Degreefulness is the result of functional inventory, not a parameter [†]

M. Ryan Bochnak*, Margit Bowler**, Emily A. Hanink**, Andrew Koontz-Garboden**
*University of British Columbia, **University of Manchester
ryan.bochnak@ubc.ca, {margit.bowler,emily.hanink,andrewkg}@manchester.ac.uk

1. Introduction

Beck et al. (2009) propose the ***Degree Semantics Parameter*** (DSP), by which languages vary in the lexical semantics of their so-called *property concept (PC) lexemes*:[1]

- In +DSP languages (e.g., English), property concept lexemes **have** a degree argument.
- In –DSP languages (e.g., Motu), property concept lexemes **lack** any degree argument.

This binary distinction has been argued to correspond to different treatments of adjectives in particular.

- **+DSP setting** corresponds to degree-based analyses (following Cresswell 1976), whereby adjectives denote degree relations (or alternatively measure functions; Kennedy 1999):

(1) $[\![\text{tall}]\!] = \lambda d \lambda x.tall'(x, d)$ $\langle d,\langle e,t\rangle\rangle$

- **–DSP setting** corresponds to supervaluationalist analyses (Kamp 1975; Klein 1980), whereby adjectives denote contextually sensitive sets of individuals:

(2) $[\![\text{tall}]\!]^c = \lambda x.tall'(x)$ in c $\langle e,t\rangle$

The DSP thus predicts that certain degree constructions should cluster together in languages:

- +DSP ("degreeful") languages support grammatical comparatives, measure phrases, differential comparatives, degree questions, etc. (though see Beck et al. 2009 for a finer-grained typology).
- –DSP ("degreeless") languages do not.

This proposal has led to a blossoming of investigation of gradability and comparison in a range of less-studied languages, showing that while facts from some languages fit well into this binary +/–DSP division (e.g., Washo; isolate, USA; Bochnak 2015), others do not (see below).

Today's talk

We argue **against the DSP as a binary macro-parameter** on open class property concept lexemes, based on a range of crosslinguistic data.

Instead, we argue for the stronger universal that **property concept lexemes *never* introduce degrees in any language**.

Rather, **degrees are introduced by functional elements** themselves, e.g., comparative morphemes, measure phrases, gradable modifiers, etc.

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[1]Term from Thompson 1989. PC lexemes are adjectival in English but often verbal or nominal in other languages.

⇒ As noted by Beck et al. (2009: 30), inconsistent clustering of degree constructions within a given language is the type of evidence needed to falsify the existence of the DSP.

⇒ Many languages vary not only in the number and type of degree morphemes they grammaticalize, but also in the category restrictions they exhibit within degree constructions, both behaviors unexpected on Beck et al.'s 2009 binary DSP proposal.

Outline:

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§3 Degreefulness as the result of functional inventory

§4 Discussion and consequences

§5 Concluding remarks

2. The empirical landscape: Degrees of degreelessness

Recent cross-linguistic work on degree constructions has shown that languages vary:

1. In their inventory of degree morphology
2. In the sensitivity of their degree morphology to syntactic category

⇒ Both behaviors are unexpected under a binary +/–DSP view.

2.1. Variation in the clustering of degree constructions

Washo has been argued to be a **clear case of a -DSP language** (Bochnak 2015). It uses conjoined comparisons (3), and **lacks any other degree morphology** (e.g., measure phrases, equatives, degree adverbs). Conjoined comparisons are infelicitous in so-called crisp judgment contexts (see §3.2 below).

(3) *t'é:liwhu de-ʔil-káykay-iʔ k'-éʔ-i daʔmóʔmoʔ de-ʔil-káykay-iʔ-é:s*
man NMLZ-ATTR-tall-ATTR 3-COP-IND woman NMLZ-ATTR-tall-ATTR-NEG
k'-áʔ-a-š
3-COP-DEP-DS
'The man is tall, the woman is not tall.' (Washo; Bochnak 2015: 4)

Several other languages have also recently been argued to be degreeless, but nevertheless have **one or more putative degree morphemes**.

