



# Scalar and non-scalar equatives in Turkish across categories

## 1 Equatives in English

- (1) a. *Anna is as tall / intelligent as Berta.*
- b. *Anna's dress is like Berta's.*
- c. *Anna is runs like Berta runs..*
- d. *Anna cooked as much soup as Berta did.*<sup>4</sup>
- e. *Anna ran as much as Berta did.*
- f. *Anna is tall, like Berta.* (coordination)

English	adjectival	nominal	verbal
scalar	<i>as – as</i>	<i>as much as</i>	<i>as much as</i>
non-scalar	<i>like</i>	<i>like</i>	<i>like</i>
	coordination <i>like</i>		

<sup>4</sup> see Solt (2015), Wellwood (2015)

## 2 Equatives in German

- (2) a. *Anna ist so groß / intelligent wie Berta.* (=1a)
- b. *Annas Kleid ist so wie Bertas.* (=1b)
- c. *Anna rennt so wie Berta.* (=1c)
- d. *Anna kochte so viel Suppe wie Berta.* (=1d)
- e. *Anna rannte so viel wie Berta.* (=1e)
- f. *Anna ist so ein Fußballfan wie Berta.* (rare)
- 'Anna is as much of a football fan as Berta is.'
- g. *Anna rannte so wie Berta.* (rare)
- 'Anna ran as fast as Berta did.'
- h. *Anna ist groß, wie Berta.* (coordination) (=1f)

German	adjectival	nominal	verbal
scalar	<i>so – wie</i>	<i>so – wie</i>	<i>so – wie</i>
non-scalar	<i>wie</i>	<i>so – wie</i>	<i>so – wie</i>
	coordination <i>wie</i>		

## 3 Equatives in Turkish

- (3) a. *Anna Berta kadar zeki.*  
A. B. kadar intelligent.Cop3sg  
'Anna is as intelligent as Berta.'  
(same degree of intelligence)
- b. *Anna Berta gibi zeki.*  
A. B. gibi intelligent.Cop3sg  
'Anna is intelligent like Berta.'  
(similar in the way of being intelligent)
- (4) a. *Anna'nın elbisesi Berta'nın-ki kadar.*  
A.-Gen dress.Poss3sg B.-Gen-Rel kadar.Cop.3sg  
'Anna's dress is as \_\_\_\_\_ as Berta's.'  
(e.g., same length or price)
- b. *Anna'nın elbisesi Berta'nın-ki gibi.*  
A.-Gen skirt.Poss3sg B.-Gen-Rel gibi.Cop.3sg  
'Anna's dress is like Berta's.'  
(e.g., similar w.r.t. design & color & fabric)
- (5) a. *Anna Berta kadar koşuyor.*  
A. B. kadar run.3sg.Prog  
'Anna runs as \_\_\_\_\_ as Berta.'  
(e.g. duration or frequency or performance)
- b. *Anna Berta gibi koşuyor.*  
A. B. gibi run.3sg.Prog  
'Anna runs like Berta.'  
(e.g.similar w.r.t. style, with extra weights, bare-foot)

Turkish	adjectival	nominal	verbal
scalar	<i>kadar</i>	<i>kadar</i>	<i>kadar</i>
non-scalar	<i>gibi</i>	<i>gibi</i>	<i>gibi</i>
	coordination <i>gibi</i>		

## 4 Findings

Turkish equatives occur with two standard markers: *kadar*, *gibi*

- *kadar* and *gibi* occur with adjectives, nouns and verbs;
- *kadar* + A: explicit, *gibi* + A: partly explicit dimension of comparison
- *kadar* + N/V, *gibi* + N/V: implicit dimensions of comparison
- *kadar* scalar – same value in a (mostly metrical) dimension;
- *gibi* non-scalar – similarity w.r.t. a number of dimensions

What is the semantics of *kadar* and *gibi* ?

- (i) *kadar* + A vs. *gibi* + A
- (ii) *kadar* + N/V vs. *gibi* + N/V

## 5 *kadar* + A vs. *gibi* + A

► *kadar* equatives: same degree; *gibi* equatives: similar way

- (6) A. B. *kadar zeki* ('intelligent') same degree of intelligence
- uzun* ('tall') same height
- yaşlı* ('old') same age ! Normbezug
- pahalı* ('expensive') same price
- güzel* ('beautiful') same degree of beauty
- (7) A. B. *gibi zeki.* ('intelligent') ways of being intelligent e.g., analytical skills, readiness of mind, emotional intelligence, linguistic talent;
- ?? *uzun* ('tall') (ways of being tall?)
- ?? *yaşlı* ('old') (ways of having a certain age?)
- ? *pahalı* (expensive') (ways of being expensive?)
- güzel* ('beautiful') ways of being beautiful

► *gibi*, but not *kadar*, is compatible with non-gradable adjectives

- (8) *Anna Berta gibi mezun.* / \**kadar mezun.*  
'Anna is graduated like Berta'  
ways of being graduated, e.g. through an intense program, according to old regulations, fake diploma certificate

► *kadar* as well as *gibi* equatives entail Normbezug

- (9) *Anna Berta kadar / gibi zeki.*  
'Anna is as intelligent as Berta / intelligent like Berta'  
==> both Anna and Berta are intelligent

► *gibi* blocks degree modifiers, which are o.k. with *kadar*;

- (10) a. *Anna en az Berta kadar uzun / zeki / güzel.*  
'Anna is at least as tall / intelligent / beautiful as Berta.'
- b. \**Anna en az Berta gibi zeki / güzel.*  
intended 'Anna is at least tall / intelligent / beautiful like Berta.'  
(sentence adverb reading o.k.)

