make reference to overall build, not just height.
  - However, these dimensions are available elsewhere, consider how we choose *the tall cup*.
  - Thus, it can be argued that these dimensions are inherent in the lexical meaning of the adjective.
- These readings must be doubly evaluative; i.e. if the elephant is not tall, it can be neither *Andre the Giant tall* or *not Andre the Giant tall*.
- Unlike the degree NP-modifier, this reading can be found below degree morphology.
  (22) @QueenDemetriax ended up more *Osama Bin Laden famous* than she had hoped.
  (23) Mary is more *Yao Ming tall* than Erin. (cannot mean closer to Yao Ming's height).
- This means, that Dimension NP-modifiers can stack under other NP-modifiers.
  (24) Tyler is *Andre the Giant tall*, but not *the elephant Andre the Giant tall*.
- Dimension NP-modifiers actually shift the scale to some other dimension, not just to similarity to NP's Adjness.
  (25) This new show is more *Dr. Who nerdy* than Dr. Who

5a. Null Operator (Degree)

- I sketch two null operators, one to handle each of these readings.
  - The degree NP-modifier needs to be able to handle two things
    - Indirect Comparison
    - Sensitivity to Comparison Class Structure
  - In order to get indirect comparison, I follow Bale (2008).
  (26) Esme is taller for a woman than Seymour is for a man.
    - Bale shows that comparison classes must be part of evaluating the scales, so that *Seymour is taller than Esme* doesn't deny this.
    - Esme's height=$\mu_{(\geq TALL \uparrow W)}(e)$ Seymour's height=$\mu_{(\geq TALL \uparrow M)}(s)$
    - Thus, these two scales must be translated to a **universal scale**, through some homomorphism $\mathbb{h}_{(\geq TALL \uparrow W/M)}$.
    - The semantics of degree NP-modifiers must be able to do the same.
    - However, Bale uses quasi-orderings to get the scales like $\geq TALL \uparrow W$.
      - Thus, order matters but distance does not.
    - If as suggested before Degree NP-modifiers have reference to the density of the comparison class, this is not enough.
      - The same can be shown for normal indirect comparatives.
      - Imagine, Esme is the tallest woman, but is just one inch above average, but Seymour is the second tallest man, 2 feet above average.
      - A distance insensitive theory of scales get the incorrect result that (26) is true in this case, or that (27) is always false.
  (27) The most beautiful woman is more beautiful for a woman than the most beautiful man is for a man.

- SKETCH OF OPERATOR FOR DEGREE NP-MODIFIERS

$$[[SIM]]=\lambda y.\lambda P_{<d,et>}.\lambda x.\forall z \in C_y[\ |\ \mathbb{h}_{(\geq P\uparrow C_y)}(x)-\ \mathbb{h}_{(\geq P\uparrow C_y)}(z)|\ >|\ \mathbb{h}_{(\geq P\uparrow C_y)}(x)-\ \mathbb{h}_{(\geq P\uparrow C_y)}(y)|\ ]$$

5b. Null Operator (Dimension)

- The Dimension NP-modifier requires a different null operator.
  - The type of this operator must be different, since it still has a degree argument.
  - The double evaluativity must be hardcoded in as a presupposition.
  - $\mathbb{D}(P)$ represents a set of dimensions that are part of P, i.e. breadth for tallness.
- SKETCH OF OPERATOR FOR DIMENSION NP-MODIFIERS

$$[[DIM]]=\lambda y.\lambda P_{<d,et>}.\ \lambda d.\lambda x:\ [[POS\ P]].\ \exists Q_{<d,et>}\in \mathbb{D}(P)[[[POS\ Q]_{C_y}(y)\wedge Q(x,d)]$$

"He's funny, but he's not Ben Carson funny."

Thanks to Karen Jesney, Barry Schein, Andrew Simpson, Maria Luisa Zubizarretta for comments on this project. Thanks to Peter Klecha, Betsy Pillion for helpful insight and suggestions. Special thanks to Roumyana Pancheva for unequable guidance and patience.

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For sources for data, go to dornsife.usc.edu/ohara/research