- Kunbarlang (Gunwinyguan; Australia; Kapitonov 2019) lacks all degree morphemes but has measure phrases (see the *Degree Phrase Parameter* of Beck et al. 2009).[2]

(4) *Nga-karrme* ***kaburrk la kaburrk djanga man-kukkarlyung*** *mayi kundulk.*
1SG.NF-getNP **two CONJ two foot III-long** NM.III tree
'I've got a four foot long stick.' (Kunbarlang; Kapitonov 2019: 7)

- Warlpiri (Pama-Nyungan; Australia; Bowler 2016) lacks all degree morphemes but has a degree demonstrative.[3]

(5) ***Kuja-kanjayi,*** *Japaljarri.*
like.this-KANJAYI Japaljarri
'Japaljarri is *this* tall.' (accompanied by gesture) (Warlpiri; Bowler field notes)

[2]The *Degree Phrase Parameter* is the highest parameter setting in Beck et al. 2009, entailing both the *Degree Semantics Parameter* and the *Degree Abstraction Parameter* as prerequisites, contrary to fact in Kunbarlang.

[3]Degree demonstratives are not discussed in Beck et al. 2009.

- More strikingly, Nez Perce (Penutian; USA; Deal and Hohaus 2019) has been argued to be degreeless, despite having a grammaticalized comparative morpheme (6), because it lacks certain degree constructions such as differential comparatives.

(6) *K hii-wes **qetu** kuhet S-kin'ix.*
K 3-is **MORE** tall S-from
'K is taller than S.' (Nez Perce; Deal and Hohaus 2019: 350)

- Even Motu (Austronesian; Papua New Guinea; Beck et al. 2009), the original motivation for the DSP, lacks many degree constructions but has an *exceed*-comparative that permits differential phrases; the availability of differential comparatives is widely considered to be the sine-qua-non of degreefulness (von Stechow 1984: 4; Deal and Hohaus 2019: 348-349).

(7) *Mary na **2cm** ai Frank ena lata e **hanaia**.*
M TOP 2cm by F his height 3 exceed
'Mary is 2 cm taller than Frank.' (Motu; Beck et al. 2009: 49)

- Finally, Fijian (Austronesian; Fiji; Pearson 2010, though see Hanink 2020) and ʔayʔaǰuθəm (Central Salish; Canada; Reisinger and Lo 2017, though see Davis and Mellesmoen 2019) have also been argued to fit into the +/–DSP dichotomy, even in the face of data that have been argued not to be fully consistent with the proposed setting.

> The emergent problem for the DSP is the inconsistent clustering of degree constructions.

2.2. Variation in degreefulness across category

Beyond the range of permissible degree constructions, other languages vary according to **which grammatical categories may combine with degree morphology**.

- Both Tswefap (Bantu; Cameroon; Clem 2019) and Tlingit (Na-Dene; USA and Canada; Cable 2018) have splits in their property concept lexeme inventory, with some PC lexemes that are adjectives and others that are verbs.
- In both languages, only gradable verbs interact with degree morphology, while adjectives do not:

Tswefap (Clem 2019: 294-295):

(8) *Comparatives*[4]

a. ***Sesege** (n-)tchege (mbeh wohloh) mi a tseuk nkumnkum.*
tall CNS-pass everyone person FACT eat fufu
Intended: 'The taller/tallest person ate fufu.' **Adjective*

b. *Chimi a **seh** n-tchege mbeh wohloh*
Chimi FACT **be.tall** CNS-pass everyone
'Chimi is the tallest [=taller than everyone].' *✓Verb*

(9) *Measure phrases*

a. ***Sesege** meyteh pege mi a tseuk nkumnkum*
tall meter two person FACT eat fufu
Intended: 'The two meter tall person ate fufu.' **Adjective*

b. *Mi yi **seh** meyteh pege a le tseuk nkumnkum*
person REL **be.tall** meter two REL ASP eat fufu
'The person that is two meters tall ate fufu.' *✓Verb*

[4] Adjectives in Tswefap may only appear in attributive position.

Tlingit (Leer 1991; Cable 2018)

- Closed class of 'adjectives' (e.g., *tlein* 'big', *yées* 'new') only occur in attributive position and may not occur with gradable modifiers, e.g., *yáanáx̲* 'more than'.
- Only gradable verbs can combine with degree morphology, as in (10) (Cable 2018: 316):

(10) ***A yáanax̲*** *áwé yak'éi* *yáat'aa*
3.O.more.than FOC 0CL.good this.one
'This one is better than that one.' ✓ *Verb*

The DSP as formulated by Beck et al. (2009) does not account for categorial differences in degreefulness like in Tswefap and Tlingit.

If a language is +DSP, there is no straightforward way to explain why degreefulness should be limited to one category of property concept lexemes.

The emerging picture is therefore one of a range of languages displaying mixed behavior with respect to their 'degree of degreelessness', both in clustering and category.