## 6 *kadar* + N/V vs. *gibi* + N/V

► *kadar* equatives: licit dimensions

- (11) *Anna'nın kızı Berta'nın-ki kadar.*  
A.-Gen daughter.Poss3sg Berta-Gen-Rel kadar.Cop.3sg  
'Anna's daughter is as \_\_\_\_\_ as Berta's.'
- child: age, height, weight (for babies)  
NOT smartness, intelligence, speed
- house: size, price  
NOT age, state of repair, location
- clothing: size, price,  
NOT style, evaluation  
(even though *A B dress kadar güzel* 'beautiful' is o.k.)

- (12) *Anna Berta kadar dans ediyor.*

- A. B. *kadar* dance.3sg.Prog  
'Anna dances as \_\_\_\_\_ as Berta.'
- dance: duration or frequency or talent  
NOT ambition, agility, concentration
- run: ability, distance, running time, speed  
NOT style, manner
- sleep: duration, NOT manner

► *kadar* equatives: one dimension only

- (4a) can mean 'Anna's dress is as long as Berta's.' or 'Anna's dress is as expensive as Berta's, but NOT: 'Anna's dress is as long and expensive as Berta's.'

► *gibi* equatives: multi-dimensional

- (4b) can mean 'Anna's dress is similar to Berta's w.r.t. design and color and fabric etc.

modification by "from many angles" o.k.:

- (13) *Anna'nın elbisesi birçok yönden Berta'ninki gibi.*  
A.Gen dress.Poss.3sg many way.Abl B.Gen.Rel gibi  
'Anna's dress is like Berta's in many ways.'

► *gibi* equatives: licit dimensions

- ways of appearance / ways of doing something .... ???
- general restrictions?
- restrictions for German (König & Umbach 2017, chap. 5, Umbach & Stolterfoht in prep)

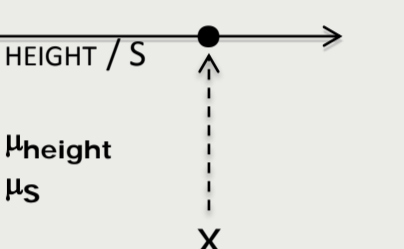
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## 7 Semantic interpretation

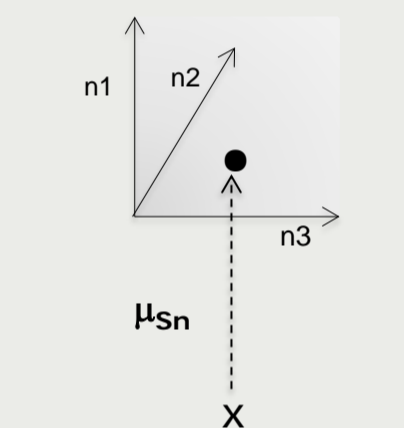
► Measure functions

- 1- dim  $[[uzun]] = \lambda x. \mu_{\text{height}}(x) \langle e, d \rangle$  Kennedy (1999)
- $[[\text{Meas}]] = \lambda x. \mu_S(x) \langle e, d \rangle$  Solt (2015)
- underspecified measure function,  
S: variable over dimensions,  
 $\mu_S$  constrained by the nominal/verbal type of x



- n-dim  $[[\text{genMeas}]] = \lambda x. \mu_{S_n}(x) \langle e, d^n \rangle$

generalized measure function,  
S<sub>n</sub>: variable over n-dimensions,  
d<sup>n</sup>: points in n-dimensional attribute space,  
 $\mu_{S_n}$  constrained by the nominal/verbal type of x



► Interpretation

- $[[kadar]]$  weak linear order, e.g.  $\geq$   
(dimension at least ordinal scale level)
- $[[gibi]]$  similarity relation defined on n-dimensional attribute spaces (see Umbach & Gust 2014, Gust & Umbach 2015)

$[[A. B. kadar \alpha]] = \mu_\alpha(a') \geq \mu_\alpha(b')$  where  $\mu_\alpha$  is an adjectival or under-specified 1-dim measure function

$[[A. B. gibi \delta]] = \mu_\delta(a') \approx_F \mu_\delta(b')$  where  $\mu_\delta$  is a generalized measure function and  $\approx_F$  denotes indistinguishability / similarity in the attribute space F

## 8 Conclusion

- Degree-based analyses of comparison (e.g., Bierwisch 1987, Kennedy 1999) focus on scalar comparison, but cannot handle non-scalar cases.
- Similarity-based (Umbach & Gust 2014) and kind-based (Anderson & Morzycki 2015) analyses account for non-scalar comparison, but have to make extra efforts when dealing with scalar cases.
- Featuring complementary strengths, the two types of analyses seem to offer a choice between competing theories.
- In view of the Turkish data we have to acknowledge that – within the same language – two different strategies of performing equative comparison are manifest.
- The semantic framework in Umbach and Gust (2014) is well suited to account for both strategies (without reducing one to the other).