

Gradable abstract nouns and eventualities

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Outline and main goal

- Summarise previously observed distributional similarities/differences between Gradable Adjectives (GAs) and related Gradable abstract Nouns (GNs)
- both allow temporal and degree modification, some GNs have e.g., more non-positive readings
- Identify two classes of these abstract GNs: DISPOSITIONAL (bravery) vs. NON-DISPOSITIONAL (beauty)

Main Goal

- Account for the distributional differences between GAs and GNs, as well as between dispositional and nondispositional GNs
- Proposal: GAs and GNs share a common semantic core: a measure function on STATES
- Type distinction between GAs $(\langle s, \langle d, \langle v_s, \langle e, t \rangle \rangle \rangle)$ and GNs $(\langle s, \langle d, \langle v_s, t \rangle \rangle)$
- Proposal: DISPOSITIONAL GNs (bravery) make available a set of eventualities that manifest the relevant STATE, NON-DISPOSITIONAL GNs (beauty) do not

Introduction: Abstract nouns related to gradable adjectives

• The morphologically simpler form can be nominal or adjectival

Property	English Adj		English N	Finnish Adj		Finnish N	German Adj		German N
BEAUTY	beautiful	\leftarrow	beauty	kaunis	\rightarrow	kauneus	schön	\rightarrow	Schönheit
COURAGE/	courageous	\leftarrow	courage	rohkea	\rightarrow	rohkeus	mutig	\leftarrow	Mut
BRAVERY	brave	\rightarrow	bravery				tapfer	\rightarrow	Tapferkeit
GUILT	guilty	\leftarrow	guilt	syyllinen	\rightarrow	syyllisyys	schuldig	\leftarrow	Schuld
HONESTY	honest	\rightarrow	honesty	rehellinen	\rightarrow	rehellisyys	erhlich	\rightarrow	Erhlichkeit
WISDOM	wise	\rightarrow	wisdom	viisas	\rightarrow	viisaus	weise	\rightarrow	Weisheit

Table 1: Adjective-Noun (Adj-N) pairs in English, Finnish and German. Arrows indicate derivational dependencies, 'is derived from', such that $a \leftarrow b$ means that a is morphologically derived from b.

Some Parallels

- Degree modification (e.g., Nicolas 2010; Doetjes 1997):
- a. more/equal/considerable bravery b. more/equally/considerably brave
- Spatiotemporal modification (e.g., Zato 2020):
- a. Alex's bravery in court yesterday b. Alex was brave yesterday in court.

Some Differences

- Quantification: a lot of bravery (primarily, a measure reading) vs. was brave a lot (no measure reading, only multiple instantiations, see e.g., Wellwood 2016)
- Nominals admit of more, and more natural non-positive readings: Alex's bravery is lacking Alex is brave?in a lacking way (see e.g., Wellwood 2014)

Data: Two types of gradable adjective related abstract nouns – beauty vs. bravery

- Both are stative
- a. ?Alex's three minute/year long bravery
 - b. ?The garden's/Fido's three minute/year long beauty
 - c. Alex's three minute long speech/four hour long party
- (4) a. Alex's constant/ever-present bravery
 - b. The garden's/Alex's constant/ever-present beauty
 - c. ?Alex's constant/ever-present speech/party
- Spatiotemporal location: Relatively unrestricted for bravery. More restricted for beauty, the referent must be reasonably conceived of as undergoing a change of state across salient times/places
- a. Alex's bravery yesterday/on the battlefield was noteworthy
 - The garden's beauty last winter was noteworthy
 - (ii) ?Alex's beauty last year/in Greece was noteworthy
- bravery but not beauty of an agent can be exemplified straightforwardly in terms of acts/actions
- a. Those (three) acts/actions showed Alex's bravery b. ?Those (three) acts/actions showed Alex's beauty

Claim:

- Bravery needs one at least to be disposed to act in a certain way (to perform acts of bravery)
- Beauty does not require any actions/dispositions to act (whilst in that state)

Nouns that pattern with bravery: courage, honesty Nouns that pattern with beauty: anger, guilt, happiness