In our view, this observed variation casts strong doubt on the status of degreelessness as a binary macro-parameter: The use of any single degree construction should imply a +DSP setting.

However, if a single degree construction requires a +DSP setting, this makes virtually all attested –DSP languages disappear: only Washo remains.

This shoehorns what is in fact a large range of crosslinguistic variation in the extent to which languages show degreeful behavior.

3. Degreefulness is functional

We saw above that the proposed DSP faces challenges both from the number of degree morphemes in a given language as well as the sensitivity of degree morphemes to syntactic category.

We propose that degrees are never introduced by PC lexemes themselves, but rather by functional degree morphology.

Languages then vary not in whether property concept lexemes have a degree argument as part of their lexical semantics, but in the number of degree morphemes grammaticalized, ranging from many (e.g., English), few (e.g., Nez Perce), to even none (e.g., Washo).

Formally, this analysis is consistent with a wide range of compositional and ontological analyses.

Here we follow (the spirit of) Parsons (1990); Wellwood (2015, 2019), and others in giving a Davidsonian analysis to property concept lexemes. We propose that crosslinguistically, property concept lexemes denote relations between individuals and states:[5]

(11) $[\![\text{tall}]\!] = \lambda x \lambda s.holder(s, x)\ \&\ tall'(s)$ $\langle e,\langle v,t\rangle\rangle$

[5] We treat states as being of type *v*.

We assume the domain of states is ordered mereologically (Champollion 2017: Chapter 2). It is also ordered by a second "size ordering", as in Francez and Koontz-Garboden (2017: 39), a formalization of what is called "intensity" elsewhere in the literature (see Tovena 2001, Baglini 2015, and Wellwood 2019: Chapter 2). The idea that states can be more or less intense than one another is what is responsible for gradability.

We assume, following Wellwood (2019: Chapter 4), that **states of individuals can be measured**, so that **the measure (μ) of a state returns a degree on a scale**. Introduction of measures of states lets us model degree constructions.

To us, the clearest argument that states alone cannot capture all gradable behavior comes from differential comparatives:

(12) Kim is five feet taller than Sandy.

There will be no way of measuring the difference between Kim's state of tallness and Sandy's with states alone; for this, we require measures on states, i.e., degrees. (cf. Wellwood's (2019: 81) argument from equatives for the same conclusion).

Central to our proposal is that such measures on states are not included in the denotations of property concept lexemes, but rather are introduced by functional morphosyntax.

We briefly illustrate how this works compositionally for **measure phrases** and **phrasal comparatives**.

- **Measure phrases** in English or Kunbarlang (e.g. *four feet*, see (4), (13)) take a property concept lexeme like *tall*, and return a relation between individuals and states such that the individuals hold a state measuring at least the measure introduced by the measure phrase.

(13) a. Kim is four feet tall.
b. $[\![\text{four feet}]\!] = \lambda P_{\langle e\langle vt\rangle\rangle}\lambda x\lambda s.P(x,s)\ \&\ \mu(s) \geq 4ft$ $\langle\langle e,\langle v,t\rangle\rangle,\langle e,\langle v,t\rangle\rangle\rangle$
c. [[Kim is four feet tall]] = 1 iff $\exists s[holder(K,s)\ \&\ tall(s)\ \&\ \mu(s) \geq 4ft]$

- **Phrasal comparatives** as in Nez Perce take a property concept lexeme as an argument, and compare the measures of the states ($\mu(s)$) held by two different individuals.

  We give a denotation for phrasal *-er* in (14b); the truth conditions for the Nez Perce comparative in (14a) is given in (14c).

(14) a. *K hii-wes* ***qetu*** *kuhet S-kin'ix.*
K 3-is **MORE** tall S-from
'K is taller than S.' (Nez Perce; Deal and Hohaus 2019: 350)
b. $[\![\text{–er}_{phrasal}]\!] = \lambda P_{\langle e\langle vt\rangle\rangle}\lambda x\lambda y.\exists s,s'[P(x,s)\ \&\ P(y,s')\ \&\ \mu(s') > \mu(s)]$ $\langle\langle e,\langle v,t\rangle\rangle,\langle e,\langle e,t\rangle\rangle\rangle$
c. [[(14a)]] = 1 iff $\exists s,s'[holder(S,s)\ \&\ tall'(s)\ \&\ holder(K,s')\ \&\ tall'(s')\ \&\ \mu(s') > \mu(s)]$

- **Other degree morphemes** can be analyzed in a similar way (e.g., clausal comparatives, differential comparatives, equatives, . . .).

In sum:
Degree semantics is introduced by a measure on states $\mu(s)$, which comes from the functional degree elements, not PC lexemes themselves.

3.1. The positive form

The backbone of theories of gradable predicates is built on the semantics of the positive (unmodified) form, e.g., (15):

(15) The mouse is big.

For (15) to be true, the inference needs to be derived that the mouse "stands out" as big relative to some background context of other, presumably small, things (aka: evaluative inference).

Our semantics for PC lexemes in (11) does not have a context-sensitive positive semantics hardwired in:

(16) $[\![\text{P}]\!] = \lambda s \lambda x . P'(x, s)$

This gives the welcome result that not all degree constructions result in an inference to the positive form (i.e., *Kim is four feet tall* does not entail that Kim is tall; *Kim is taller than Mary* does not entail that Kim is tall).

Our analysis is compatible with different approaches to positive degree constructions:

Option 1: Degreeful POS operator

- Positive degree inferences are tied to a degree semantics introduced by null functional morphology (POS, as standard in the degree literature since Cresswell 1976):

(17) $[\![\text{POS}]\!]^c = \lambda P_{\langle e\langle vt\rangle\rangle} \lambda x . \exists s [P(x, s) \ \& \ \mu(s) \geq standard_c(P)]$

(18) a. Kim is tall.
b. $[\![\text{POS(tall)}]\!]^c = \lambda x . \exists s [holder(x, s) \ \& \ tall'(s) \ \& \ \mu(s) \geq standard_c(tall)]$
c. $[\![\text{Kim is POS(tall)}]\!]^c = 1$ iff $\exists s [holder(K, s) \ \& \ tall'(s) \ \& \ \mu(s) \geq standard_c(tall)]$

- On this option, positive degree inferences are tied to a degree semantics and functional morphology, consistent with our claims about the introduction of degrees.

Option 2: Degreeless

- Positive degree inferences do not rely on an abstract morpheme with degree semantics and arise through pragmatic strengthening (Rett 2015); contextual restriction of existential quantification over the domain of states (cf. Francez and Koontz-Garboden 2017: Chapter 3); or in some other way not inherently tied to degrees.

(19) $[\![\exists \text{ tall}]\!]^c = \lambda x . \exists^D s [holder(x, s) \ \& \ tall'(s)]$
(where D is a contextual domain restriction to "tall enough" states)

(20) a. Kim is tall.
b. $[\![\text{Kim is } \exists \text{ tall}]\!]^c = 1$ iff $\exists^D s [holder(K, s) \ \& \ tall'(s)]$

- On this option, positive inferences may not be tied to degrees at all, so our claim does not bear on them.

- We don't commit here to what the proper treatment of positive constructions should be, but note that our analysis is compatible with both of these options.

Question for future research: Could there be genuine cross-linguistic variation in the choice between Option 1 and Option 2? How could this be detected?

3.2. Crisp judgments

Crisp judgment contexts are contexts in which the items being compared are very similar in measurement; the acceptability of a comparative in crisp judgment contexts has been taken to diagnose degreefulness, requiring a strict ordering between degrees:

(21) Context: Mary is 5'7" and Ruth is 5'7$\frac{1}{4}$".

a. ✓ Ruth is taller than Mary. *Explicit comparative*

b. # Compared to Mary, Ruth is tall. *Implicit comparative*

(22) *Similarity Constraint (Kennedy 2011)*:
"When objects *x* and *y* differ to only a very small degree in the property that a vague predicate *g* is used to express, we are unable or unwilling to judge the proposition that *x is g* true and that *y is g* false."

Implicit comparatives based on positive predications (e.g., conjoined comparatives) have been observed to be infelicitous in crisp judgment contexts:

(23) Context: There are two pinecones. One is slightly bigger than the other.

a. *#wíːdiʔ behéziŋ-aʔ-š lák'aʔ wíːdiʔ t'-íːyel-iʔ*
this small-DEP-SR one this NMLZ-big-ATTR
Literally: 'This one is small, this one is big.' (Washo)

This is explained (Bochnak 2013, 2015) by the *Similarity Contraint* on vague predicates (Graff 2000; Kennedy 2007b, 2011); in a crisp judgment context, speakers will not simultaneously accept the truth of both positive, vague predicates (22).

However, implicit comparatives can be felicitous in crisp judgment contexts if the context is narrowed to the two items being compared (Kennedy 2007b; Bowler 2020 for Warlpiri).