DISPOSITIONAL GNS NON-DISPOSITIONAL GNS

Background: Gradable adjectives and predication over states

- Anderson and Morzycki 2015:
- A two-place relation between STATES and individuals e.g.: [beautiful] $\langle e, \langle v, t \rangle \rangle = \lambda x. \lambda s. beautiful(s, x)$
- Wellwood 2016, 2014; Zato 2020 (see also Baglini 2015; Husband 2010):
- Even simple predication with gradable adjectives (Ann was happy) involves predication over states — One-place predicate of STATES e.g.: [beautiful] $_{\langle v,t \rangle} = \lambda s. beautiful(s)$

Addressing a possible worry about i-level predicates

- Predicative uses of brave and beautiful are i-level (Carlson 1977, e.g., #There are firemen brave/beautiful)
- Is this evidence that their semantics do not contain a Davidsonian eventuality/spatiotemporal variable (e.g., Kratzer 1995; Diesing 1992)? • However Condoravdi (1992) and McNally (1994): what differentiates i- and s-level predicates are temporal persistence inferences
- Even one of Kratzer's (1995) tests classifies schön ('beautiful', German) as having an eventuality argument as shown by availability of reading (7b):
- weil diesen Sommer fast alle Gärten schön waren.
 - since this summer almost all gardens beautiful were ...since almost all of this summer's gardens were beautiful (some of the gardens (that we saw) this summer were not beautiful).
 - ...since almost all of the gardens were beautiful this summer (a different proportion (of the same gardens) may have been beautiful in previous

Background: Abstract nouns that denote eventualities

- Non-gradable abstract nouns such as belief, statement have also been argued to express properties of eventualities (e.g., STATES, PROCESSES or EVENTS)
- Grimm 2014 e.g., psych nouns can denote the experiencer state or the stimulus
- Elliott 2020: nouns such as explanation expresses a root property of events. Thematic roles are introduced in the syntax via functional heads
- —Sutton 2022; Sutton and Filip 2020 nouns such as statement and belief have an eventuality denoting sense (but are polysemous, so also have an informational entity-denoting sense)
- Zato 2020 uses elements of Anderson and Morzycki's account to derive the semantics of nominals from the semantics of gradable adjectives. Predicts semantic equivalence of e.g. bello ('beautiful') and belleza ('beauty) in some constructions (la bellaza de Juan and Juan (es) bello)

Analysis outline

- 1. GAs and related GNs (bravery, beauty) distinguished from other abstract nouns that can denote states (knowledge, opinion) by the presence of a degree-based measure function on STATES for the former (cf. Zato 2020)
- This measure function is a common root between GAs and related GNs
- 2. GAs and GNs differ in semantic type This is used to block POS for GNs:
 - GAs: relation between degrees, STATES and a property of individuals (cf. Husband 2010)
 - GNs: relation between degrees and a property of STATES
 - Main idea: After ∃-closing, applying POS etc., GAs are fundamentally properties of individuals GNs are fundamentally properties of STATES
- 3. Dispositional vs. non-dispositional GNs: Only dispositional STATES (states that are dispositions to act in a certain way vs. states of being a certain way) are related via a *Manif* estation relation to a set of actions
 - This set of acts can be targeted by spatiotemporal expressions (e.g., bravery in court yesterday)

Analysis

Measure functions on states

- Shared root of gradable adjectives and related nominals is relation formed from a measure function on states
- Roughly the kind of measure function assumed by Husband's (2010) analysis of GAs
- (8) $\sqrt{P} = \lambda w. \lambda d. \lambda s. \mu_P(w, s) \succeq d : \langle s, \langle d, \langle v_s, t \rangle \rangle \rangle$
 - A measure function of states, s, wrt a world, w st $\mu_P(w,s) \succeq d$ says that s measures at least degree d wrt property P in w
- (9) [beautiful] $\langle s, \langle d, \langle v_s, \langle e, t \rangle \rangle \rangle \rangle = \lambda w. \lambda d. \lambda s. \lambda x. \mu_{\text{BEAUT}}(w, s) \succeq d \wedge Th(s, x)$
- $\llbracket \mathsf{beauty} \rrbracket_{\langle s, \langle d, \langle v_s, t \rangle \rangle \rangle} = \lambda w. \lambda d. \lambda s. \mu_{\text{\tiny BEAUT}}(w, s) \succeq d$