This is due to the *Informativity Constraint* on vague predicates:

(24) *Informativity Constraint (Kennedy 2011):*
"Both the positive and negative extension of a vague predicate [must] be non-empty (such predicates are not useful if there are not things that they are true of and things that they are false of)."

Bowler (2020): Definiteness is covert in Warlpiri, and its property concepts are nouns. Property concepts can be interpreted definitely in conjoined comparatives, in which case only the two items being compared are in the positive/negative extensions of the predicates.

This is accomplished with a degreeless, Kleinian semantics for Warlpiri property concepts.

(25) Context: One tree is slightly taller than another tree.

a. *Nyampu watiya wirijarlu, wita nyampu=ju.*
this tree big small this=TOP
Literally: 'This tree is the big one, this one is the small one.' (Warlpiri; Bowler 2020)

b. $[\![(25a)]\!]^c = 1$ iff this tree$_1$ = $\iota x[x$ is big in $c]$ & this tree$_2$ = $\iota y[y$ is small in $c]$

Based on data like (25), we propose that the availability of a comparative in a crisp judgment context is not indicative of degreefulness: such data can be accounted for without reference to degrees.

Conversely, the unavailability of a comparative in a crisp judgment context suggests degreelessness (though this does depend on the semantics assumed/motivated for the positive degree construction).

For languages with comparative morphology encoding a strictly-greater-than ordering relation on measures of states (e.g., English *-er/more*; (21a)), we predict crisp judgments to be possible. This is indeed the case in English.

Note that although Deal and Hohaus (2019) present a degree-free analysis of Nez Perce crisp judgment comparatives with *qetu*, on our analysis, Nez Perce is no longer a challenging case for the DSP: Languages can have an explicit comparative supporting crisp judgments without having other degree phrases (e.g., *five feet*), which would allow measure phrases or differential comparatives.

3.3. Typology

We have argued that, contrary to Beck et al. (2009)'s DSP, languages vary individually in the degree morphemes that they grammaticalize: The availability of any one degree construction doesn't tell you anything about any other construction.

What kind of implicational relations between degree morphology does our analysis predict?

At this stage of the project, perhaps none, but it doesn't follow that there are not other factors impacting on the morphosyntactic typology of gradable expressions in ways that lead to implicational hierarchies.

For example, there do exist robust implicational hierarchies with degree expressions, e.g.,

- Bobaljik's 2012 *Containment Hypothesis*, from which it follows that the superlative form of adjectives universally contains the comparative form, ruling out *ABA suppletion patterns
- Grano & Davis's 2018 *Pos-Comp Generalization*, which has it that the comparative form of a gradable adjective is universally derived from or identical to its positive form (see also Klein 1980; Grano 2012; Rett 2015).

We argue here only against those predicted by the DSP, falsified by data like those above.

Any attested implications may be driven by various factors, e.g., semantic, morphosyntactic, or diachronic (which we do not address here in any detail).

The existence and nature of other implicational relationships is an empirical question that is an exciting avenue for future research at the interfaces of gradable expressions.

4. Discussion and consequences

In doing away with the macro-parametric DSP in this way, our analysis gives rise to several welcome consequences.

1. **We account for the range of languages that grammaticalize one or few degree morphemes.**

   Languages can develop some degree morphemes without grammaticalizing an entire degree system (e.g., Kunbarlang, Motu, Nez Perce).

   As evidenced by the literature discussed above, where otherwise –DSP languages with some degree morphology are still treated as –DSP, there is an uncomfortable gap that languages fall into on the binary DSP analysis. Our analysis makes such languages unexceptional.

2. **We account for languages where only a subset of property concept lexemes interact with degree morphology.**

   Such languages are Tswefap and Tlingit, in which only gradable verbs interact with degree morphology, while adjectives do not.

   This behavior is unexpected under a macro-parametric DSP theory. The DSP could be relativized to category, as Clem (2019) suggests, but this undoes its status as a macro-parameter, which we believe begs the question what is really going on.

   By contrast, such facts fit comfortably in our analysis: the functional degree morphology controlling degree behavior in these cases is simply picky about the syntactic categories it selects for.

   Such behavior is not exotic, but morphosyntactically pedestrian.

3. **We make sensible predictions about language change with respect to degrees.**

   Changing from being a degreeless language to degreeful language (as in e.g. Samoan; Hohaus 2018) no longer requires a wholesale semantic reanalysis of a large swath of open class vocabulary.

   Instead, it comes as a consequence of reasonably well-understood processes of grammaticalization, such as a bleaching and semantic change of functional vocabulary, e.g., a directional particle to an explicit comparative marker, as has happened in Samoan (Hohaus 2018: 117–118).

4. **We make sensible predictions about first language acquisition of degrees.**

   Hohaus et al. (2014) observe that children start out as –DSP and only move to +DSP as they acquire their first language.

   Under our analysis, this change is captured through the gradual acquisition of functional vocabulary, rather than a reanalysis of property concept lexemes.

   This strikes us as more plausible: rather than learning the open class property concept lexemes as degreeless, and then *relearning* them with a degree semantics, the child learns them once—as degreeless. If the language has the relevant functional vocabulary, it is learned, and degrees thereby introduced. If the language does not, degrees are never introduced.

5. **Our analysis is in principle compatible with those that aim to remove degrees from the semantic ontology (e.g., Doetjes et al. 2009; van Rooij 2011).**

   Insofar as the semantics of comparison, measure phrases, etc., can be implemented without degrees, then functional morphemes also need not introduce them.

   We continue to believe, nevertheless, that some constructions, e.g., differential comparatives as discussed above, would likely still need a degree semantics in languages having such a construction.

In short, our high-level claim is agnostic on which particular constructions ultimately require degrees, our point being simply that for those that do, they are introduced not in the lexical semantics of property concept lexemes, but rather by functional vocabulary.

6. **Notwithstanding 5, assuming orthodoxy and degrees where they are generally assumed, the finer details of our analysis can be generalized to the problem of degrees across categories, highlighted by Wellwood (2015, 2019).**

   Although the details must wait for the future, a sketch is as follows. On our analysis, degrees are always and only introduced by functional degree morphology, of the kind we see across nominal, verbal, and adjectival categories, at least in English.

   Assuming, for example, that the role of *much* in English is purely syntactic (see Corver 1997), then with minor type theoretic tweaks, the degree morphology observed across categories (e.g. the comparative, intensifier, etc.) can introduce degrees across categories.

   The lynchpin in the analysis is the assumption, inspired by Wellwood, that what such morphology requires is not a degreeful lexical semantics of the open class lexical item (noun, adjective, verb), but rather an ordered domain, something shared by plurals, mass nouns, adjectives and verbs (assuming the domain of eventualities is ordered mereologically, like the domain of masses and pluralities), to the exclusion of the domains of singular count nouns.

7. **Our analysis provides an explanation for why effects of the scalar typology can still be observed in degreeless languages like Washo, as documented by Bochnak (2015).**

   Bochnak (2015: 14) observes that minimum and maximum standard predicates are infelicitous in Washo antonymic comparatives, e.g., minimum standard *bent* in (26):

   (26) *#wí:di? ʔil-k'únk'un-iʔ-i* *wí:di? ʔil-k'únk'un-iʔ-é:s-a-š*
   this ATTR-bent-ATTR-IND this ATTR-bent-ATTR-NEG-DEP-DS
   'This one is bent, that one is not bent.' (Bochnak 2015: 14)
   (Context: There are two rods, A and B, and B is more bent than A.)

   This is expected if predicates like *ʔil-k'únk'un-iʔ-i* 'bent' have a closed scale, as in English (Kennedy 2007a).

   This raises questions if Washo is degreeless, however, since the infelicity is tied to scalar properties of the predicate, and since scales have traditionally been tied to degrees (Kennedy and McNally 2005).

   On our analysis, though, scalar effects can be separated from degrees: scalarity can come from the ordering on states, with the idea that e.g., some kinds of states have an upper-bound or lower bound state in the their size-order (closed-scale predicates) while others (open-scale predicates) do not.

   In this way, we can have the scalar typology arise from the lexical semantics of predicates in a degreeless language like Washo but without degrees.

5. Concluding remarks

In sum, we propose that the actual observed variation in degreefulness is explained if degrees are introduced by functional morphology, rather than by property concept lexemes themselves.

What would falsify our claim? If languages were to group themselves into two clear groups: those with robust degree morphology and behavior and those without. The empirical record that has developed over the last decade since Beck et al.'s original proposal is not consistent with that state of affairs.

A conceptual advantage of our proposal is that we no longer require a semantic parameter over open-class lexical items; rather, we offer a universal semantics for PC lexemes cross-linguistically with variation located solely in the functional lexicon, in line with other proposals on the nature of cross-linguistic variation (cf. Borer 1984; Chomsky 1995; Matthewson 2001).

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