POS only for GAs, not for GNs

- POS defined for GA type $\langle s, \langle d, \langle v_s, \langle e, t \rangle \rangle \rangle$, not for GN type $\langle s, \langle d, \langle v_s, t \rangle \rangle \rangle$
- (11) $[POS]([(be) beautiful]_{\langle s, \langle d, \langle e, t \rangle \rangle \rangle}) = \lambda w. \lambda x. \exists s. \mu_{BEAUT}(w, s) \succeq std_{\mu_{BEUT}} \land Th(s, x)$

Gradable nominals undergo \exists -closure of d instead \Rightarrow non-positive readings

(12) a. $[Alex's_{theme}] = \lambda \mathfrak{P}_{\langle s, \langle v, t \rangle \rangle} . \lambda w. \iota s. \mathfrak{P}(w)(s) \wedge Th(s, alex)$ (Approx. Event Identification in Kratzer 1996)

b. $[Alex's beauty] = [Alex's]([\exists-Cl]([beauty])) = \lambda w.\iota s.\exists d.\mu_{BEAUT}(w,s) \succeq d \land Th(s,alex)$

Dispositional vs. Non-dispositional Nominals

- A sortal distinction between STATES
- STATES which are manifested by acts: eventualities that are not parts of that STATES
- STATES which are not manifested by acts/actions
- (13) $\lambda s. \lambda e_{:\neg e \sqsubseteq s}. Manif(s, e) := for STATES, s$, the set of eventualities that manifest s (or some part(s) of s), but are not themselves an improper part of s

Options for analysing dispositional state GNs:

- 1. Polysemy: a STATE reading and an eventuality reading
- Problem: There is no eventive countable sense: a bravery \neq 'an act of bravery'
- 2. *Manif* is encoded in verbal predicates such as *shows*
- Problem: what about Alex's bravery yesterday was notable?
- 3. Associated events in the lexicon (similar to associated reading events for book in Pustejovsky 1995)
- \bullet E.g., the constitutive (CONST) qualia attribute: what constitutes s, accessible via a routinised coercion
- (14) a. $[\text{bravery}]_{\langle s, \langle d, \langle v_s, t \rangle \rangle} = \langle \lambda w. \lambda d. \lambda s. \mu_{\text{BRAV}}(w, s) \succeq d, \text{ CONST} = \lambda e. \textit{Manif}(s, e) \rangle$
 - b. [bravery yesterday] $\langle s, \langle d, \langle v_s, t \rangle \rangle \rangle = \langle \lambda w. \lambda d. \lambda s. \exists e. \mu_{\text{BRAV}}(w, s) \succeq d \land \textit{Manif}(s, e) \land \tau(e) = \text{yesterday},$ $ext{CONST} = \lambda e. extit{Manif(s, e)}
 angle$
- bravery yesterday analysed as a routinised coercion: the state of being brave that was manifested by certain actions/events yesterday

Summary

- A type distinction between gradable adjectives and related nouns, but derived from a common measure based root, and both have a degree argument, both are stative
- Accounts for why degree modifiers are applicable to both
- Can also be used to block POS applying to nominal predicates
- A distinction between gradable abstract nouns: dispositional and non-dispositional
- Proposal: Only dispositional GNs have an associated set of eventualities/actions that make the state manifest — Used as a 'hook' for constructions such as *showed bravery* and *bravery yesterday*

Discussion of other accounts

Tropes (e.g., Moltmann 2004, 2013, 2004; Nicolas 2010; Maienborn 2020)

- GAs and GN analysed in terms of tropes (particular instantiations of properties).
- Moltmann argues against a STATE-based analysis:
- (15) a. John saw the beauty of the rock formation. b??John saw (the state of) the rock formation being beautiful.
 - (Moltmann 2013, p. 51)
- not clear that the state of maps to the technical term STATE, and not clear that this test is decisive: (BNC)
- (16) a. I [...] immediately felt ashamed that I'd let them see my fear.
 - b. [their] sole purpose as Chanel's ambassadors is to be seen (and documented) being
- (enTenTen21) beautiful • A STATE-based account also offers unification with other eventuality-denoting abstract nouns (e.g., party,

statement) Wellwood's (2016) use of 'covert eventisers'

- Welwood uses a Kratzerian 'covert eventiser' mapping to derive pluralities of atomic events from states for some GA constructions
- Not suitable for dispositional GNs, since this would predict an unattested countable reading

Selected References

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